Nominalist Constituent Ontologies: A Development and Critique

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How the views and terminology of my dissertation contrasts with subsequent work

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My views and terminology about tropes have undergone a fair amount of revision since writing my dissertation. Thus, because there has been a surprising amount of interest in my dissertation (550+ downloads on philpapers.org!), I thought it would be useful to provide a summary of how my dissertation contrasts with my subsequent published work.

For convenience, I'll use the following acronyms to refer to some of my other published papers. Please see my CV for venues and other details:

BTB	Bundle Theory's Black Box…
TCG	Tropes as Character-Grounders…
TDA	Tropes as Divine Acts…
TTD	Is Trope Theory a Divided House?
TWP	Two Ways to Particularize a Property

Terminology and main argument of my dissertation

In my dissertation I used the following terminology:

- Loux has drawn a distinction between what he calls "tropes" and "tropers". In my dissertation I explored this distinction and I stuck with Loux's labels for the important concepts picked out by what Loux meant by "trope" and "troper".
- I also used "trope theory" and "troper theory" to label the metaphysical theories that postulated a "trope" or "troper" ontology, respectively.

Here is the main argument and major theses of my dissertation (this isn't so much a formally valid syllogism as a map of the major steps in the dissertation):

(D1) Trope theory is superior to *austere nominalism* and all other extant forms of nominalism.

(D2) There are two distinct concepts mapped by Loux's distinction between a "trope" and a "troper".

(D3) The concept of a *troper* is novel, whereas the concept of a *trope* is what all self-described "trope theorists" have in mind when they talk about "tropes".

(D4) "Tropes" and "tropers" divide the alleged theoretical sweet spot between austere nominalism and a realist bundle theory.

Thus,

(D5) It is false that "trope theory" has the advantage of uniquely occupying that middle ground.

In addition,

(D6) Nominalist constituent ontologies, such as trope theory, face a number of unnoticed or unappreciated *Gap Challenges*.

(D7) With respect to the *Gap Challenges,* trope theory fares poorly and troper theory fares well.

Thus,

(D8) Troper theory is superior to trope theory.

But,

(D9) Troper theory faces a number of significant problems and, thus, is ultimately unacceptable.

Thus,

(D10) Neither trope theory nor troper theory are acceptable.

Terminology and Theses in post-dissertation work

I continue to maintain (D2), (D4), (D6), and (D9).
But I now deny (D1), (D3), (D5), (D7), (D8), (D10).

Let me explain my new stance in more detail. But let me skip (D1) for now.

I still affirm (**D2**) that there are two distinct concepts mapped by Loux's trope/troper distinction. But I now reject Loux's claim (**D3**) that the concept of a troper is novel. I reject it because I have come to see (and show in TTD, TWP, and TCG) that Loux's notion of a troper is already at play in the literature—in fact, it is probably the dominant concept of a "trope". Thus, Loux's distinction between "trope" and "troper" is best described as a distinction between two different concepts of a *trope*. Thus, using "trope" and "troper" to label the distinction is potentially misleading. Accordingly, I have introduced the terms *modifier trope* (for Loux's "trope") and *module trope* (for Loux's "troper"), and I use "trope" and "trope theory" as neutral between the two trope concepts.

I still affirm the substance of (**D4**) because modifier tropes (Loux's tropes) and module tropes (tropers) do share the conceptual/theoretical space between austere nominalism and realist bundle theory.

But I reject (**D5**) because I take 'trope theory' to encompass both modifier trope theory and module trope theory. Thus, the more general view (trope theory) does uniquely occupy the middle ground between austere nominalism and realist bundle theory, but the two versions of the general view (modifier trope theory and module trope theory) problematically divide that space (which is what (D4) says, in effect).

I continue to maintain (**D6**). For example, the Gap Challenges raised in BTB are derived from the material in my dissertation. However, in the dissertation the Gap Challenges were used to show that (what I now call) module tropes are superior to modifier tropes. In BTB my aim is more ambitious: I argue that the Gap Challenges pose a problem for *any* bundle theory of substance, and

not just for tropist bundle theories. So, although BTB is based on the dissertation material, it significantly expands it and takes it in a new direction.

I now deny (**D7**). One of the Gap Challenges is the "Character-Challenge". In my dissertation this is given about as much attention as the two other gap challenges. In subsequent work, however, I've discovered that the Character-Challenge actually unfolds into a number of different character-related issues for trope theorists. For example, I now argue (in TCG) that these issues concerning character pose a dilemma for trope theory. Roughly, the dilemma is this: If the trope theorist goes with modifier tropes, then she faces a number of disadvantages (e.g., she cannot plausibly maintain a bundle theory). But, if the trope theorist goes with module tropes, then she must either (i) deny the seemingly obvious fact that there are thickly-charactered objects or (ii) accept causal overdetermination. With respect to these issues, I now think that modifier tropes fare better than module tropes—which is, in effect, to deny (D7).

I also now deny (**D8**). In part, this is because I now deny (D7), which was the dissertation's motive for (D8). But I have gone on to raise new, more fundamental, and more penetrating objections to module tropes (especially in TTD, TWP and TCG).

Because of these more fundamental problems (raised in recent work), I continue to maintain (**D9**), but I do so largely for different reasons than those raised in the dissertation.

I can now say why I now reject (**D1**). I now think (and argue in TWP) that module trope theory threatens to collapse into austere nominalism. Because of this, I no longer hold that module trope theory is better than austere nominalism. In fact, I'm inclined to think that it is *worse* that austere nominalism. So I now reject (D1) because I think that at least *one version of trope theory* (module trope theory) is *not* superior to austere nominalism.

Perhaps the most unexpected change in my views is my new stance on (**D10**). In effect I now reject (D10) because I no longer think that modifier trope theory is unacceptable. I now think (and argue in TDA) that modifier trope theory might work within a theistic metaphysic. To be sure, the novel version of modifier trope theory I propose in TDA needs to be further developed. But, at the very least, I'm certainly think that such a (modifier) trope theory *might* work. It remains to be seen.

NOMINALIST CONSTITUENT ONTOLOGIES:

A DEVELOPMENT AND CRITIQUE

A Dissertation

Submitted to the Graduate School

of the University of Notre Dame

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by

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NOMINALIST CONSTITUENT ONTOLOGIES:

A DEVELOPMENT AND CRITIQUE

Abstract

by

Robert K. Garcia

In this dissertation I consider the merits of certain nominalist accounts of phenomena related to the character of ordinary objects. What these accounts have in common is the fact that none of them is an error theory about standard cases of predication and none of them deploys God or uniquely theistic resources in its explanatory framework.

The aim of the dissertation is to answer the following questions:

- What is the best nominalist account on offer?
- How might it be improved?
- Does it ultimately succeed?

I will argue that while so-called trope theory is the best account on offer, it can be significantly improved—or replaced—by a novel version of nominalism that is modeled after trope theory. Ultimately, however, I will argue that even the novel version fails.

The dissertation unfolds as follows. In Chapter 1, I introduce Austere Nominalism (AN), which is perhaps the most extreme version of nominalism that falls within the scope of the dissertation. AN is often described as the view that there exist

only concrete particulars. According to AN, it is unnecessary to posit any entities other than ordinary objects—turkeys, tables, and the like—in order to account for explananda related to the character of those objects. (Such explananda include the phenomenon of attribute agreement, of attribute possession, of true subject-predicate sentences, etc.) In this chapter I argue that AN fails to provide an adequate account of these explananda. In addition, introducing and criticizing AN serves an important heuristic role for the rest of the dissertation. To understand this role, we must distinguish between the *basic explanatory strategy* deployed by the austere nominalist and the *type of explananda* for which she deploys that strategy. The austere nominalist deploys the strategy to account for the character of *ordinary objects*. As I argue in Chapter 1, this deployment is a failure. As I go on to show in Chapter 2, the widespread rejection AN has led to a variety of rival accounts of the character of ordinary objects. In rejecting AN, however, these accounts *also* tacitly reject its basic explanatory strategy. Thus goes the baby with the bathwater, since, arguably, there are some attractive features of AN's basic explanatory strategy. Indeed, those who defend the most prominent version of nominalism—trope theory—seem to overlook the advantages of AN's basic strategy, and by so doing, make an unnecessary concession to the realist. Or so I argue in Chapter 3. And, as I will argue in Chapter 4, the strongest version of nominalism is a novel account, modeled after trope theory, that deploys AN's basic strategy at a more fundamental level than that of ordinary objects. This novel account—troper theory—is closer in spirit to AN than is traditional trope theory. (Thus, AN serves as a foil for the discussion of other nominalist views.) Finally, in the Afterword I show how troper theory is subject to some of the traditional objections to which trope theory is subject.

Thus, while troper theory is the best nominalist account on offer, it is ultimately inadequate as an account of the character of ordinary objects. Finally, in the Afterword I indicate how troper theory is equally vulnerable to some of the traditional objections that plague trope theory. Thus, if you are not convinced that traditional objections to trope theory are conclusive and you want to be a nominalist, then you should abandon trope theory and adopt troper theory. If you take traditional objections against trope theory to have significant force, then you should reject both theories.

For Joel, who still breathes.

And for Mom, who does not.

CONTENTS

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CHAPTER 1: AUSTERE NOMINALISM

In this dissertation I consider the merits of certain nominalist solutions to the problem of universals. Very roughly, these solutions are nominalist in that they deny the existence of universals.[1] What these accounts have in common is the fact that none of them is an error theory about standard cases of predication and none of them deploys uniquely theistic resources in its explanatory framework. Generally, the problem of universals concerns phenomena related to the character of concrete objects and may be taken to consist in a family of questions about such objects: *In addition to concrete objects, are there characteristics per se? For example, if a red apple exists, does a numerically distinct entity—redness—also exist? And, if there are characteristics (properties, etc.), how do they relate to concrete objects? Is the redness of the apple in some sense a part or constituent of the apple? If two apples are the exact-same shade of red, is there one redness or two? Finally, what is the referent of an abstract singular term like "redness", as in "Redness is a color"?*

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[1] The reader will notice that I have not provided a formal definition of "nominalism." This is intentional. Typically, nominalism is described as the view that there are particulars but no universals. But beyond that, it is very difficult to generalize. In part, the difficulty stems from the fact that philosophers have meant different things by "universal" and "particular." In spite of this lack of specificity, however, metaphysicians who work on the problem of universals agree on which views *count* as nominalist, and include *Austere Nominalism*, *Predicate Nominalism*, *Concept Nominalism*, *Resemblance Nominalism*, and *Trope Nominalism* in the roster. In subsequent chapters, I will discuss both the relevant concepts (that of the *universal* and *particular*) as well as these traditional nominalisms.

By using terms like "concrete object" (and other cognates), parties to this debate usually have in mind things like elephants, humans, apples and/or electrons. It should be noted that the "and/or" is a deliberate hedge on my part, a device to sidestep a putatively orthogonal issue. This issue may be put as follows. The problem of universals concerns a family of phenomena related to the character of a target class of entities. The members of this class are almost always identified via ostension—by pointing to tables, chairs, cats and the like. It is typically assumed that the general metaphysical problems concerning the character of the members of the target class will hold regardless of how one decides to populate that class.[2] For example, the general phenomenon of attribute agreement—two entities having the same character—would seem to hold both at the level of elephants (two elephants are both grey) and at the level of electrons (two electrons are both negatively charged). Thus, the assumption is that the issue concerning (i) *which entities we should point to when identifying the target objects of our metaphysical analysis* is orthogonal to the issue concerning (ii) *which metaphysical analysis is adequate for the target objects of our analysis.* I have some doubts about this assumption, but to focus matters I grant it in what follows.[3]

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[2] So Michael Loux: "To simplify matters, I will assume that the nominalist takes the particulars of our nonscientific picture of the world to be fully real, and I will rely on those objects and the claims we make about them as the materials for delineating the contours of this response to the problem of universals; but the structural points I will be making about the ontological framework of austere nominalism will not depend upon this choice of materials. Anything I say about a version of austere nominalism congenial to common sense will have an obvious application to the austere nominalism of a scientific realist whose attitude toward the framework of common sense is eliminativist." *Metaphysics: A Contemporary Introduction,* 3rd Ed. (New York and London: Routledge, 2006), pg. 52-3.

[3] It is not obvious that the relevant explanatory demands (i.e., those concerning attribute possession, attribute agreement, etc.) will be the same regardless of what we take to be the target objects of analysis. Afterall, candidate target objects include what seem to be radically different sorts of things, such as trees, human persons, tables, apples, rocks, electrons, quarks, fields, souls, etc.

The aim of the dissertation is to answer the following questions:

1. What is the best nominalist account on offer?
2. How might it be improved?
3. Does it ultimately succeed?

I will argue that the best account on offer—so-called trope theory—can be significantly improved, but ultimately fails. In this chapter, I begin the investigation by considering what is perhaps the most extreme form of nominalism.

1.1 Introduction to Austere Nominalism

Austere nominalism is the view that an adequate solution to the problem of universals can be had within an ontological framework that posits the existence of only ordinary concrete particulars. Austere nominalism has a distinguished history[4] and goes under different names. It has been attributed to W. V. O. Quine, and has recent defenders as well.[5] Indeed, some have thought that nominalism *simpliciter* is equivalent to austere nominalism.[6] So Zoltán Gendler Szabó: a nominalist "unqualifiedly rejects any abstract entities of any sort whatsoever."[7] In more vivid terms, the austere nominalist is often

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[4] It has been argued that the Stoics held this view. See Paolo Crivelli, "The Stoics on Definitions and Universals", *Documenti e Studi Sulla Tradizione Filosofica Medievale*, XVIII (2007).

[5] See Quine, "On What There Is", *From a Logical Point of View* (Cambridge, MA: Harvard University Press, 1954); Michael Devitt, "Ostrich Nominalism or 'Mirage Realism'?" *Pacific Philosophical Quarterly* 61 (1980), pgs 433-49; and Josh Parsons, "There is No 'Truthmaker' Argument Against Nominalism" *Australasian Journal of Philosophy* 77 (1999), pgs. 325-34.

[6] See for example, Nelson Goodman and W. V. Quine, "Steps Towards a Constructive Nominalism," *The Journal of Symbolic Logic*, Vol. 12, No. 4, Dec. 1947.

[7] Szabó, "Nominalism," *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman (Oxford: Oxford University Press, 2003), pg. 11.

said to have a preference for "desert landscapes." As Szabo notes, however, this label is ironically inappropriate: "Nominalism does away with so many kinds of putative entities that the ontology it yields may not even be properly described as a desert landscape. After all, aren't landscapes, at least in one of the perfectly legitimate sense of this word, abstract?"[8] This quip has a point. As we will see, taking austere nominalism seriously requires giving up more than just landscapes.

An initial way to understand austere nominalism is to contrast it with other extant putative solutions to the problem of universals. According to rival views, solving the problem of universals requires the postulation of "things" over and above concrete objects. These rival views differ over what additional existents must feature in an account of the character of concrete objects. Thus, by of providing such an account, rival views appeal to additional entities, such as linguistic items (e.g. predicates), mental entities (e.g. concepts), spatially located metaphysical constituents (either multiply locatable (e.g. universals) or not (e.g. tropes)), non-spatially located metaphysical constituents (e.g. universals), or non-spatially located entities (e.g. sets or transcendent universals). In later chapters, I will discuss some of these views in detail.

It is also important to distinguish austere nominalism from what David Armstrong once infamously called "Ostrich Nominalism." In his 1978 book, Armstrong introduced the label "Ostrich Nominalism" to characterize philosophers who refuse to give an

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[8] Szabó, "Nominalism," *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman (Oxford: Oxford University Press, 2003), pg. 12.

analysis[9] of "sameness of type."[10] The Ostrich thereby refuses to answer a "compulsory" question and so fails in her duties as a metaphysician. Of course, whether or not an austere nominalist is aptly said to be an "Ostrich" depends on whether the "problem" of giving an analysis of sameness of type is (a) a problem she *ought* to solve, and (b) a problem that is solvable on *any* view. But, as David Lewis has argued, the specific problem Armstrong accuses the Ostrich of refusing to recognize (a) is *not* the standard One Over Many problem that Armstrong was originally concerned to solve, and (b) is not a problem that is either mandatory or solvable.[11]

As Lewis points out, Armstrong's One Over Many problem undergoes a double—and doubly dubious—transformation in Armstrong's book.[12] Originally, the problem is that of giving an account of Moorean facts of sameness of type. But then the problem undergoes a double transformation. The *first transformation*: the explanatory demand increases from being that of giving an account to that of giving an analysis. But as Lewis points out, giving an analysis of X is only *one* way to give an account of X—another way is to take X to be primitive. The *second transformation*: the explanandum generalizes from *Moorean* facts of similarity of type (i.e., Moorean cases of predication like "Socrates is pale.") to *all* facts of similarity of type (i.e., all cases of predication, and in

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[9] Although Armstrong usually uses the term "account", he really means *analysis*, as David Lewis has shown in "New Work for a Theory of Universals," *Properties*, eds. D. H. Mellor and Alex Oliver (Oxford ; New York: Oxford University Press, 1997). I'll return to this issue below.

[10] Armstrong, *Nominalism and Scientific Realism,* Volume 1 of *Universals and Scientific Realism* (Cambridge: Cambridge University Press, 1978), pg. 16.

[11] Lewis, "New Work for a Theory of Universals," *Properties*, eds. D. H. Mellor and Alex Oliver (Oxford ; New York: Oxford University Press, 1997), pgs. 197-201

[12] Here I am summarizing Lewis, "New Work for a Theory of Universals," *Properties*, eds. D. H. Mellor and Alex Oliver (Oxford ; New York: Oxford University Press, 1997), pgs. 198 ff.

particular cases like predications of resemblance or class membership). Since the latter explanandum is not a Moorean fact, an account of it would not seem to be required. Furthermore, Lewis argues, an analysis of the new explanandum is impossible, since there cannot be "…a theory that names entities, or quantifies over them, in the course of its sentences, and yet altogether avoids primitive predication…"[13] Lewis concludes: "The transformed problem of One over Many deserves our neglect. The ostrich that will not look at it is a wise bird indeed."[14] To sum up: According to Armstrong, one is an Ostrich Nominalist if one refuses to analyze sameness of type (i.e., predication in general). Lewis has argued that this sort of analysis is neither compulsory nor possible, and that, indeed, we should refuse to undertake such an analysis. That is, we should *all* be Ostrich Nominalists. I am inclined to agree with Lewis on this point. But, whether or not Lewis is right, the fact that there is a debate here suggests that we shouldn't equate austere nominalism and Ostrich Nominalism.

In contrast to rival views, the austere nominalist holds that we needn't posit any entities besides concrete particulars in order to discharge whatever explanatory duties we might have concerning the explanandum of the problem of universals (whether we take that explanandum to be the phenomenon of attribute possession, attribute agreement, true subject-predicate sentences, or whatever). If we want a truth-maker for the sentence "This apple is red", we need only point to the apple itself, qua metaphysical simple. That is, to account for the character of the apple, we need only one explanatory resource: the

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[13] Lewis, "New Work for a Theory of Universals," *Properties*, eds. D. H. Mellor and Alex Oliver (Oxford ; New York: Oxford University Press, 1997), pg. 199.

[14] Lewis, "New Work for a Theory of Universals," *Properties*, eds. D. H. Mellor and Alex Oliver (Oxford ; New York: Oxford University Press, 1997), pg. 199.

apple itself, taken as a whole—that is, taken as a metaphysically unstructured, simple, entity.

I will expand on this account in a moment. Before doing so, however, it should be noted that the austere nominalist recognizes that her view offers a relatively thin explanation of the character of concrete objects. But by her lights, it is better to have a meager account than to be saddled with occult ontological baggage. That is, one motive for adopting austere nominalism is to keep one's ontology free of objectionable abstract objects. In this way, an objection to abstract objects is *ipso facto* a motive for austere nominalism. Thus, before expanding on the account offered by austere nominalism, it is appropriate to consider the most forceful of these objections.

1.2 Motives for Austere Nominalism: The Horror Abstractae[15]

According to Szabó, currently the most influential type of pro-nominalist argument is based on the apparent "causal isolation" of abstracta.[16] "Without causal links, nominalists contend, our knowledge about and reference to abstract entities becomes mysterious."[17] The idea here seems to be the following. We can refer to X and/or have beliefs about X, only if we are in some sort of causal contact with X.

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[15] I borrow this nice expression from Szabó, "Nominalism," *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman (Oxford: Oxford University Press, 2003), pg. 26. My summary in this section is largely taken from his discussion.

[16] Two other objections, he notes, are at the periphery of contemporary debate and are widely taken to be unconvincing: the Quinean-style objection that abstracta are *unintelligible* and the objection that abstracta unduly bloat one's ontology.

[17] Szabó, "Nominalism," *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman (Oxford: Oxford University Press, 2003), pg. 29

Abstract objects cannot stand in causal relations with familiar concrete objects, and we manifestly are concrete objects, so we cannot be in causal contact with them. But then we can neither refer to nor have beliefs about abstract objects. Thus, *even if* abstracta exist, we can never refer to them or express beliefs about them. Further, because we can characterize abstracta only if we can express beliefs about abstracta, we cannot characterize abstracta. Thus, literally nothing can be said *about* abstracta. But if we cannot do these things, then it would seem illegitimate to include abstracta in our metaphysical theories.

To the foregoing objection from causal isolation, several promising replies are available. The first three are from Szabó.[18] First, unless the nominalist concedes that we can at least describe abstracta, her own view is inexpressible.[19] Without such a concession, how can we understand the above claim that "literally nothing can be said *about* abstracta"? Second, the argument in the previous paragraph assumes that all abstracta are causally isolated, but this assumption is questionable. Certain sorts of abstracta, if they exist, are almost certainly *not* causally isolated. For example, Szabó suggests that a *novel* is an abstract object which can both (a) be causally dependent upon concrete objects, such as its author, and (b) have effects amongst the concreta—just think of all the ruckus that can result from a scandalous storyline. Szabó's point can be generalized: whether a particular sort of abstract object is causally impotent should be decided on a case by case basis. There are no non-question begging reasons to assume *a*

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[18] Szabó, "Nominalism," *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman (Oxford: Oxford University Press, 2003).

[19] Szabó, "Nominalism," *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman (Oxford: Oxford University Press, 2003), pg 31.

priori that *all* abstract objects or that any *given sort* of abstract object is causally impotent. Third, it is questionable whether or not a causal connection is actually necessary for reference. "[A]n initial baptism, at least as [Saul] Kripke originally conceived it, does not require causal contact."[20] But if this is right and the argument requires a questionable principle of semantics, then the causal isolation objection is significantly weakened.

To Szabó's objections, I will add two more. Fourth, it is not obvious why the non-nominalist shouldn't take the nominalist's *modus pollens* and convert it into a *modus ponens*. To wit: If abstracta are causally isolated, then abstracta cannot be referred to or known. But we do refer to and know about abstracta. So abstract are not causally isolated.

Fifth, folks on all sides of the debate seem to agree that we have no *principled* way of drawing the abstract / concrete distinction. Nelson Goodman's comment is representative: "…the line between what is ordinarily called 'abstract' and what is ordinarily called 'concrete' seems to be vague and capricious."[21] Thus, while we have clear examples of putative objects on each side of the abstract/concrete distinction, we don't have a principled criterion for deciding what *sort* of object goes on each side.[22] If

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[20] Szabó, "Nominalism," *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman (Oxford: Oxford University Press, 2003), pg 30.

[21] Nelson Goodman, "A World of Individuals: A Symposium," in *The Problem of Universals* (Notre Dame, Indiana: University of Notre Dame Press, 1956), pg. 16.

[22] See, for example, Peter van Inwagen's "A Theory of Properties", *Oxford Studies in Metaphysics*, Volume 1 (Oxford: Oxford University Press, 2004).

we accept this claim, then the charge that abstracta are *essentially* causally impotent looks dubious or at least open to debate *amongst* those who posit abstracta.

In sum, to the extent that austere nominalism is motivated by a repugnance for "abstract" objects, the motivation for the view is either weak or dubious. If this is correct, then the austere nominalist is under pressure to find an alternative motivation for her view. And, according to the austere nominalist, motivation for her view can be found in how it solves the problem of universals.

1.3 Austere Nominalism's Account of Character

As I mentioned above, the problem of universals concerns phenomena related to the character or attributes of concrete objects. Four "phenomena" are especially relevant. First, there is what we might call *attribute possession*. In pre-philosophical discourse, we speak of concrete objects *having properties*. This page has the property of being white, for example. Second, there is what we might call *attribute agreement*. Again, speaking pre-philosophically, we say that all the pages of this dissertation have the *same shape*. Third, there are apparently true sentences that deploy *abstract singular terms* such as *courage*, *redness*, etc. *Courage is a moral virtue*, for example. The subjects of such sentences appear to stand for attributes. And fourth, there are apparently true sentences that quantify over attributes, such as "Some zoological species are cross-fertile." By accepting the truth of such sentences, we appear to be committed to the existence of attributes per se.

With respect to accounting for character related phenomena, the strength of austere nominalism is supposed to consist in its account of attribute possession and

attribute agreement. These phenomena are expressed in what we might call *ordinary* subject-predicate sentences. Such sentences are "ordinary" in that they appear to take as their subjects ordinary concrete particulars. (Later we will consider austere nominalism's account of sentences whose subjects are abstract singular terms.) Its account is straightforward and is typically spelled out in terms of the truth conditions for sentences that express the relevant phenomena. According to the austere nominalist, the relevant truth conditions for such sentences can be spelled out in terms of concrete objects.

Consider the general phenomenon of attribute possession, as expressed by a simple subject-predicate sentence schema "A is F." In Loux's words, the austere nominalist holds that "what makes a subject-predicate sentence of the form 'A is F' true is just that A is F."[23] This claim is typically expressed by way of a Tarski biconditional:

"A is F" is true iff A is F

The idea is that the truthmaker for "A is F" is what gets expressed by what's on the right side of the biconditional. Since the notion of a truthmaker is controversial, it is important to see why it is fair and accurate to characterize the issue as one concerning truthmakers. With respect to the problem of universals, character and character attribution together constitute the central issue, and the standard way we attribute character is by way of subject-predicate sentences. Thus, any adequate account of character must be able to give an adequate account of subject-predicate truth. Presumably, true subject-predicate sentences state facts about the world, and so their truth

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[23] Loux, *Metaphysics: A Contemporary Introduction,* 3rd Ed. (New York and London: Routledge, 2006), pg. 54.

would seem to depend on how the world is.[24] Typically this has been thought to involve truthmakers, which are non-linguistic counterparts to true sentences. Thus, the challenge is to come up with an adequate account of truthmakers for the relevant true subject-predicate sentences.

At the intuitive level, we want to say that a truthmaker is something in virtue of which a sentence or proposition is true. This involves three elements: First, there is a truth-bearer; since an austere nominalist will deny that there are propositions, we may assume that she will take sentences[25] to be the bearers of truth. Second, there is a truthmaker; just what an austere nominalist will employ as truthmakers is something we will discuss below. Third, there is the truthmaking "relation"[26]; the latter is typically expressed by something we can call a truthmaking principle. There are several candidate truthmaking principles and there is much discussion over which, if any, deserve credence.[27] Here is a standard, prima facie plausible version of a truthmaking principle: For every contingently true sentence S, there is an entity X such that "X exists" entails S. We may capture the relevant sense of "entails"by adding the following subsidiary principle: Where C is any claim of the form *X is a truthmaker for sentence S*, if C is true then C is necessarily true.

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[24] So Alan Donagan: "If the ultimate non-logical and non-formal constituents of true propositions refer to nothing in the world, in what can the truth of such propositions consist?" See his "Universals and Metaphysical Realism," in *Universals and Particulars: Readings in Ontology*, ed. Michael Loux (Notre Dame, IN: University of Notre Dame Press, 1976), pg. 130.

[25] Presumably, sentence *tokens*.

[26] Of course, the austere nominalist is speaking pre-philosophically when she speaks of a "relation." Perhaps she would simply say *there is truthmaking*.

[27] See the papers in *Truthmakers: The Contemporary* Debate, ed. by H. Beebee and J. Dodd (Oxford: Clarendon Press, 2005).

Returning to the case of sentences allegedly expressing attribute possession, we can say that the austere nominalist offers what looks like a straightforward account. She tells us that "A is F" is true in virtue of its being the case that A is F. Just what is involved in *its being the case that A is F* is an important question for the austere nominalist, and I will discuss this in due course. For the moment, however, I will focus on an example. The austere nominalist tells us that "The apple is red" is true in virtue of its being the case that the apple is red. This account of basic subject-predicate sentences represents the austere nominalist's strategy for handling the phenomenon of attribute possession. This account is crucial for the austere nominalist because, as we will see, her account of attribute agreement is built upon it. Thus, it is notable that critics of the view typically concede the adequacy of this account of the target sentences. Even an über-realist like Loux concedes the point: "I am inclined to think…that the [austere] nominalist account succeeds in showing how the truth of subject-predicate discourse is grounded in non-linguistic fact."[28] In a later section, I will argue that this concession is mistaken. My present concern, however, is to note how the above account of attribute *possession* is supposed to provide the austere nominalist with everything she needs for an account of attribute *agreement*.

According to Michael Devitt, the above account of attribute possession can straightforwardly provide an account of attribute agreement.[29] According to Devitt,

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[28] Loux, Substance and Attribute (Dordrecht, Holland: D. Reidel Publishing Company, 1978), pg. 36. See also Loux, Metaphysics: A Contemporary Introduction, 3rd Ed. (New York and London: Routledge, 2006), pg. 54.

[29] Michael Devitt, "Ostrich Nominalism or 'Mirage Realism'?" in *Properties*, eds. D. H. Mellor and Alex Oliver (Oxford ; New York: Oxford University Press, 1997), pg. 95.

(1) A and B are both F.

is true in virtue of

(2) A is F

and

(3) B is F

In terms of a T-schema:

"A and B are both F" iff (A is F and B is F)

According to the austere nominalist, no terms that appear to pick out abstracta show up on the right-hand side of the above biconditionals. That is, the truth conditions for "A is F" and "A and B are both F" do not involve abstracta. Thus, the austere nominalist concludes that for the purposes of giving an account of either attribute possession (A is F) or attribute agreement (A and B are both F), we needn't posit universals, tropes, sets or other queer abstracta—we only need to posit that concrete particulars (A and/or B) exist. We can generalize this conclusion: for the purposes of giving an account of subject-predicate sentences whose subjects stand for concrete objects, we needn't posit anything but concrete particulars.

As already noted, the critics of austere nominalism typically concede that the view can account for attribute possession. And, although some challenge the adequacy of its account of attribute agreement, criticisms tend to focus on its account of the third and fourth phenomena noted above—sentences deploying abstract singular terms and sentences that appear to quantify over properties. According to Loux and others, these phenomena pose serious problems for the austere nominalist. Because I agree with this assessment, and because I have nothing substantial to add to the criticisms, I will only

briefly summarize Loux's discussion of how these phenomena pose challenges for the austere nominalist.

1.4 Traditional Objections to Austere Nominalism

Like all traditional parties to the dispute, the austere nominalist agrees that some sentences that deploy abstract singular terms are true. Loux provides the following examples:

(1) Triangularity is a shape.

(2) Red is a color.

The traditional realist claims that the abstract singular terms in such sentences name universals, and that if we accept the truth of such sentences we are committed to the existence of universals. The austere nominalist, however, insists that these sentences only *appear* to name universals; in fact, they name only concrete objects. Thus, the above sentences should be read as:

(1a) Triangular objects are shaped objects.

(2a) Red objects are colored objects.

So far, so good, but the question concerns whether this sort of translation strategy will work for all true sentences that deploy abstract singular terms. What the austere nominalist needs, according to Loux, is the following general principle:

> For every sentence incorporating an abstract singular term, it is possible to identify a sentence in which that terms does not appear but the corresponding general term does, such that the latter sentence gives the meaning of the former.[30]

And, Loux adds, it is plausible to think that two sentences have the same meaning only if they are truth-equivalent. But therein lies trouble for the austere nominalist. For consider these sentences:

(3) Courage is a moral virtue.

(4) Hilary prefers red to blue.

If we translated these sentences as we did the first two, we get:

(3a) Courageous persons are morally virtuous.

(4a) Hilary prefers red objects to blue objects.

But (3) and (3a) do not appear to be truth equivalent. Nor do (4) and (4a). Thus, it seems that the austere nominalist must either (i) find a new strategy for handling *all* sentences that deploy abstract singular terms or (ii) offer different strategies for different sentences. Adopting the latter option would seem to threaten the ideal of a unified semantics. Loux considers several iterations of the former option, and finds them all wanting. In sum, austere nominalism seems unable to provide an adequate account of sentences that deploy abstract singular terms.

This leaves the fourth phenomenon—apparently true sentences that appear to quantify over properties. Examples include:

- "There are undiscovered physical properties."

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[30] Loux, *Metaphysics: A Contemporary Introduction,* 3rd Ed. (New York and London: Routledge, 2006), pg. 57.

- "Some zoological species are cross-fertile."[31]
- "Spiders share some of the anatomical features of insects."[32]

Our pre-philosophical commitment to the truth of such sentences provides a serious challenge for the austere nominalist. This sort of challenge, for example, is central to Peter van Inwagen's recent argument against austere nominalism.[33] On pain of being allowing non-concrete objects into her ontology, the austere nominalist also seems unable to account for the truth of these sentences. Indeed, our commitment to the truth of such sentences seems to be the most common reason for rejecting austere nominalism.

Thus, the standard objections to austere nominalism challenge its resources for providing an adequate account of sentences deploying abstract singular terms and sentences that appear to quantify over properties. By my lights, these objections hit their mark. What is interesting, however, is the typical concession that austere nominalism can handle the more *fundamental* issue concerning simple subject-predicate sentences that take as their subjects ordinary concrete particulars—sentences like "Socrates is snubnosed" and "The apple is red". Note that if austere nominalism cannot handle these basic subject-predicate sentences, then the view cannot handle the central issue in the debate over the Problem of Universals—the issue of *character* (or, to put it more neutrally, character attribution). Thus, if austere nominalism cannot handle these basic

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[31] David Lewis, "New Work for a Theory of Universals," *Properties*, eds. D. H. Mellor and Alex Oliver (Oxford ; New York: Oxford University Press, 1997), pg. 196.

[32] Peter van Inwagen, "A Theory of Properties", *Oxford Studies in Metaphysics*, Volume 1 (Oxford: Oxford University Press, 2004), pg. 114.

[33] Peter van Inwagen, "A Theory of Properties", *Oxford Studies in Metaphysics*, Volume 1 (Oxford: Oxford University Press, 2004).

subject-predicate sentences, then it is largely irrelevant whether the view can handle sentences that express attribute agreement or deploy abstract singular terms or quantify over properties. In the next section, I will call into question the assumption that austere nominalism has adequate resources for handling these basic subject-predicate sentences.

1.5 Austere Nominalism's Account of Character—Second Thoughts

Consider again the general phenomenon of attribute possession, as expressed by a simple subject-predicate sentence schema "A is F." As we've seen, the austere nominalist takes herself to have an answer to the question *In virtue of what is a basic subject-predicate sentence true?* Her answer schema is

"A is F" is true iff A is F

We are supposed to find the *truthmaker* for "A is F" by looking to the right side of the biconditional. But what *exactly* is the truthmaker that we are supposed to find there? Let's consider several possibilities, and let's call the *expression* on the right hand side of the biconditional "E." The relevant truthmaker would seem to be something *expressed by* E. It is implausible to suppose that the truthmaker is the linguistic expression, E, itself. But suppose it were. In all likelihood, there are other expressions which are truth equivalent to E. Suppose "B is G" is one of those expressions. But truth equivalence is transitive, so

"A is F" is true iff B is G

It follows then that the right hand side of this biconditional also gives us a truthmaker for "A is F." But by parity of reasoning, we have to allow that for *every* expression E* which is truth equivalent to E, E* is every bit as much a truthmaker for "A

is F" as E. But this seems obviously false. If there is a truthmaker for "A is F" it surely won't be an expression apparently about some object other than A. And, *a fortiori*, it won't turn out that "A is F" has a whole host of expressions cum truthmakers, almost all of which appear to be about objects other than A. So we can see why it is implausible to make the expression E itself the truthmaker for "A is F".

If it is not the case that E or any E* is a truthmaker for "A is F", then we must conclude that whatever else the relevant truthmaker is, it can't be a linguistic entity. So the relevant truthmaker is not the expression itself, but rather some *thing* expressed by the expression.

This result is not surprising and is in keeping with austere nominalism. As Loux reports, "What [the austere nominalist] tells us is that if 'Socrates is courageous' is true, it is true in virtue of how some nonlinguistic object, Socrates, is."(54) The lesson here is that the austere nominalist needs to provide a non-linguistic item from her ontology which can play the role of making a subject-predicate sentence true. But what can this non-linguistic entity be?

Recall that according to austere nominalism "what makes a subject-predicate sentence of the form 'A is F' true is just that A is F."[34] So the truthmaker is that non-linguistic entity that is picked out by the that clause, *that A is F*. But what entity is that? On the face of it, it is a proposition or proposition-like entity. But the austere nominalist doesn't have propositions, qua nonlinguistic entities, in her ontology. So appearances have led us astray.

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[34] Loux, *Metaphysics: A Contemporary Introduction,* 3rd Ed. (New York and London: Routledge, 2006), pg. 54.

There is another way in which an austere nominalist might wish to identify the relevant truthmaker. She might tell us that it is *how A is* that makes the sentence "A is F" true. Or, to use Loux's words, "what makes subject-predicate sentences true, then, is just that things out in the world are *as they are*..."(54, my italics) But, as indicated by the italicized phrases, these statements appear to be saying that the relevant truthmaker is the *way* an object is. But austere nominalism doesn't have *ways* in its ontology—there are objects *A, B, C*… but strictly speaking there is no *way* that *B* is. So again, appearances have led us astray.

As you might expect, we face the same problem if we try to take the relevant truthmaker to be a *fact*. Strictly speaking, the ontology of austere nominalism is factless. Still, we might grant them the latitude to use fact talk in a "loose and popular" sense. For example, perhaps it is helpful to use fact talk in order to distinguish austere nominalism from other views. So Loux: "the austere nominalist insists that every ontological account must take some facts as primitive or basic… [and] is merely proposing that we invoke the concept of a primitive or fundamental fact one step earlier [than the Platonist] and take the original fact that certain things are triangular to be basic."(53) While this exposition is fair to austere nominalism, it is somewhat misleading. It suggests that the Platonist and the austere nominalist disagree over which facts are to be analyzed and which are to be taken as primitive; more importantly, it suggests that there *are* facts on both ontologies. It is the latter suggestion that is misleading by dint of an equivocation on "facts." A typical Platonist ontology has concrete objects and facts, where these are distinct kinds of entities. But according to austere nominalism, there are no entities distinct from concrete objects; which is just to say that *there are no facts* (assuming the

austere nominalist does not want to *identify* facts with concrete objects). Thus, the Platonist and the austere nominalist must be using "fact" in a different sense.

Unfortunately, it is difficult to know *what* sense to make of the austere nominalist's use of "fact." (Or, it is difficult to know what sense to make of the use of "fact" in characterizing austere nominalism.) Perhaps we should take seriously the qualifier "primitive." That is, perhaps the idea is that it is a primitive fact that A is F, and to say that something is primitive is not to say that it is a something. This, however, is an unorthodox use of "primitive." Normally, to say that something is primitive is not to say that it is not a something, but rather to say that it is not analyzable (or simply not analyz*ed*). Primitive facts serve as unexplained explainers in a theory—and that which is not a something is not an explainer.

But perhaps we should allow the austere nominalist to use "primitive" in her unorthodox way. That is, suppose we grant that to say that something is a primitive is not to say that it is a something. Thus, when the austere nominalist says that the relevant truthmaker is a primitive fact she is *not* saying that the truthmaker is a something. But this move is of no help to the austere nominalist. Recall that we have been trying to figure out what the truthmaker is for a subject-predicate sentence like "A is F." The assumption is that something is a truthmaker only if it is a something. Thus, if the austere nominalist says that the relevant truthmaker is the primitive fact that A is F *and* she says that a primitive fact is not a something, then she has not yet identified the truthmaker for "a is F."

In sum, the challenge for the austere nominalist is to identify the truthmaker for "A is F" without identifying the truthmaker with a *proposition* about *A*, a *way A* is, or a

fact about *A*. Not surprisingly, it seems that the only remaining possible truthmaker is *A* itself. Andrew Newman seems to anticipate this conclusion when he notes that "Nominalists could talk about a sentence being made true by a fact. But their talk about facts would not have any ontological significance, since they do not have the resources to explain the distinction between a particular and a fact as a real unit."[35]

In the foregoing I have been arguing for the following claim:

(I) If austere nominalism is true and "A is F" has a truthmaker, then A alone suffices as its truthmaker.

I will now argue that (I) spells trouble for the austere nominalist. Suppose that austere nominalism is true. Suppose also that contingently true subject-predicate sentences like "A is F" have truthmakers. By (I), it follows that A alone suffices as a truthmaker for "A is F."

Given the previously noted truthmaking principle[36], it follows that "A exists" entails "A is F." The sentence "A is F" has been chosen arbitrarily, and so stands for *any* true subject-predicate sentence about A. Thus, the existence of A is sufficient to make true any true subject-predicate sentence about A. Thus, if a subject-predicate sentence S about A is true, it could not have been the case that A exists but S is false. The subject "A" has been chosen arbitrarily, and so stands for *any* object. Thus, for any object O and

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[35] Andrew Newman, *The Correspondence Theory of Truth: An Essay on the Metaphysics of Predication* (Cambridge: Cambridge University Press, 2002), pg. 27, fn. 46.

[36] To repeat: For every contingently true sentence S, there is an entity X such that "X exists" entails S. We may capture the relevant sense of "entails"by adding the following subsidiary principle: Where C is any claim of the form *X is a truthmaker for sentence S*, if C is true then C is necessarily true.

any subject-predicate sentence S about O, if S is true, it could not have been the case that O exists but S is false. The notable result is the following conditional:

(II) If austere nominalism is true and if true subject-predicate sentences have truthmakers, then if a subject-predicate sentence is true, it could not have been the case that the entity picked out by the subject exists but the sentence is false.

It will be useful to represent the key claims as follows:

(1) There are only concrete particulars.

(2) Contingently true subject-predicate sentences have truthmakers.

(3) For any object O and any true subject-predicate sentence S about O, the existence of O is sufficient to make S true.

(4) For any subject-predicate sentence S, if S is true, it could not have been the case that the subject of S exists but the sentence is false.

In the foregoing, the basic argument is that (1) & (2) jointly entail (3), which in turn entails (4). The problem is that (4) seems false, and thus the entailment of (4) seems to be a *reductio* on ((1) & (2)). Although it isn't obvious how to *argue* for the falsity of (4), there does seem to be an abundant number of putative counterexamples. Here is one: "Nate is a four-foot high epistemologist" is true but there are worlds in which Nate exists but "Nate is four-foot high epistemologist" is false—believe it or not, in some worlds he is even shorter.

The upshot is that the thoroughgoing nominalist seems to face a dilemma: she should either reject (2), the Truthmaking Principle, or accept (4). Either option is a high price to pay in order to provide an account of the character of concrete objects. With

respect to the problem of universals, character attribution is a central issue, and the standard way we attribute character is by way of subject-predicate sentences. It would seem, then, that an adequate account of character must be able to give an adequate account of subject-predicate truth. If the austere nominalist seeks to provide such an account without appealing to truthmakers per se, she owes us an alternative strategy for account for subject-predicate truth. This is a more fundamental problem than the traditional problems concerning sentences which deploy abstract singular terms or quantify over properties. All together, these problems (and perhaps others[37]) constitute a strong case against austere nominalism. Indeed, I will take these problems to signal the failure of austere nominalism. In the next chapter, I will explore the upshot of this failure for a philosopher who still seeks to provide an adequate account of the character of concrete objects.

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[37] As we've seen, austere nominalism is explicitly formulated in a way that appeals to truthmakers. Thus, another problem facing the austere nominalist is that her view, if true, cannot itself have a truthmaker. The argument goes as follows: Consider a world where it is true that there are only concrete objects. And, for simplicity let's say there are only two of them, A and B. It follows that in this world A and B are the only objects which can serve, individually or jointly, as truthmakers for any true sentence. Let's allow ourselves the use of propositions, and let us grant that A and B (qua concrete objects) make the following four propositions true: *A exists, B exists, A is concrete* and *B is concrete*. It seems clear that for any conjunction C of any or all of these four propositions, C does not entail *Only A and B exist.* Nor does C entail *There are only concrete objects.* It also seems clear that A and B do not jointly make true *Only A and B exist*. Nor do A and B jointly make true *There are only concrete objects*. The trouble is that A by itself or jointly with B will not suffice as the truthmaker for *There are only concrete objects*. So something else is needed, but there can be something else only if the target proposition is false. Thus, if *There are only concrete objects* is true, it has no truthmaker.

CHAPTER 2: ONTOLOGICAL STRATEGIES AND TROPE THEORY

2.1 Summary

In the previous chapter I argued that Austere Nominalism (AN) fails to provide an adequate general account of the character of ordinary objects. In this chapter I will point to the upshot of this failure. By way of preview, here is an abstract of this chapter: The failure of austere nominalism presents us with a choice between two different strategies for accounting for the character of ordinary objects: a relational ontology or a constituent ontology. In important respects, the choice between these two strategies is more fundamental than the traditional choice between some version of realism and some version of nominalism. There are realist and nominalist versions of each strategy. The different forms of relational nominalism are plagued by a number of decisive objections. Trope theory, however, is not subject to those objections. In this respect, it is superior to those other forms of nominalism.

2.2 The Upshot of Austere Nominalism's Failure

Ordinarily, we think of objects like elephants and electrons as having various characteristics. Elephants are large and cumbersome, while electrons are small and charged. While nobody seriously disputes these kinds of facts, metaphysicians dispute the proper account we should provide for them. As we saw in the last chapter, the

Austere Nominalist seeks to give a general account of the character of ordinary objects within a very limited explanatory framework. Indeed, she has at her disposal only one explanatory resource: the ordinary object itself, taken as a whole—that is, taken as a thing without any internal metaphysical structure. In the last chapter we saw that this restriction on explanatory resources leads to serious difficulties. The upshot of these difficulties is this: a philosopher who concedes the failure of austere nominalism but who wants to provide an adequate general account of the character of ordinary objects must expand her explanatory resources to include something besides the ordinary object itself, taken as a metaphysically unstructured whole. At this point, it is tempting to think that the immediate upshot is a choice of whether we will expand our ontology by adopting some version of realism or some other version of nominalism besides austere nominalism. In other words, it is tempting to think that if our ontology must undergo an ontic addition, the immediate decision is whether this addition should be construed in a realist or nominalist way.

2.3 Relational Versus Constituent Ontologies

On reflection, however, we can see that the upshot presents us with a more fundamental choice than that between realism and nominalism. As we will see, it presents us with a choice between two fundamentally different ontological strategies. In this section, I will describe these two strategies. In the subsequent sections, I will note the way in which the choice between these strategies is more fundamental than the choice between realism and nominalism, and I will provide some examples of realist and nominalist versions of each strategy.

That we face a choice between two fundamentally different ontological strategies was noticed long ago by Aristotle, who, in certain contexts, used the "immanent" versus "separate" distinction to mark the difference between two types of ontology.[38] What we will call a "constituent ontology" is a product of what Cover and Hawthorne have called "the blueprint approach:"

> When confronted with 'What is the nature of an individual substance?' one might hope to make some progress by conceiving of a sort of blueprint—of God's recipe book, so to speak. Just as a recipe in cookery will proceed by listing ingredients and modes of combination, so the blueprint for an individual substance would provide an account of the constituents of a thing, together with an account of the modes of unification whereby those constituents make up the thing or ontological kind in which one is interested.[39]

In an important sense, the blueprint approach looks *within* an ordinary thing to account for the thing being what it is or the way that it is. In so doing, this approach assumes that ordinary objects have something like a metaphysical structure, and it tells us we must look to that structure in giving an account of the character of ordinary objects.

Thus, the core general strategy of the constituent ontologist is to account for the character of ordinary objects in terms of the *parts* or *constituents* of those objects. (I use "part" and "constituent" interchangeably.) It is crucial to notice, however, that these parts are not ordinary, commonsense parts. Rather, they are what we might call *metaphysical parts* or *constituents*. In what follows, the notion of a metaphysical part is

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[38] According to Michael Loux, Aristotle uses this distinction in this way at 996[a]15-16; for details see Loux "Aristotle on Matter, Form, and Ontological Strategy", *Ancient Philosophy*, 25, 2005, pgs. 81-123; and Loux "Aristotle's Constituent Ontology," *Oxford Studies in Metaphysics, Vol. 2*, ed. Dean Zimmerman (Oxford: Oxford University Press, 2006), pg. 206-250.

[39] J. A. Cover and John O'Leary-Hawthorne, *Substance & Individuation in Leibniz* (Cambridge: Cambridge University Press, 1999), pg. 11.

central, so a few clarificatory comments are in order. There are three more familiar part/whole relations which are *not* the kind of composition relation that governs metaphysical parts. First, the metaphysical part/whole relation is not the ordinary *spatial* part/whole relation that governs commonsense parts. My heart is not a metaphysical part of me.[40] Second, the metaphysical part/whole relation is not the *set-membership* relation. Metaphysical parts are parts of ordinary objects, but no ordinary object is a set.[41] Third, the metaphysical part/whole relation is not the kind of relation that holds between a property (e.g., *being scarlet*) and a conjunctive property of which it is a conjunct (e.g., *being scarlet and round*).[42] Metaphysical parts are parts of ordinary objects, but no ordinary object is a property, not even a conjunctive property.[43] Constituent ontologists agree that the metaphysical part/whole relation is not one of these three familiar kinds of part/whole relations.

With respect to what the metaphysical part/whole relation is *not*, there is one final point of agreement among constituent ontologists. All of them agree that the relation in question is not the standard *mereological* part/whole relation within the context of unrestricted mereological composition. Within such a framework, for any two entities

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[40] My apologies to anyone who thinks that, strictly speaking, there are no hearts. I can only invite them to find their own example.

[41] At least, no ordinary object is a *non-singleton* set. And assuming that ordinary objects are singletons doesn't help—the metaphysical part/whole relation would still not be the set-membership relation since (at least some) metaphysical parts are *proper* parts of ordinary objects. But singletons don't have proper parts.

[42] Loux makes this point in his unpublished "An Exercise In Constituent Ontology", pg. 8.

[43] Somewhat surprisingly, L. A. Paul would deny this. She thinks that, strictly speaking, an ordinary object is a property. She said so during a presentation at Notre Dame (October, 2007). And, that she is committed to this follows from what she says about improper logical parts in "Logical Parts" *Nous*, Vol. 36, No. 4, 2002, pg. 581.

whatsoever, there is an object that is the fusion of those entities. Thus, if composition is unrestricted, then for any collection of metaphysical parts, there is an object that is their fusion. Note that if the metaphysical part/whole relation is governed by mereology, then ordinary objects are fusions of metaphysical parts. Thus, if mereological composition is unrestricted, then for *any* collection of metaphysical parts, there is an ordinary object that is their fusion. The problem, of course, is that this would result in far too many ordinary objects. Thus, constituent ontologists agree that if mereology governs the metaphysical part/whole relation, then mereological composition cannot be unrestricted.

At this point, the agreement ends. Some constituent ontologists think that it will suffice to restrict mereological composition and take ordinary objects to be fusions of metaphysical parts. D. C. Williams was attracted to this approach, and recently L. A. Paul has defended it, although she has been less than clear on what grounds the restriction on composition.[44] Others deny that we can take the metaphysical part/whole relation to be a mereological one, even if composition is restricted in some way. The usual rationale is that mereological fusions are indiscriminating with respect to the ordering or interrelations between their parts.[45] On the basis of this kind of rationale, Armstrong

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[44] See Williams comments in "On the Elements of Being: I" in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 117; See L. A. Paul, "Logical Parts" *Nous*, 36:4 (2002), pgs. 578-96, and "Coincidence as Overlalp" *Nous* 40:4 (2006), pgs. 623-59.

[45] Underwriting this denial is, roughly, the following argument: (i) If a collection of things compose a fusion, then they compose only *one* fusion. (ii) But the very same collection of metaphysical constituents can compose different wholes. Thus, the composition relation that governs metaphysical part/whole relation is not mereological fusion. Premise (i) follow from the standard principles of mereology. Armstrong argues for premise (ii) on the grounds that states of affairs exist and are complex entities with metaphysical parts, but states of affairs are such that the *ordering* of their parts is essential. If a and b are individuals and R is a nonsymmetrical relation (e.g. *is taller than*), then there are two different states of affairs that have exactly a, b and R as their constituents: aRb and bRa. Thus, Armstrong concludes that "it is possible for there to be two different states of affairs that nevertheless have *exactly the same constituents*." So mereological fusion won't suffice for the metaphysical part/whole relation. See

holds that the metaphysical part/whole relation is a sui generis one involving a "fundamental tie or nexus."[46]

In sum, constituent ontologists have been very clear about what a metaphysical part is *not* supposed to be. Whether they owe us more by way of a positive account of the metaphysical part/whole relation is an open question. I won't attempt to answer it, but recent attention has been given to this issue.[47] In fairness, however, it should be noted that many *non-constituent* ontologies face a similarly difficult question about the nature of the relation that holds between ordinary objects and the non-constituent entities that ground their character.[48] To this sort of approach we will now turn.

Although Cover and Hawthorne do not explicitly mention it, there is another important approach besides the blueprint approach. On this approach, in explaining an ordinary object's character, one does not look to its metaphysical ingredients and their modes of composition. Indeed, on this approach one does not suppose that ordinary objects *have* any structure or parts over and above their commonsense mereological

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Armstrong's *Universals*: *An Opinionated Introduction* (Boulder: Westview Press, 1989), pg. 90ff. For a recent discussion of the importance of the internal organization of metaphysical wholes, see Donald W. Mertz, "Ontic Predicates as Substance" in *Substanz. Neue Überlegungen zu einer klassischen Kategorie des Seienden* (Frankfurt: Klostermann Vittorio GmbH, 2005), pgs. 245-271.

[46] Armstrong, *Universals*: *An Opinionated Introduction* (Boulder: Westview Press, 1989), pg. 110.

[47] See Loux, "Aristotle's Constituent Ontology," *Oxford Studies in Metaphysics, Vol. 2*, ed. Dean Zimmerman (Oxford: Oxford University Press, 2006), pg. 206-250, and "An Exercise in Constituent Ontology" unpublished paper; and L. A. Paul, "Logical Parts," *Nous*¸ 36:4 (2002). For a helpful historical discussion of the constituent strategy, especially in terms of its notion of "constituent", see Alfred Freddoso's "Introduction" to his translation of *On Creation, Conservation, and Concurrence: Metaphysical Disputations 20-22* by Francisco Suarez, S. J. (South Bend, Indiana: St. Augustine's Press, 2002), pgs. xxxii-xxxix.

[48] This is especially the case for those non-constituent ontologies on which the character of an ordinary object is said to be grounded in transcendent, timeless and unchanging universals.

structure and parts. Instead, in explaining the character of an ordinary object, one looks to the object's relationships, ties, or connections to other, external things. This approach results in what we will call a *relational ontology*.

Thus, we have a rough and ready distinction between a relational ontology and a constituent ontology. This distinction is not unknown[49], but it is arguably underappreciated. As I will argue below, this distinction is prior to the traditional distinction between realism and nominalism, where these are understood as general accounts of the character of ordinary objects.[50]

We are now in a position to see how the failure of austere nominalism presents us with a choice between a relational ontology and a constituent ontology. If you concede the failure of austere nominalism but want to provide a general account of the character of ordinary objects, you must do so by appealing to something besides the ordinary object itself, taken as a metaphysically unstructured whole. Since we must posit[51] something besides the ordinary object taken as a whole, either we can posit something that is immanent in the object or we can posit something that is not immanent in the object.

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[49] The labels I'm using are taken from Nicholas Wolterstorff, who appears to be the first to point out the significance of the difference between the two strategies; see his "Bergmann's Constituent Ontology" Nous, Vol. 4, No. 2, 1970, pgs. 109-134, and "Divine Simplicity" *Philosophical* Perspectives, 5, Philosophy of Religion, ed. By James Tomberlin (Atascadero, California: Ridgeview Publishing Company, 1991), pgs. 531-552. Wolterstorff's labels are an explicit improvement upon those of Gustav Bergmann, who distinguished between what he called a "complex-ontology" and a "function-ontology"—see Bergmann, *Realism: A Critique of Brentano and Meinong* (Madison, Wisconsin: The University of Wisconsin Press, 1967). Loux discusses the different strategies at length in two places: "Aristotle's Constituent Ontology" in *Oxford Studies in Metaphysics, Vol.2,* ed. Dean Zimmerman (Oxford: Oxford University Press, 2006), and "An Exercise in Constituent Ontology" unpublished paper.

[50] So understood, versions of realism and nominalism typically *also* aim to provide semantic values for abstract singular terms, etc.

[51] Just to be clear: I do not mean to use the verb "posits" in the way that it is sometimes used in the context of scientific explanation, in which it means to assert the existence of an *unobservable* entity. By "posits" I mean "asserts the existence of".

Here is another way of putting this: since we must posit something besides the ordinary object, we must decide whether this ontic addition will be something that is, *in some special sense*, a part, component, or constituent of the ordinary object, or something that, as it is often put, exists "separately" from the object. An ontology which adopts the former strategy is a constituent ontology and one which adopts the latter is a relational ontology. Although I will stick with these labels, it must be stressed that the latter label is misleading, since a relational ontology needn't posit relations[52] and a constituent ontology needn't do without relations.[53]

2.4 The Fundamental Choice Between a Relational or Constituent Strategy

Having noted the distinction between these two strategies, we are now in a position to see how the choice between these strategies is more fundamental than the choice between some version of realism and some version of nominalism. After we see this, we will go on to look at specific realist and nominalist examples of each strategy.

You'll notice that the distinction between relational and constituent strategies can be drawn without characterizing the entities that supposedly underlie the character of ordinary objects. That is, the distinction can be drawn without presupposing some version of realism or nominalism, where these are understood as accounts of the character

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[52] A relationless relational ontology might be arrived at as follows: Worries about Bradley's regress could convince a relational ontologist (i) to speak of "fundamental ties" (which are not ontic additions to their terms) rather than reifying (say) the exemplification relation, and (ii) to posit impure properties (e.g., *being to the left of Loux*) rather than positing relations (*being to the left of*).

[53] A constituent ontology might postulate constituent relations, such *instantiation*, and/or non-constituent relations, such as *being to the left of*.

of ordinary objects. Furthermore, it is not clear how to draw a principled distinction between realism and nominalism without presupposing one of the two strategies. A naturally attractive and historically popular[54] tact, for example, would be to take "nominalism" to mean any view that accepts as a framework constraint what Reinhardt Grossmann has called the Axiom of Location:

> **AOL:** Necessarily, no entity is wholly and completely located at two non-overlapping places at the same time. [55]

Unfortunately, neither within the context of a relational ontology nor within the context of a constituent ontology will AOL suffice to distinguish between realist and nominalist views. This is most clearly the case within the context of relational ontology. Platonic forms, for example, are not located at all, and so a realist-relationalist ontology like Platonism is consistent with AOL. It might seem, however, that AOL would suffice within a constituent framework to distinguish between realist and nominalist views. After all, it is natural to think that the properties postulated by the constituent realist will be constituents that are spatially located within the ordinary objects; thus, where we have two red apples, we have redness located in two different places. And, indeed, this seems to be the way one constituent ontologist—David Armstrong—thinks about universals.[56]

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[54] "The great stumbling-block in the way of realism about universals is that it is so difficult to frame an idea of such items which seems at all plausible. This reaction—that there must be *something* dubious about items that can be simultaneously completely present in indefinitely many objects, items that are not affected by the vicissitudes of the objects to which they, perhaps temporarily belong—is an old one, as old as the theory itself." Keith Campbell, *Abstract Particulars* (Oxford: Basil Blackwell, 1990), pg. 12.

[55] I have modified Grossmann's official version of AOL, which goes as follows: "No entity whatsoever can exist at different places at once or at interrupted time intervals." See Grossman, *The Existence of the World: An Introduction to* Ontology (London and New York: Routledge, 1992, pg. 13.

[56] Or at least the Armstrong thought in his *Universals*: *An Opinionated Introduction* (Boulder: Westview Press, 1989).

But not all realist constituent ontologists think this way. J. P. Moreland and L. A. Paul both deny that universals are, strictly speaking, located anywhere. Both say that universals are constituents in ordinary objects but both deny that in the strict sense universals are spatio-temporally "in" those objects. One can only speak of universals being located in a derivative sense—for Paul, a universal is derivatively located in virtue of being fused with a location property.[57]

So AOL doesn't help us draw a principled distinction between realism and nominalism without presupposing one of the two strategies. I don't intend to prove it, but I doubt that any other principle can succeed where AOL has failed. At any rate, it is unclear what such a principle would look like. This suggests that the difference between realism and nominalism will—at best—amount to one thing on a constituent ontology and something else on a relational ontology.

The foregoing provides some reasons to think that the choice between a relational or constituent strategy is more fundamental than the choice between some version of realism and some version of nominalism. It is not surprising, then, that if one considers the various traditional and rival metaphysical systems, under their *de facto* labels, one can find all four of the possible combinations: realist-constituentist, realist-relationalist, nominalist-constituentist, and nominalist-relationalist.

I will illustrate this point in the next section; and, while I will point to both realist and nominalist views, the emphasis will be on the topic of the dissertation—nominalist

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[57] The principle difference between Moreland and Paul is that Moreland denies while Paul affirms that the relevant part/whole relation is a mereological one. For Moreland's views on this, see his *Universals* (Acumen 2001). For Paul's views, see her "Logical Parts" *Nous*, 36:4 (2002), pgs. 578-96; and "Coincidence as Overlalp" *Nous* 40:4 (2006), pgs. 623-59.

views. I will use the occasion to lay out a variety of different nominalist accounts of character, but I will restrict myself in the ways mentioned earlier. Accordingly, none of the views I consider will be an error theory about standard cases of predication and in none of these versions will God or uniquely theistic resources feature in its explanatory framework.

In addition, since in this dissertation I am concerned with certain forms of nominalism, when I describe a *realist* view I do so primarily to show that there are both relational and constituent versions of realism, and that realism within a constituent ontology looks quite different than realism with a relational ontology.

Finally, while describing the different versions of nominalism will serve the purpose of showing (i) that there are both relational and constituent versions of nominalism, and (ii) that nominalism within a constituent ontology looks quite different than nominalism with a relational ontology, there is a more important purpose being served: namely, to introduce other versions of nominalism for our consideration, in light of the failure of austere nominalism. After describing these versions of nominalism, I will go on to argue that a certain one of them—relative to the rest—is a superior view.

2.5 Realist and Nominalist Versions of Relational Ontology

I will now characterize relational ontology in terms of a general schema, and then go onto describe some of the realist and nominalist instances of this schema that are typically discussed in the literature. In schematic form, the relational ontologist posits, in addition to the ordinary object O, a distinct entity X which is such that X is in no sense a part of O and O's standing in some interesting relation, tie, or connection to X suffices to

make it the case that—put in ordinary parlance—O has a certain property, or—put with an eye to theory-neutrality—O is characterized in a certain way. Traditional ***Platonism*** is a realist instance of the relational strategy. In order to account for certain phenomena, a Platonist posits immutable and timeless "universals" ("forms", "*universals ante rem*", etc.) in addition to ordinary objects. But universals play their characterizing role without standing in any sort of part/whole relationship to the objects they characterize. A fundamentally unique sort of relation (or quasi-relation) is said to hold between universals and ordinary objects; the idea of such a relation is expressed by labels like "exemplification", "instantiation", or "participation." Thus, for example, an apple is red in virtue of standing in an exemplification relation to the universal, redness. Not surprisingly, on this construal of Platonism, Plato turns out to be a Platonist—or at least *one* Plato does.[58]

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[58] Another Plato might be found in Aristotle, who describes Plato as a paradigmatist, one who holds that an ordinary object has its character in virtue of *resembling* a paradigm object. See Aristotle, Metaphysics 997^b and following.

Another ancient example of a relational ontology is that of Plato's successor in the Academy, Speusippus, who—if Aristotle can be trusted—thought that ordinary objects get their character from *numbers*, where numbers are taken to be "abstract" entities that stand in a sui generis non-mereological relation or connection to the objects they characterize. Thus, Speusippus's view, unlike that of the Pythagoreans, is a relational ontology since, unlike them, he doesn't take numbers to be (in any sense) constituents of ordinary things. (Thus, a view need not postulate properties or forms to count as a relational ontology. In a latter chapter, we will see a version of constituent ontology that also does without properties or forms.) And, since his numbers function like Platonic universals—they stand in a one-many relation to ordinary objects—it is perhaps appropriate to call Speusippus's view a *realist*-relational ontology.

According to G. F. Stout, Bertrand Russell held to a version of relational realism. Stout's summary of Russell provides a particularly lucid description of a relational ontology: "[For] Mr. Russell, …there is no universe, but only an indefinite aggregate of disjointed items, each conceivably capable of existing by itself. As an integral part of this theory, he disjoins particulars and universals as two intrinsically independent realms of existence. He finds it possible to do this because, for him, qualities and relations are, as such, universals. Inasmuch as they are universals, they cannot in any way form part of the being of the particular things which they qualify or relate. On the other hand, inasmuch as they are qualities and relations, they cannot contain the particular things. Characters cannot contain what they characterise. It follows that the domain of concrete things and individuals in its own intrinsic being falls entirely apart from the domain of universals in their intrinsic being." Stout, "The Nature of Universals and Propositions,"

But nominalistically inclined versions of relational ontology are also possible. Indeed, if we consult the *locus classicus* for nominalism / realism taxonomies—Armstrong's *Nominalism and Realism*[59]—we find many nominalist-relationalist views, including Predicate Nominalism, Concept Nominalism, Paradigm Resemblance Nominalism, Object-Class Nominalism, Primitive Natural Class Nominalism, and Object-Resemblance Nominalism (some of these labels are my own). These views have provided the standard subject matter for subsequent discussions of nominalism, such as those found in Nicholas Wolterstorff[60], Michael Tooley[61], and J. P. Moreland.[62] While not all of these views are currently popular, they represent the range of views held throughout the history of philosophy.

I will now survey these nominalist-relationalist views. Although the first two versions of nominalism have a place on the traditional roster, one would be hard-pressed to find a contemporary philosopher who subscribes to one of them. According to Armstrong, so-called ***Predicate Nominalism*** takes an ordinary object O to have the character it does in virtue of O standing in a "satisfaction" relation to a certain

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Proceedings of the British Academy, 10 (1921-3), pgs. 157-72. Interestingly enough, a version of realist *constituent* ontology was also held by Russell, presumably at a different time. See *An Inquiry Into Meaning and Truth* (Pelican, 1962), pgs. 92-93, where Russell subscribes to a so-called bundle theory.

[59] Armstrong, *Nominalism and Realism*, Volume 1 of *Universals and Scientific Realism* (Cambridge: Cambridge University Press, 1978), Chapters 2-5.

[60] Wolterstorff *On Universals: An Essay in Ontology* (Chicago and London: The University of Chicago Press, 1970).

[61] *The Nature of Properties: Nominalism, Realism, and Trope Theory*, edited by Michael Tooley (New York & London: Garland Publishing, Inc., 1999).

[62] J. P. Moreland, *Universals* (Guildford: Acumen, 2001).

predicate.[63] Both the Medieval philosopher Roscelin of Compiégne[64] and the Modern philosopher Thomas Hobbes[65] have been interpreted as holding this kind of view. Note that this view is *not* austere nominalism. Austere nominalism takes the object itself to ground or make true all true subject-predicate sentences directly about that object. Predicate Nominalism, in a way, turns austere nominalism on its head: it is the satisfaction of a predicate that grounds or accounts for the object having the character it does. So on this view an apple is red because it satisfies "red." Of course, one immediately wants to know whether the relevant predicate is a type or token. If a type, then it is hard to see how what we are calling Predicate Nominalism is really a version of nominalism—since, presumably, a type is an abstract object of some sort. If a token, then the view seems to be giving us a rather anthropocentric ground for an object's character. We'll discuss anthropocentrism more in the next section. Here it will suffice to say that if the character of the apple is grounded in a *token* predicate, then had our language been just slightly different with respect to its color predicates, the apple wouldn't have been red. This result evinces the implausible anthropocentrism of the

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[63] I construe the view as asserting a one-way dependence relation ("in virtue of"), whereas Armstrong's official characterization is consistent with a dependence relation in either or both directions: "*a* has the property, F, if and only if *a* falls under the predicate 'F'." In fairness to Armstrong, his explanation of his official characterization gives it the meaning that is more explicit in my characterization. See his *Nominalism and Realism*, Volume 1 of *Universals and Scientific Realism* (Cambridge: Cambridge University Press, 1978), pg. 13.

[64] According to Anselm, Roscelin held the view that "universals were mere verbal utterances" or *flatus vocis* (verbal farts); see Richard I. Aaron *The Theory of Universals* (Oxford: Oxford University Press, 1967), pg. 13. See also *Realists and Nominalists* by Meyrick H. Carré (Oxford: Oxford University Press, 1946), pg. 40-41.

[65] According to Heimir Geirsson and Michael Losonsky, Hobbes argued "that different objects have common properties in virtue of the fact that we use the same word or phrase to describe them. For example, on this view, the red delicious apple and the ripe strawberry are both red not because there is a universal Redness they have in common, but because the same word 'red' applies to both of them." *Beginning Metaphysics: An Introductory Text with Readings* (Oxford: Blackwell Publishers, 1998), pg. 19.

view. Notwithstanding its implausibility, this view clearly adopts a relational strategy: the account of O's character doesn't involve an appeal to anything metaphysically immanent in O.

The next view, ***Concept Nominalism***, is said to operate in parallel fashion to Predicate Nominalism. According to Armstrong, this view takes the object O to have the character it does in virtue of O's standing in a "satisfaction" or subsumption relation to a certain concept. So an apple is red because it satisfies the concept expressed by "red." As was the case for Predicate Nominalism, the relevant concept will have to be construed as either a type or a token. And, as we will see in the next section, neither construal is plausible. As was the case for Predicate Nominalism, Concept Nominalism is a relational ontology: the account of O's character doesn't involve an appeal to anything metaphysically immanent in O.[66]

Another view we might call ***Paradigm-Resemblance Nominalism***. There are at least two variants of this view. On the first variant, an object has the character it does in virtue of standing in a resemblance relation (or quasi-relation), of a sufficient strength, to another ordinary object, where the latter object serves as the paradigm for the specific characteristic in question. So, the apple on this table is red because it sufficiently resembles some other apple, where the latter is somehow the paradigm for all red

[66] But consider a world W in which I am the only being capable of having concepts. It seems that the concept nominalist would have to say that it is *my* concepts which account for my character. If there is a sense in which my concepts are metaphysical constituents in me, then perhaps in W concept nominalism is a constituent ontology.

objects.[67] The idea here seems to be that just as the meter stick in my garage is truly said to be a meter in length *in virtue of resembling the meter stick in Paris*, so this apple is red in virtue of resembling some paradigm apple.[68] On the second variant of Paradigm Resemblance Nominalism, an object has the character it does in virtue of standing in a resemblance relation (or quasi-relation), of a sufficient strength, to each member of a special set of closely resembling ordinary objects. On this variant, this set, rather than a single object, serves as the paradigm for the specific characteristic in question. H. H. Price explained the variant as follows:

> Every class [of resembling objects] has, as it were, a nucleus, an inner ring of key-members, consisting of a small group of standard objects or exemplars. The exemplars for the class of red things might be a certain tomato, a certain brick and a certain British post-box. Let us call them A, B, and C for short. Then a red object is any object which resembles A, B, and C as closely as they resemble one another.[69]

Note that on neither variant is it the case that a non-paradigm object has a certain characteristic in virtue of being a member of a certain set. True, on both views, a thing having a given form of character is a member of a set—the set of all and only the things with that character. But this fact is posterior to the central fact in character

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[67] It is not clear what is supposed to account for the *paradigm* having the character it does—there seem to be two options: either the paradigm has its character in virtue of resembling itself, or it is a primitive fact that the paradigm has the character it does.

[68] William Alston appeals to this example when defending his claim that God is the particular paradigm of moral goodness. See his "What Euthyphro Should Have Said" in *Philosophy of Religion: A Reader and Guide*, edited by W. L. Craig, M. Murray, and J. P. Moreland (New Brunswick: Rutgers University Press, 2002), pgs. 283-298.

[69] H. H. Price, "Universals and Resemblances", Chapter 1 of his *Thinking and Experience* (Cambridge, Massachusetts: Harvard University Press, 1962), pg. 20-21.

determination, viz., that the object resemble some other object, or each member of a different and prior set of objects.

But there are versions of nominalist relationalism that *do* make an object's membership in a set the ground of an object's character. They are all versions of what we can call *set-theoretic* nominalism. Roughly, they share the following core interrelated ideas:

(i) It is in virtue of being a member of a set, or kind of set, that an ordinary object is charactered in the way that it is (or, put less neutrally: "has a certain characteristic").

(ii) Attribute agreement amounts to co-membership; that is, two objects are charactered in the same way in virtue of those objects being co-members of a class.

(iii) Talking about the characteristics of objects or quantifying over a property amounts to talking about or quantifying over a certain set (a "property class") of ordinary objects.[70]

Whereas the Platonist appeals to forms in her account of an object's character, the set-theoretic nominalist appeals to sets. That is, the so-called *property classes* of set-theoretic nominalism are supposed to play the same character-grounding role(s) as the forms of Platonism.

The simplest version of set-theoretic nominalism was introduced by Armstrong under the title of "Class Nominalism." At that time (1978), Armstrong noted that

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[70] David Manley, "Properties and Resemblance Classes, "*Nous*, 2002, Vol. 36, No. 1, pg. 75.

> I have not found an author who explicitly expounds and defends Class Nominalism. Rather, Class Nominalism is a pervasive tendency or occasional assumption among those philosophers who are Nominalist in sympathy, particularly if they are logicians. For modern logic has an extensional or class bias.[71]

Since then, David Lewis has endorsed a version of Class Nominalism, although he does so within the framework of modal realism.[72] Because Class Nominalism is one of several versions of set-theoretic nominalism that we will consider, I will adopt a more perspicuous label for it: "***Object-Class Nominalism***" (OCN).[73] Here is how Armstrong describes this view:

> [OCN] is the view that *a*'s having a property, F, should be analyzed as *a*'s being a member of a certain class of things, the class of Fs. The phrase 'the class of Fs' must, of course, be 'taken in extension'. For [one who holds OCN] the phrase is simply a convenient way of picking out a certain class of particulars. Otherwise his analysis is involved in blatant circularity.[74]

Unfortunately, Armstrong's description of OCN can be misleading. Consider his phrase "being a member of a *certain* class of things." This phrase suggests that on OCN,

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[71] Armstrong, *Nominalism and Realism*, Volume 1 of *Universals and Scientific Realism* (Cambridge: Cambridge University Press, 1978), p 15.

[72] See Lewis' comments in footnote 8 of "New Work For A Theory of Universals", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 193. Lewis thinks, for example, that "the property of being a talking donkey…is the set of all talking donkeys throughout the [possible] worlds." *On the Plurality of Worlds* (Malden, Massachusetts: Blackwell Publishers, 1986), pg. 50. It should be noted that Lewis has reservations about Class Nominalism. In particular, he isn't certain that Class Nominalism-cum-modal-realism will suffice for giving an account of so-called Moorean facts of attribute agreement (e.g., that "different lumps of gold are the same in kind"). In order to provide such an account, Lewis entertains a view like the next one I will discuss: Primitive Natural Class Nominalism. See "New Work for a Theory of Universals," p. 192 in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997).

[73] I borrow this label from David Manley, "Properties and Resemblance Classes, "*Nous*, 2002, Vol. 36, No. 1, pg. 76.

[74] Armstrong, *Nominalism and Realism*, Volume 1 of *Universals and Scientific Realism* (Cambridge: Cambridge University Press, 1978), p. 28.

an object's membership in certain classes, but *not* its membership in *other* classes, suffices for that object's having certain properties. The suggestion is that we can distinguish between two sorts of classes which have an object O as a member. The first sort of class is such that O's membership in it suffices to ground some characteristic of O. The other sort of class is such that O's membership in it does *not* suffice to ground any characteristic of O. The problem, however, is that OCN is defined in such a way as to preclude there being such a distinction. For example, one natural way to draw the distinction would be to draw it between a set whose members are all of a certain kind and a set whose members are *not* all of a certain kind. But of course, OCN was supposed to be providing an analysis of the character of ordinary objects. We wanted, after all, an account of what it is in virtue of which the object O is the *kind* of thing it is. So, as Armstrong correctly notes, to appeal to *kinds* in that analysis is utterly unilluminating, if not circular. [75] Perhaps worse, the distinction between two sorts of classes may turn on an implicit appeal to properties or kinds construed in a *non-set-theoretic way*. Therefore, OCN should be understood as withholding from giving an account of the unity of any character-grounding set. On this view, each such set is extensionally defined; thus for any extensionally defined class of ordinary objects, where x and y are any two members of that class, we can aptly say that "x and y share a unique property." In this context,

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[75] Here Armstrong might be taking his lead from G. F. Stout, who wrote: "What again is meant by resemblance in a certain respect? In what respect must figures resemble each other to be classed as triangles? Shall we say "by being enclosed by three lines"? The answer is a good one if we suppose that three-sidedness is a single quality indivisibly present in the plurality of things which it qualifies. But nominalism is based on a denial of this position. Hence in the mouth of the nominalist the answer can only mean that the figures must resemble each other inasmuch as they are all triangles - inasmuch as they are all members of the class "triangular figures." This is plainly a vicious circle, when what requires to be explained is precisely the meaning of the words "class" or "kind."" "The Nature of Universals and Propositions," *Proceedings of the British Academy*, 10 (1921-3), pgs. 157-72.

there is no difference between a class and a set. And, of course, *every* set is extensionally, and thus uniquely, defined. Thus, OCN implies that for every unique set whatsoever of ordinary objects, we could aptly predicate a unique property of each of its members.

At this point, it is worth mentioning a serious problem for OCN, since the other versions of set-theoretic nominalism are designed to overcome it. Consider the following two sets: {all the electrons} and {George W. Bush, the Statue of Liberty, this apple, this rock, this fingernail clipping}. The problem is that OCN entails (i) that with respect to each of these sets, we can truly talk about a unique property shared by all and only its members, and (ii) that these sets are on par in that OCN cannot account for what we would pre-theoretically describe as the difference between natural groupings and gerrymandered ones. The sets of OCN "carve reality at the joints—and everywhere else as well. If it's distinctions we want, too much structure is no better than none."[76] The problem of accounting for the difference between sets that carve reality at its joints and those sets that do not has been called the *Problem of Naturalness*.[77]

Unlike OCN, other versions of set-theoretic nominalism are not, as it were, egalitarians about sets of ordinary objects. That is, other versions deny that *every* set of ordinary objects is a property class. To underwrite this denial, and to solve the Problem of Naturalness, other versions of set-theoretic nominalism add what we might call a *naturalizing function*. In what follows, let Σ be the set of all the sets of ordinary objects:

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[76] These are Lewis' words, taken slightly out of context, but they apply nicely to OCN. Lewis was talking about properties construed as sets of possible objects. See the previous footnote on Lewis.

[77] David Manley, "Properties and Resemblance Classes, "*Nous*, 2002, Vol. 36, No. 1, pg. 76.

$\Sigma = \{ x \mid x \text{ is a set of ordinary objects}\}$. A naturalizing function picks out a proper subset of Σ, where members of the subset are *natural* classes in that these classes exactly represent what we might pre-theoretically describe as the natural divisions of the world (whatever those divisions turn out to be, and at whatever level of science, etc.). Let φ stand for any set picked out by the naturalizing function (i.e., any set in the range of the function). φ can be called a "property-class" in that it functions like a realist's property: it is in virtue of being a member of φ that ordinary objects are charactered in a certain way; it is in virtue of being co-members of φ that objects can be said to charactered in the same way; and talking about or quantifying over a property amounts to talking about or quantifying over some φ.

I will mention two versions of set-theoretic nominalism that deploy a naturalizing function. The first is ***Primitive Natural Class Nominalism***.[78] According to Armstrong, this sort of view was held by Antony Quinton.[79] David Lewis describes this kind of view as follows:

> Most simply, a Nominalist could take it as primitive that some classes of things are perfectly natural properties; others are less-than-perfectly natural to various degrees; and most are not at all natural. Such a Nominalist takes 'natural' as a primitive predicate, and offers no analysis of what he means in predicating it of classes. His intention is to select the very same classes as natural properties that the user of universals would select.[80]

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[78] Armstrong introduces this view in *Universals: An Opinionated Introduction* (Boulder: Westview Press, 1989), Ch. 2.

[79] Armstrong, *Universals*: *An Opinionated Introduction* (Boulder: Westview Press, 1989), pg. 21. See Antony Quinton's "Properties and Classes" *Proceedings of the Aristotelian Society*, Vol. 58, 1957.

[80] David Lewis, "New Work for a Theory of Universals", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 193.

On this view, it is simply a primitive fact that certain sets in Σ (the set of all the sets of ordinary objects) are "natural" and the rest are not. As Lewis noted, naturalness plausibly comes in degrees. But to simplify the discussion, I will ignore this complication. I will assume that for any set φ that is a member of Σ, φ is either natural or unnatural. That is, either φ represents what we would pre-theoretically describe as a natural grouping of objects, or φ does not. But on this view, for every φ such that φ is natural, φ's being natural is a primitive fact—in particular, φ's being natural is not grounded in facts about the homogeneity (similarity, etc.) of φ's members. Thus, on this view, there *just is* a naturalizing function, but it is not one that is capable of specification. Instead, the naturalizing function is primitive in that it picks out a proper sub-set of Σ *without looking to the character of the ordinary objects themselves*. This is because, on this view, two objects are charactered in the same way in virtue of being co-members of a natural class. More generally, if the members of a class φ are homogeneous, they are so in virtue of the primitive fact that φ is a natural class.

The next version of set-theoretic nominalism privileges a proper subset of Σ by appealing to *resemblances* between ordinary objects. This view is called ***Object-Resemblance Nominalism*** (ORN).[81] Since the view intends to give a reductive—viz., a set-theoretic—account of properties, it cannot analyze *x resembles y* in terms of any *respect* in terms of which these objects resemble, since any such "respect" would be a

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[81] I take the label from David Manley, "Properties and Resemblance Classes, " *Nous*, 2002, Vol. 36, No. 1, p. 75. Recently, Gonzalo Rodriguez-Pereyra has defended a version of resemblance nominalism that assumes the truth of modal realism (i.e., that every possible world exists as concretely as the world in which we happen to exist; that there are no spatial, temporal, or causal relations between worlds; our world is "actual" only in the sense that it is "ours"; etc.). Since I find modal realism incredible, I will not consider Rodriquez-Pereyra's version of nominalism in this dissertation. See his *Resemblance Nominalism: A Solution to the Problem of Universals* (Oxford: Oxford University Press, 2002).

surrogate property. That ORN must operate under such a theoretical constraint was noted by Nelson Goodman:

> Similarity [between ordinary objects[82]] is, of course, similarity in *some respect or other*; if two [ordinary] things are similar they are similar in some 'respect'—i.e., they have a common quality. When, however, we say that more than two things are all similar *in one respect* we are in effect saying not only that each two are similar but also that some 'respect' in which any two are similar is the same as that in which any other two are similar. In other words, we are saying that every two members of the class have in common some quality that every other two members have, and this amounts to saying that all members of the class have a common quality. But this is precisely what we are trying to define in terms of our given two-place primitive predicate [of resemblance]. And so we find ourselves back where we started.[83]

Instead, ORN takes it to be a primitive fact that objects resemble each other to various degrees. ORN's naturalizing function, then, picks out of Σ the so-called resemblance classes. A class φ is an resemblance class if and only if:

(i) Each member of φ is an ordinary object;

(ii) each member of φ resembles every other member to some degree; and

(iii) no non-member of φ resembles every member of φ to that degree.[84]

Thus, for example, the class of all electrons is a resemblance class, as is the class of all red things. According to ORN, two objects can be said to share a property if and

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[82] It is important to add this qualification, since (i) Goodman has ordinary objects in mind, like apples, roses and aardvarks, and (ii) as we will see later, this sort of objection does not have the same bite—if any—against a view that appeals to resemblances between particularized properties (or "tropes"). For a useful discussion of these points, see Arda Denkel, *Object and Property* (Cambridge: Cambridge University Press, 1996), pgs. 158-171.

[83] Nelson Goodman, *The Structure of Appearance*, Second edition (Indianapolis: The Bobbs-Merrill Company, 1966), pg. 148-49.

[84] This definition of a resemblance class is a modified version of one offered by David Manley in his "Properties and Resemblance Classes, "*Nous*, 2002, Vol. 36, No. 1, p. 77.

only if they are co-members of a resemblance class. Thus, all exactly resembling red objects can be said to share a property, "being red." It will be useful to note the difference between ORN and Paradigm Resemblance Nominalism: On ORN, a rose is red in virtue of being a member of the set of all and only exactly resembling red things; thus the rose in question is part of the extension of the set which grounds the rose's character. On Paradigm Resemblance Nominalism a rose is red in virtue of resembling the members of some set of paradigms; thus the rose in question is not part of the extension of the set which grounds the rose's character (assuming the rose in question is not a paradigm for redness).

So much for canvassing the traditional realist and nominalist versions of relational ontology. We've seen that although there are a variety of such views, they share a common strategy for accounting for the character of ordinary objects. This strategy is that of accounting for the character of an object in terms of something which is not in any sense a part of that object. Any view which adopts this general strategy is what we've been calling a relational ontology. In contrast to the strategy of the relational ontologist, a constituent ontologist looks to the metaphysical parts of the ordinary object in order to account for its character. To this general strategy we will now turn.

2.6 Realist and Nominalist Versions of Constituent Ontology

Let's begin by stating the general strategy of a constituent ontologist. In schematic form, the constituent ontologist posits, in addition to the ordinary object O, an entity X which is such that X is in some sense a metaphysical part of O and X's being a part of O suffices to make it the case that O has a certain characteristic (or, is

characterized in a certain way). Again, there are both realist and nominalist instances of this strategy.

Before we consider some examples, it should be noted that the difference between realist and nominalist constituent ontologies is often spelled out in terms of whether X (i.e., that which accounts for O's being characterized in a certain way) is "repeatable." Unfortunately, realist relational ontologists have used "repeatability" to mean at least two different things. Sometimes we are told that something is repeatable in virtue of being the sort of thing which is possibly a constituent of numerically distinct, non-overlapping ordinary objects at one and the same time. At other times we are told that something is repeatable in virtue of being the sort of thing that is possibly located at two numerically different non-overlapping places at a single time. (In the next chapter I will show how the distinction between these two senses is important.) At any rate, the constituent-realist affirms the existence of constituents which are repeatable in at least one of these senses, whereas the constituent-nominalist typically denies that anything is repeatable in either sense.

Let's now consider a couple of examples. Recently, D. M. Armstrong has defended a realist version of a constituent ontology.[85] Roughly, on his view there are, besides ordinary objects, repeatable properties (or as he puts it, "immanent universals")

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[85] Armstrong used to think that there are two categorially different kinds of constituents in an ordinary object—both immanent universals and a "thin particular" (the latter is arguably what has always been called a bare particular; but since "bare particulars" have been so often misconstrued, perhaps a new label was justified). See his *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997). More recently, Armstrong has defended the rather opaque view that (i) ordinary objects have (only) parts of universals as constituents, and (ii) universals have (only) parts of ordinary objects as constituents. For his recent view, see "How Do Particulars Stand to Universals?", *Oxford Studies in Metaphysics*, Vol. 1, ed. by Dean Zimmerman (Oxford: Clarendon Press, 2004), pgs. 139-54.

which exist as constituents of those objects and in virtue of which those objects have the character they do.[86] For Armstrong, these constituents are repeatable in both of the above senses.

An increasingly popular version of nominalist constituent ontology is so-called **Trope Theory**.[87] Although this theory comes in many forms, at the core of the theory are the following four claims:

(**TT1**) There are properties.

(**TT2**) Every property is a particular, that is, each property is not possibly a constituent in more than one non-overlapping ordinary object at the same time.[88]

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[86] A classical version of a constituent ontology is that of Pythagoras. If Aristotle is right, Pythagoras agreed with Speusippus that objects derive their character from numbers; but against him, Pythagoras argued that numbers are constituents of ordinary objects, where a number is taken to be the sort of thing that can be a constituent in two or more non-overlapping objects. Pythagoras' view is thus a constituent ontology. And since his numbers function like the universals of a realist, it would be fair to describe it as a *realist* constituent ontology.

[87] Important contemporary defenses of this kind of view include: G. F. Stout "Are the Characteristics of Particular Things Universal or Particular?" *Proceedings of the Aristotelian Society,* supp. Vol. 3, 1923, pgs. 114-22; D. C. Williams "On the Elements of Being: I" in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pgs. 112-124; Keith Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990); John Bacon, *Universals and Property Instances: The Alphabet of Being* (Oxford: Blackwell, 1995); Peter Simons "Particulars in Particular Clothing: Three Trope Theories of Substance" *Philosophy and Phenomenological Research*, 54, pgs. 553-75; and Anna-Sofia Maurin *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002). Trope theory seems to be increasing in popularity, as manifested by its development and/or deployment in several recent important projects. See, for example: John Bacon, *Universals and Property Instances: The Alphabet of Being*, Aristotelian Society Series, Vol. 15 (Oxford: Blackwell, 1995); Douglas Ehring, *Causation & Persistence* (New York: Oxford University Press, 1997); Anna-Sofia Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002); John Heil, *From an Ontological Point of View* (Oxford: Clarendon Press, 2003); George Molnar, *Powers: A Study in Metaphysics* (Oxford: Oxford University Press, 2003).

[88] The terms "particular" and "repeatable" are often taken to be antonyms. Thus, an alternative and not uncommon way to state TT2 is to say that properties are not repeatable. As previously noted, however, the term "repeatable" has been used in at least two ways: (i) being possibly located at two numerically different non-overlapping places at a single time, and (ii) being possibly a constituent of numerically distinct, non-overlapping ordinary objects at one and the same time. In TT2 I've chosen to construe "being particular" in contrast to the latter sense of "being repeatable". I've done so because a

(**TT3**) Properties are fundamental metaphysical constituents of ordinary objects.

(**TT4**) An ordinary object has the character it does in virtue of having properties as metaphysical parts.

Although trope theorists share a commitment to particularized[89] properties, they have used a number of different labels for properties construed in this way.[90] Some of these names are notoriously unhelpful and even misleading: "individual accidents" (Aristotle), "first accidents" (Aquinas), "modes" (John Locke), "moments" (Edmund Husserl), "tropes" (Williams[91]), "abstract particulars" (Campbell), and "cases" (Wolterstorff). At any rate, out of deference to recent trends, and because I like the sound of it, I will use the term "trope".

I'll now note how trope theory compares to a realist constituent ontology, and then go on to describe the primary sorts of roles that tropes are supposed to play. Along the way I'll note some areas of in-house disagreement amongst trope theorists.

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trope theorist might want to allow tropes to be repeatable in the sense of being possibly multiply located. I discuss this in some detail in the next chapter.

[89] A point of clarification: The phrase "particularized property" should *not* be understood as suggesting that such a property has undergone some sort of *process* of particularization (whatever that might amount to). I would prefer to use the phrase "particular property", but the latter phrase (relative to the one I've chosen) is even more likely to be misunderstood—as meaning "specific property." I will later illustrate this sort of terminological confusion.

[90] For a brief historical survey of the sundry labels, see Peter Simons, "Particulars in Particular Clothing: Three Trope Theories of Substance" *Philosophy and Phenomenological Research*, Vol. 54, No. 3 (1994), pg. 555; see also Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), pg 3-4; and John Bacon "Tropes", *The Stanford Encyclopedia of Philosophy (Fall 2002 Edition)*, Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2002/entries/tropes/>

[91] Williams has been accused of picking "trope" as some sort of bad joke, but this seems to be a false accusation. See Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002).

In virtue of its commitment to (TT3) and (TT4), trope theory embodies a constituent strategy, accounting for the character of ordinary objects in terms of the metaphysical parts of those objects. Thus, with respect to these commitments, trope theory is similar to a *realist* constituent ontology. The difference, of course, is that a constituent realist would reject (TT2). Thus, according to a constituent realist the universal redness can be "in" two apples at the same time, but according to a trope theorist a redness trope is not capable of such a feat. Instead, each red apple has its very own redness trope. For the trope theorist, the characteristics of ordinary objects are just as particular as the objects they characterize.[92]

So trope theorists agree that properties are particular metaphysical constituents in ordinary objects. Trope theorists, however, disagree on whether tropes are the *only* kind of metaphysical constituent in ordinary objects. We can see that there is room for this disagreement by noticing that the conjunction of (TT1) through (TT4) does not entail that

(**TT5**) Every metaphysical constituent is a property.

The choice between accepting or rejecting (TT5) has sometimes been described as the choice between accepting or rejecting a *one-category* trope theory. (Unfortunately, very little is said about necessary or sufficient conditions for two entities being categorially different.[93]) And indeed, traditional trope theorists—e.g.

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[92] This much-repeated thesis apparently originates from G. F. Stout, "The Nature of Universals and Propositions," *Proceedings of the British Academy*, 10 (1921-3), pgs. 157-72.

[93] The important question—*Under what conditions are two entities categorially different?*—seems largely ignored by both Campbell and Maurin. This is especially curious in Maurin's case, since she repeatedly rejects proposed modifications of trope theory on the ground that those modifications violate her one-category desideratum.

Stout, Campbell, and Maurin—clearly endorse (TT5), and take it to be a *virtue* of their theory that it avoids the "perennial embarrassments"[94] of a two-category ontology.[95]

Some recent and *prima facie* less economical trope theories expand their ontologies by postulating other categorially unique kinds of basic constituents, such as primitive universals (e.g., properties construed in a realist way) or primitive substrata (e.g., bare particulars).[96] Accordingly, these more expansive trope theories are sometimes construed as multi-category ontologies.[97]

Against more expansive trope theories, traditional trope theorists insist on the explanatory sufficiency of a one-category ontology of tropes. They tell us that tropes have the ability to play different roles traditionally assigned to categorially-different entities. As Williams has said:

> [Tropes] 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. That such a crucial category has no regular name is quite characteristic of first principles and is part of what

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[94] This nice phrase is Campbell's. He discusses the merits of a one-category ontology in the first chapter of his *Abstract Particulars* (Oxford: Basil Blackwell, 1990).

[95] This is clearly the case for Maurin. In her book, *If Tropes*, she considers several problems for trope theory. For many of these problems, it appears that a solution might be had by introducing entities which are not tropes. Maurin, however, rejects each of these putative solutions on the ground that each such solution would require giving up a one-category ontology. For Maurin, these rejections seem to be based on an all-things-considered judgment which includes the convictions that (i) broadly "Ockhamist" or economic considerations are a very significant factor in theory choice, and (ii) a multiple-category ontology faces serious problems with respect to connecting the items of different categories. See *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), especially pages 5-6.

[96] In Bacon's useful terms, a *kernel-tropism* adds primitive substrata, whereas *trope universalism* adds primitive universals. An example of the former is the view developed by C. B. Martin in "Substance Substantiated" *Australasian Journal of Philosophy,* Vol. 58, 1980, pgs. 3-10. An example of the latter is the view held by John Cook Wilson, *Statement and Inference, with Other Philosophical Papers*, Vol. 2 (Oxford: Clarendon Press, 1926).

[97] Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002).

> makes the latter worth pursuing. …[T]he trope…provides the one rubric which is hospitable to a hundred sorts of entity which neither philosophy, science, nor common sense can forego.[98]

For most trope theorists, there are *two* sorts of entities for which tropes provide the sole "rubric". Tropes are supposed to be the sole constituents that go together to make up or "construct" both ordinary objects and ersatz universals.[99] As Campbell says

> To pursue the one-category strategy, we need to make a start with a category that is not either of the classic pair, neither concrete particular nor abstract universal, but from which both of these can be constructed. That is what the trope theory sets out to do.[100]

It is important to note that the trope theorist is *not* affirming some sort of eliminativism about whatever is constructed out of tropes. As Maurin states:

> In saying that tropes are the only entities that exist we are not saying that there are no tables or that there is no universal colour redness. All we are saying is that all entities that exist besides tropes are constructed from tropes. Another way of saying that there is nothing but tropes is to say that tropes are the only metaphysically *fundamental* entities.[101]

With respect to how ordinary individuals are constructed out of tropes, trope theorists agree on the rough and ready idea that ordinary objects are bundles of tropes which are all present together. But exactly *how* tropes go together to construct an

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[98] D. C. Williams "On the Elements of Being: I" in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pgs 115 and 123.

[99] John Bacon calls this a *trope-cluster theory* in his "Tropes", *The Stanford Encyclopedia of Philosophy (Fall 2002 Edition)*, Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/fall2002/entries/tropes/>.

[100] Keith Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pg. 20.

[101] Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), pg. 5.

ordinary object continues to be a matter of dispute among trope theorists. This is especially the case among trope theorists who are also bundle theorists about substance. As Maurin notes, "The main difficulty in working out a detailed [tropes only] bundle theory, naturally, is giving a plausible account of this essential connection."[102] The connection has been informally described as "the relation of occurring together, of being present together, or being located together…"[103] While trope theorists have labeled the bundling relation in different ways,[104] I will stick with "compresence." Concerning compresence, there are three questions of central importance for trope theorists. First, is compresence itself a trope? Second, is compresence an internal or external relation (on some relevant gloss of those terms)? [105] And third, should "being compresent" be cashed out in terms of "being co-located"?[106]

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[102] Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), pg. 127.

[103] Loux, *Metaphysics: A Contemporary Introduction*, 3rd Edition (New York: Routledge, 2006), pg. 91.

[104] Other labels include "concurrence," "collocation," "combination," "consubstantiation," and "coactuality." Loux, *Metaphysics: A Contemporary Introduction*, 3rd Edition (New York: Routledge, 2006), pg. 91.

[105] These issues are often thought to be crucially related. Allegedly, if compresence supervenes on two given tropes, then it needn't be taken to be a genuine ontic-addition. The premise being that, in the words of Armstrong, "what supervenes is no addition of being"—he calls this the "ontological free lunch" principle. See *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997), pg. 12. Maurin discusses these matters in some detail in Chapter 6 of *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002).

[106] L. A. Paul has argued that the answer to this question should be No. She provides several reasons for this answer, but the basic idea is that our views about how properties go together to make up an object should be flexible with respect to our views about space-time (whether we adopt a absolutist or relational view, for example). See her "Logical Parts," *Nous*, 36:4 (2002), pg. 580.

How best to answer these questions about "thing-construction" continues to be a matter of dispute among trope theorists.[107] Less disputed among trope theorists is the way in which tropes go together to "construct" an *ersatz universal*. The core idea is that fully determinate ersatz universals are sets of exactly similar tropes. To illustrate, let R be the set of all redness tropes of a fully determinate shade. R will include, for example, the redness_1 in this apple and the redness_2 in that cherry, and every other redness trope of the relevant shade. All the tropes in R are qualitatively exactly similar, and no trope that is not a member of R is qualitatively exactly similar to a trope that is a member of R. Trope theorists argue that R can play some of the same roles that the realist's universal, Redness, can play. For example, trope theorists argue that R can provide the semantic value for the abstract singular term "Red" in a sentence like "Red is a color." Thus, R is said to be a fully determinate ersatz universal. More general or less determinate ersatz universals are also sets of resembling tropes, but these tropes are not *exactly* similar. There is, for example, the ersatz universal *being colored*, which is the set of all rednesses, bluenesses, yellownesses, etc. In either case, since ersatz universals are constructed out of tropes via similarity relations, trope theorists have to decide whether similarity relations are themselves to be understood as tropes. This, too, is a matter of controversy.[108]

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[107] This nice phrase is repeatedly used by Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002).

[108] See "The Problem of Universalisation", Chapter Five of Maurin's *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002).

2.7 Why Trope Theory is Superior to Other Versions of Nominalism

So much for characterizing the different versions of realism and nominalism that are typically found in the literature. We've seen that there are realist and nominalist versions of both the relational and the constituent strategy. We also saw that among the different versions of nominalism, only trope theory adopts the constituent strategy. For the remainder of this chapter, we will focus on this unique version of nominalism.

Previously I mentioned that trope theory currently seems to be the most popular version of nominalism. Its current status is apparently due to the perception that the standard objections against non-trope-theoretic versions of nominalism are decisive.[109] Indeed, trope theory is said to be immune to the traditional objections that plague other forms of nominalism. I will now discuss those objections.[110] This discussion will serve two purposes: First, it will indicate the way in which trope theory is superior to the other traditional versions of nominalism. Second, it will set the stage for introducing a novel version of nominalism, one which appears to be as equally immune as trope theory to the objections I will discuss.

I will not, however, mention *all* of the important objections to non-trope theoretic versions of nominalism.[111] Nor will I consider each of these nominalisms one at a time.

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[109] I am excluding from this claim those versions of nominalism that are predicated on modal realism.

[110] The following criticisms are well trodden and, it seems, widely accepted. Many have their classic exposition in Armstrong's *Nominalism and Realism*, Volume 1 of *Universals and Scientific Realism* (Cambridge: Cambridge University Press, 1978).

[111] I won't because the ground has been well-covered by others. See Armstrong *Nominalism and Realism*, Volume 1 of *Universals and Scientific Realism* (Cambridge: Cambridge University Press, 1978) and *Universals*: *An Opinionated Introduction* (Boulder: Westview Press, 1989); Moreland, *Universals*

Instead, I will discuss seven kinds of objections, each of which bears on two or more versions of non-tropist nominalism. I will begin with the objections that bear on the fewest versions of non-tropist nominalism, and end with an objection that bears on all of them. Along the way, I will note how trope theory is said to be immune to, or at least less vulnerable to, these objections.

The first objection concerns the ***plausibility of a theory's primitives***, and bears especially upon Primitive Natural Class Nominalism (PNCN). Recall that on this view an ordinary object is charactered in a certain way in virtue of being a member of a set—but not just any set. Rather, an ordinary object is charactered in a certain way in virtue of being a member of a set which is determined to be "primitively natural" by the naturalizing function.[112] Recall also that the intention of the Primitive Natural Class Nominalist "…is to select the very same classes as natural properties that the user of universals would select."[113] As before, let Σ be the set of all the sets of ordinary objects. On PNCN, it is a primitive fact that certain members of Σ are natural classes and the rest are not. Let φ be any member of Σ that is a primitively natural class, and let ψ be any member of Σ that is not a primitively natural class. Because the naturalness of a class is primitive, it is a brute fact that φ is a natural class. This means that the naturalness of φ is

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(Guildford: Acumen, 2001); and Loux, *Metaphysics: A Contemporary Introduction*, 3rd Edition (New York: Routledge, 2006).

[112] A reminder as to what the naturalizing function amounts to: Let Σ be the set of all the sets of ordinary objects: $\Sigma = \{ x \mid x \text{ is a set of ordinary objects} \}$. A naturalizing function picks out a proper subset of Σ, where members of the subset are *natural* classes in that these classes exactly represent what we might pre-theoretically describe as the natural divisions of the world (whatever those divisions turn out to be, and at whatever level of science, etc.).

[113] David Lewis, "New Work for a Theory of Universals", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 193.

not grounded, or analyzed in terms of, the nature of or relationships between the members of φ. Nevertheless, the members of φ *are* homogeneous, unlike the members of ψ. Speaking pre-theoretically, we would say that the members of φ have a single property, constitute a natural kind, are all alike in some respect, etc. But the members of φ are homogeneous in virtue of being members of a set that is primitively natural.

But it is precisely here that the primitives of PNCN seem implausible. The problem is that while PNCN's naturalizing function ranges over sets, it is, so to speak, blind to the *members* of those sets. In other words, the naturalizing function is blind to the ordinary objects themselves, and so is blind to the nature of and relationships between those objects. Consider the set of all donkeys and the set of my left shoe, that cranberry, and this electron. On PNCN only the former set will be primitively natural, and so it will be a fact that the members of the former set are homogeneous whereas the members of the latter set are not. But the view's explanation of this fact is *not* given in terms of the members themselves. Of course, we recognize the homogeneity in the former set and the lack of homogeneity in the latter set. But this recognition seems to be clearly based on our attending to the ordinary objects themselves, and especially to their characteristics and relationships. This recognition does *not* seem to be based in our attending to any set that these objects belong to. Thus, the problem with PNCN is that while it accepts the homogeneity which we recognize, it rejects what we recognize to be the obvious ground of that homogeneity. Thus, PNCN implausibly denies that the ground of homogeneity has anything to do with the basis of our recognition of homogeneity.

To see the implausibility of PNCN's primitives, consider the following illustration. Suppose a factory ships out small boxes of marbles. Each box has exactly

three marbles in it. Inside the factory, there is a huge bin of marbles, and each marble is entirely of one of three colors: red, blue, or green. A picking machine randomly selects three marbles from the bin and places them in a box, which is then sealed. Each box is then placed on a conveyor belt which takes boxes to a labeling machine which attaches either (in the exclusive sense) a label that says "Homogeneous" or a label that says "Heterogeneous". But in determining which label to apply, the labeling machine does not take into consideration, in any way, the contents of each box. (The labeling machine is not, for example, given directions from the picking machine.) Finally, each "Homogeneous" label has the following in small print: "*We guarantee that this box contains three marbles of the same color. Indeed, we guarantee this because if our marbles are of the same color, they are so* in virtue of *having a "Homogeneous" label on their box."*

So much for describing the illustration. I assume that most readers will find it incredible that the labeling machine would or could live up to the guarantee. But, even if it is not incredible, it certainly seems inexplicable in a deeply unsatisfying way. But the way the labeling machine operates is relevantly similar to the way that the naturalizing function works on PNCN. It is supposed to select just those sets whose members we pre-theoretically recognize as homogeneous, even though the selection process is blind to what we would pre-theoretically describe as the respects in which those objects are similar. On this view, it is simply a primitive fact that the selection process is successful. But this primitive seems quite implausible.

Trope theory is not subject to this problem. While trope theory affirms that there are natural classes of ordinary objects, it denies that these classes are primitively natural.

Instead, the naturalness of a class of ordinary objects is grounded in the character of its members. If X and Y are members of a natural class of ordinary objects, then there is a trope in X which exactly resembles a numerically distinct trope in Y. (And degrees of naturalness would be cashed out in term of degrees of resemblance.) So for the trope theorist, exact similarity at the level of tropes grounds natural groupings at the level of ordinary objects.

The second kind of objection concerns the ***anthropocentrism*** of a theory. This objection applies to both Predicate and Concept Nominalism, both of which "involve…the grotesquely anthropocentric consequence that no kinds of things existed before we discerned, classified and labeled them…"[114] Because these views hold that an object is charactered the way that it is in virtue of what human beings *do* (i.e., create and/or use token predicates or token concepts), it makes the character of an object implausibly dependent upon us.[115] Obviously, trope theory involves no such anthropocentrism.

The third objection, that of ***arbitrariness***, bears on both variants of Primitive Resemblance Nominalism. For our purposes, we may say that a philosophical account or explanation of some phenomenon P is guilty of arbitrariness if it explains P by appealing to X alone, where there is a distinct Y such that X and Y are on par with respect to their qualifications for accounting for P. (Note that X and Y can be on par

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[114] Campbell aimed this criticism at predicate nominalism, but it obviously applies equally to concept nominalism. *Abstract Particulars*, p. 18. For similar objections see J. P. Moreland, *Universals*, pgs. 32, 37, 47, and Michael Tooley, "Introduction" to his edited volume, *The Nature of Properties* (New York: Garland Publishing, Inc., 1999), p. xi.

[115] This theory might not be so bad if it were token *divine* concepts that played this role, but that sort of view is outside of the scope of this dissertation.

even if *neither* is well-qualified for accounting for P.) As we will see, both variants are guilty of arbitrariness in that on each view it is arbitrary as to what plays the role of accounting for the character of a non-paradigm object. Let's consider the first variant of Primitive Resemblance Nominalism. Recall that on this view, an object has the character it does in virtue of standing in a resemblance relation, of a sufficient strength, to another ordinary object, where the latter object serves as the paradigm for the specific characteristic in question. So, consider a world W with only three red apples in it; let's name them A1, A2 and A3. According to the view in question, one of these will be the paradigm for redness. That is, one of the apples will ground the character of the other two (with respect to their being red). Suppose the paradigm is A1. Thus, A2 is red because it resembles A1, and A3 is red because it resembles A1. But since A1 and A2 are both ordinary red apples, there is surely another world W* that is different from W in only one respect: in W* A2 is the paradigm for redness instead of A1. But then A1 and A2 are on par with respect to their qualifications for grounding the fact that A3 is red. Thus, it is entirely arbitrary as to which ordinary red object gets to play the role of being the paradigm for redness. Thus, the first variant of Paradigm Resemblance Nominalism is guilty of arbitrariness.

The second variant is also guilty, and for exactly parallel reasons. Recall that on the second variant, an object has the character it does in virtue of standing in a resemblance relation, of a sufficient strength, to each member of a special set of closely resembling ordinary objects. This set, rather than a single object, serves as the paradigm for the specific characteristic in question. So, consider a world W with only red apples in it (it doesn't matter how many). Let's name one of them A, and let Γ and Σ name disjoint

sets of apples, where A is a member of neither Γ nor Σ. According to the view in question, in W *some* set of apples is the paradigm for redness. Suppose the paradigm set is Γ. Thus, A is red in virtue of resembling each member of Γ. But since is Γ and Σ are both sets of red apples, there is surely another world W* that is different from W in only one respect: in W* Σ is the paradigm set for redness. But then Γ and Σ are on par with respect to their qualifications for grounding the fact that A3 is red. Thus, it is entirely arbitrary as to which set of ordinary red objects gets to play the role of being the paradigm for redness. Thus, the second variant of Paradigm Resemblance Nominalism is also guilty of arbitrariness.

Taken at face value, trope theory is not guilty of arbitrariness. On trope theory, the ground of an object's character is not arbitrarily assigned. With respect to grounding a specific characteristic of an ordinary object, there is only one entity that is qualified to do the job—the relevant trope that is a constituent of the object. An apple is red in virtue of having a single redness trope as a constituent. It should be noted, however, that critics have argued that trope theory does not rule out the "empty possibility" that an ordinary object be constituted by more than one trope of the same fully determinate kind. Armstrong, for example, has argued that there is nothing in trope theory to rule out the possibility that an ordinary object have two exactly similar redness tropes.[116] Such a situation would be called "piling".[117] Against the critics, trope theorists have consistently denied the possibility of piling, and some trope theorists have offered principles of

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[116] Armstrong, *Universals and Scientific Realism, Vol. 1: Nominalism and Realism* (Cambridge: Cambridge University Press, 1978), pg. 86.

[117] The term "piling" seems to derive from Armstrong, *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997), pg. 65.

individuation on which piling is impossible.[118] I won't resolve this dispute here. Suffice it to say that if piling is possible, then trope theory is guilty of arbitrariness—since it will be possible that there be at least two equally sufficient grounds for a specific characteristic of an ordinary object.[119]

The fourth and fifth objections were originally leveled by Nelson Goodman against Object-Resemblance Nominalism (ORN), but given the nature of these objections, they also bear on Object-Class Nominalism. To avoid redundancy, I will only explain how these objections bear upon ORN. Recall that according to ORN, first, ordinary objects can be said to share a unique property (are charactered in the same way, etc.) in virtue of those objects being members of the same resemblance class, and second, talking about or quantifying over a property amounts to talking about or quantifying over a certain set (a "property class") of ordinary objects.

The first of Goodman's objections is called the ***companionship objection***. It goes as follows. Suppose ORN is true and consider a world where every round thing is red and every red thing is round. We thus have the set of all round red things, in which every member resembles every other member to the same degree, and no non-member of the set resembles every member of the set to that degree. That is, the set of round red things is a resemblance class. According to ORN, then, *being red* is just the set of round red things, and, *being round* is just the set of round red things. So, *being red* is the same thing as *being round*—and that is clearly false. So we have a *reductio* against ORN.

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[118] See, for example, the discussion by Jonathan Schaffer, "The Individuation of Tropes" *Australasian Journal of Philosophy*, Vol. 79, No. 2, June 2001, pgs 247-257.

[119] Piling might also generate other shameful sins, such as that of explanatory overdetermination and ontological bloating.

Trope theory is said to be immune to this objection.[120] Trope theory does not take *being red* to be the set of all ordinary red objects. Instead, talk about redness in general[121] is talk about the set of all rednesses, and talk about roundness in general is talk about the set of all roundnesses. Thus, with respect to the above world, there are two distinct sets being talked about.

The second of Goodman's objections is called the ***imperfect community objection***. It goes as follows. Suppose ORN is true and consider a world in which there is a soft yellow thing, a round yellow thing, and a round soft thing.[122] These objects form a resemblance class, so according to ORN there is a unique property that can be said to be shared by all and only its members. But this is clearly false, and so we have another *reductio* against ORN. Again, trope theory is said to be immune to this problem, since it would say that in the world just mentioned, talk about softness in general is talk about the set of softnesses, talk about yellowness in general is talk about the set of yellownesses, and talk of roundness in general is talk about the set of roundnesses—and these are distinct sets of tropes.

The sixth objection concerns the ***fixed extensions of sets***, and bears on those theories in which sets of ordinary objects are said to ground, in one way or another, the character of ordinary objects: Paradigm-Resemblance Nominalism, Object-Class

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[120] But David Manley disagrees. See his "Properties and Resemblance Classes, "*Nous*, 2002, Vol. 36, No. 1.

[121] If we were talking about the redness of some specific object, rather than redness in general, then we would be talking about a single redness trope and not the set of all and only redness tropes.

[122] I'm taking this example from David Manley, "Properties and Resemblance Classes, "*Nous*, 2002, Vol. 36, No. 1, pg. 76.

Nominalism, Primitive Natural Class Nominalism, and Object-Resemblance Nominalism. This kind of objection was originally raised by Nicholas Wolterstorff against the suggestion that "being white is to be identified with the class of all and only those things which are white." Wolterstorff objects:

> Consider something which was red but is not red. This, of course, is not a member of the class of all and only those things which *are* red; nor *was* it a member of the class of all and only those things which *are* red. It is not true of the class of all and only those things which *are* red, that that thing is a member of it, nor that it *was* a member of it. It is the case, however, that that thing exemplified the property red. That is to say, it is true of red that that thing exemplified it. I conclude, then, that red is not identical with the class of all and only those things which are red.[123]

The trouble here stems from the well-known identity condition for sets: ($\Gamma = \Sigma$) if and only if (for all x, $x \in \Gamma$ if and only if $x \in \Sigma$). In virtue of this identity condition, a set has its members essentially or necessarily. Let "R" stand for the set of all red objects. Given the identity condition for sets, two things follow: (i) The *number* of objects in R could not be other than it is—if R has exactly ten members then it is impossible that R have only nine members, and (ii) R could not have had different members besides the ones it has—if x is a member of R, and y is not a member of R, it is not possible for y to be a member instead of x.

But note that Object-Class Nominalism, Primitive Natural Class Nominalism, and Object-Resemblance Nominalism are each committed to the conditional that there are red objects only if R exists. So each is committed to the following unacceptable

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[123] Nicholas Wolterstorff, *On Universals: An Essay in Ontology* (Chicago: University of Chicago Press, 1970), pgs. 175-76.

propositions: [124] (i) There could not be one more or one less red object in the world; (ii) it is not the case that my black car, instead of my red apple, could have been red (keeping the number of red objects the same); and (iii) if (presentism were true and) I were to eat the red apple on my desk, there subsequently would be no red objects in the world. Note that these extremely counter-intuitive modal implications hold even if the set is unified in some interesting way—that is, they hold regardless of the fact that a given set is a resemblance class or a primitively natural class.

Similar implications also hold for both variants of Paradigm Resemblance Nominalism. On the first variant, if the apple on my desk is *the* paradigm red object, then by eating it I make it the case that nothing is red in the world. On the second variant, if the apple on my desk is *one* of the paradigm red objects—i.e. is a member of the *set* of paradigms, then, again, by eating it I annihilate that set and thus make it the case that nothing is red in the world.

Trope theories are immune to objections concerning the fixed extension of sets of ordinary objects. They are immune because they do not take the character of an ordinary object to be dependent upon that object's being a member of any set. It can, however, seem that trope theorists are subject to a similar objection. Williams, for example, talks as though the character of an ordinary object O depends upon O's having a constituent trope that is a member of a resemblance class of tropes. As he puts it, "'Socrates is wise', or generically, 'a is φ', means that the concurrent sum (Socrates) includes a trope which

[124] I'm assuming presentism for sake of this example.

is a member of the similarity set (Wisdom)."[125] This can seem to be the claim that a trope has the character is does in virtue of its membership in the appropriate similarity set of tropes. Clearly, this sort of trope theory is as vulnerable to fixed-extension objections as Object Resemblance Nominalism, the only difference being that the former has resemblance classes of ordinary objects, whereas William's trope theory has resemblance classes of tropes.

More recent trope theories have attempted to shore up the apparent weakness in William's account by denying that a given trope has the character it does in a non-primitive way. Instead, it is taken to be a primitive fact that a given trope is (say) a redness trope, and this fact is ontologically prior to resemblances between distinct rednesses. And, in particular, a given trope's being a redness trope is not constituted by its membership in a set. Anna Sofia-Maurin puts this emphatically:

> …even if this particular redness is in fact related by similarity to numerous other particular instances of redness, it is not necessarily this relationship that constitutes this instance's *being red*. If you are a trope theorist it is surely not. To the trope theorist, the particular redness (the trope) is red as a consequence of its *being the way it is*, and so are all other red tropes. To a trope theorist, therefore, the fact that each particular redness (each trope) is such that it resembles every other redness is a consequence of the fact that each particular redness *is what it is* and nothing else.[126]

This is not to say, however, that the sets of exactly similar tropes play *no* role in trope theory. As noted previously, sets of exactly similar tropes are commonly taken by trope theorists to provide semantic values for abstract singular terms. For Maurin, these

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[125] Williams, "Elements of Being: I", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 119

[126] Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), pg. 57.

sets also play a (truthmaking) role in accounting for the fact that numerically distinct tropes are qualitatively similar. As she says,

> While simple predications [which have the form of '*a* is F'] do not in general necessarily require the existence of something amounting to the realist's universal for their truth, the same does not hold for a special variant of the simple predicative proposition: what I shall call the 'comparative' predicative proposition. These are propositions of the kind '*a* and *b* are the same F'.[127]

Maurin is proposing, in other words, a dual strategy: Offer a primitive account of a trope's being the property it is, and offer a non-primitive account for a trope's being exactly similar to other tropes.[128] Whether and how this dual strategy works need not detain us here, since we are concerned with how trope theory is immune to the sorts of objections that plague other traditional forms of nominalism.

The seventh and final objection concerns the ***order of explanation***. The basic problem with *all* of the aforementioned non-trope theoretic forms of nominalism is that they reverse the intuitive order of explanation. This problem is most obvious for Predicate Nominalism and Concept Nominalism: Intuitively, an object satisfies a certain

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[127] Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), pg. 57.

[128] This dual strategy is explicitly predicated on the assumption that we can reasonably give different kinds of answers to two important questions. These questions were originally introduced by Campbell in his *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pg. 29:

> *The A-Question*: "We can take *one* single red object and ask of it: what is it about this thing in virtue of which it is red?"
>
> *The B-Question*: "We can ask of any *two* red things: what is it about these two things in virtue of which they are both red (share *the same* nature)?"

Maurin discusses these questions and the dual strategy at length: *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), pg. 61ff.

predicate or concept *because* the object has the character it does, and *not* vice versa.[129] Similarly for Object-Resemblance Nominalism and both variants of Paradigm Resemblance Nominalism: these theories ground the fact that an object is red on the fact that the object *resembles* some other object or objects. Intuitively, however, two ordinary objects resemble each other (to whatever degree) in virtue of each of those objects being intrinsically what or how it is. Finally, while Object-Class Nominalism and Primitive Natural Class Nominalism do not ground the character of an object in resemblance, they do ground the character of an object in that object's being a member of a certain set. This, however, also seems to reverse the intuitive order of explanation. In Campbell's words, it is a "bizarre idea that it is membership in the Rabbit class that makes something a rabbit, rather than vice versa."[130] Moreover, note that on this view the *entire* character of an object is grounded in its memberships in different classes. Thus, it is hard to see how the object, considered in itself, has any character at all. If we consider the object in epistemic abstraction from the sets of which it is a member, what's left of the object begins to look suspiciously like a bare particular.

With respect to its account of the character of ordinary objects, trope theory is immune to objections about the order of explanation. The ordinary object has the character it does in virtue of its being constituted in a certain way, in virtue of having

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[129] Moreland's comment is representative: "…on reflection, it is obvious to most people that properties are what make our predicates correctly apply to reality and not vice versa." *Universals* (Guildford: Acumen, 2001), pg. 29.

[130] Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pg. 18 For similar complaints, see: Moreland, *Universals* (Guildford: Acumen, 2001), pgs. 32, 37, and 47; and Tooley, "Introduction" to his edited volume, *The Nature of Properties* (New York: Garland Publishing, Inc., 1999), pg. xi.

certain properties as metaphysical parts. Again, however, older trope theories seem guilty of reversing the order of explanation with respect to the character of *tropes*. As we saw previously, one could fairly characterize Williams as holding that a given redness is what it is in virtue of being a member of the resemblance class of rednesses. More recent trope theories, like Maurin's, are immune to this sort of problem, and, indeed, seem to get the intuitive[131] order of explanation right: facts about resemblances between tropes are not explanatorily prior to (primitive) facts about each trope being the sort of particularized property that it is.

So much for canvassing the objections which plague traditional versions of non-trope theoretic nominalism. The conclusion seems to be that trope theory can avoid these objections, and is in this respect the most attractive extant form of nominalism. It's no surprise, then, that many nominalists have turned their hopes and allegiance to trope theory. Finally, it is worth noting that these other versions are all relational ontologies, whereas trope theory is a constituent ontology. Indeed, trope theory seems to be the *only* extant nominalist constituent ontology. In the next chapter, however, I will develop a novel version of nominalist constituent ontology.

2.8 What We've Learned in Chapter 2

In the previous chapter we saw that the explanatory resources of austere nominalism are too pedestrian to provide an adequate account of the character of ordinary objects. In this chapter we have considered two different and opposing strategies for

[131] It must be noted, however, that intuitions about ordinary objects are one thing, intuitions about tropes another. The former intuitions should probably be given more respect than the latter.

improving upon austere nominalism. We saw that the first strategy, that of a relational ontology, comes in a number of nominalist versions. These versions of nominalism were seen to be plagued by some decisive objections. The second strategy, that of a constituent ontology, has only one extant nominalist version—trope theory. We saw that this theory is immune to the objections that plague nominalist relational ontologies. In this respect, trope theory was seen to be the most attractive extant version of nominalism.

Trope theory sometimes is advertised as uniquely occupying the logical space between austere nominalism and universal-(constituent)-realism (where the latter is understood to be the view that there are only universals and things "bundled" out of universals.) In the next chapter, I will argue that this advertisement is false. Developing a suggestion by Michael Loux, I will argue that there is a unique and attractive version of constituent nominalism that is closer in spirit to austere nominalism than is traditional trope theory.

CHAPTER 3: AUSTERE NOMINALISM, TROPES, AND TROPERS

3.1 Introduction

In this dissertation we are examining nominalistic theories of a certain sort—namely, those which are not error theories about non-philosophical discourses about the character of familiar objects[132] and which do not appeal to uniquely theistic resources in accounting for phenomena attending such character. In the previous chapter we saw that among extant nominalisms of this sort, trope theory is superior to the rest. In this chapter we will consider the claim that trope theory has the unique advantage of incorporating the theoretical strengths of its two closest rival one-category[133] ontologies: universal-realism and austere nominalism.

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[132] I have in mind those theories which take statements like "Red is a color" to be, strictly speaking, false. In other words, by "error theory" I mean any theory that rejects as false all atomic sentences that involve abstract singular terms, sentences which are apparently about abstract entities.

[133] Constituent ontologists have not always been clear about what they mean by a "one-category" ontology. For my purposes, I will take a one-category ontology to be an ontology in which *all the metaphysically basic entities* are of the same category. Constituent ontologists take metaphysically basic entities to be constituents in *composites*, where the latter are usually taken be entities in their own right. This raises the important question of what category these composites belong to. For most versions of constituent ontology, the composite is arguably of a different category than its constituents. Thus, such versions would seem to be *two*-category ontologies. Nevertheless, the usual sense in which a constituent ontologist subscribes to a one-category ontology is this: *all the explanatory work* is supposed to be done by entities which all belong to the same category. In what follows, my use of "one-category ontology" will have this usual sense. Thus, in what follows I am restricting my attention to traditional, one-category, prima-facie more economical trope theories, as opposed to trope theories that expand their basic-ontologies by adding either primitive substrata or primitive universals. An example of the former is the view developed by C. B. Martin in "Substance Substantiated" *Australasian Journal of Philosophy,* Vol. 58, 1980, pgs. 3-10. An example of the latter is the view held by John Cook Wilson, *Statement and Inference, with Other Philosophical Papers*, Vol. 2 (Oxford: Clarendon Press, 1926).

Since trope theory is often defined over and against the latter two views, it will be helpful to begin by sketching them. Like other so-called constituent ontologies, universal realism accounts for the character of ordinary objects by taking them to have metaphysical structure. According to universal realism, this structure consists in the fact that an ordinary object is a bundle of properties, where these constituent properties are construed as universals. There have been recent defenders[134] of this view, but the Bertrand Russell of *An Inquiry Into Meaning and Truth* is perhaps its most well-known exponent:

> I wish to suggest that...what would commonly be called a 'thing' is nothing but a bundle of coexisting qualities such as redness, hardness, etc. …I wish to suggest that, wherever there is, for common sense, a 'thing' having quality C, we should say, instead, that C itself exists in that place, and that the 'thing' is to be replaced by the collection of qualities existing in the place in question.[135]

Note that according to this view, ordinary objects *have* metaphysical constituents, and *all* of these constituents are universals.

In contrast to the universal realist, the austere nominalist denies that properties exist. On her view, there exist only ordinary objects like persons, potatoes, and/or electrons. In addition, she insists that an adequate account of the character of these objects can be had within this limited explanatory framework. Indeed, she limits herself to only one explanatory resource: the ordinary object itself, taken as a whole—that is, taken to lack any metaphysical structure. She insists that we can provide an account of

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[134] John O'Leary Hawthorne and J. A. Cover have recently defended a view like this; see their "A World of Universals" *Philosophical Studies* Vol. 91, 1998, pgs 205-219.

[135] Bertrand Russell, *An Inquiry Into Meaning and Truth* (Pelican, 1962), pgs. 92-93.

character-related phenomena *without* postulating properties—whether particular (tropes), immanent (constituent universals) or transcendent (Platonic universals). According to the austere nominalist, if we want a truth-maker for the sentence "This apple is red", we need only point to the apple itself, qua metaphysical simple.

As we will see, trope theory is said to hold the middle ground between universal realism and austere nominalism. Indeed, prominent defenders of trope theory make a two-fold claim on its behalf. First, we are told that trope theory uniquely occupies the theoretical space between universal realism and austere nominalism. And second, we are told that trope theory thereby uniquely incorporates the strengths and avoid the weaknesses of the other two views.

In this chapter, I will be challenging the claim that trope theory uniquely occupies the said space. In fact, I will argue that the former claim is, as it were, a symptom of dialectical myopia. The claim is mistaken in virtue of the presence of another possible view that falls into that space. And it is an *unfortunate* mistake in virtue of the potentially greater explanatory power, elegance, and parsimony of this previously unnoticed view. Following an observation by Michael Loux, I will argue that there is a unique nominalistic version of constituent ontology that occupies this space and is closer in spirit to austere nominalism than is traditional trope theory. I will show that there is room for this theory—"troper theory"—by drawing two important distinctions: the universal/particular distinction and the property/individual distinction. I will finish the chapter by responding to a potential worry about the coherence of troper theory. Note that it is *not* the purpose of this chapter to provide an extended discussion of the advantages of troper theory over trope theory. I will do so in the next chapter. The

primary purpose of this chapter is to introduce troper theory as an unnoticed but prima facie attractive rival to trope theory.

3.2 Trope Theory as an Advantageous Compromise Between Austere Nominalism and Universal-Realism

According to some trope theorists, one advantage of trope theory derives from that fact that it uniquely holds the middle ground between the two other one-category constituent ontologies: austere nominalism and universal-realism. The alleged advantage is that, by holding this position, trope theory is able to incorporate the strengths and avoid the weaknesses of these other views.

George Molnar, for example, describes the dialectical place of trope theory as follows:

> Tropes are genuine, mind-independent properties, but they are non-repeatably particular. …This distinguishes trope theory from both classical realism and classical [austere] nominalism. …But the traditional theories are not altogether wrong. I am convinced that there is something fundamentally correct in all versions of realism, and there is something (else) that is fundamentally correct in all versions of nominalism. It is desirable that trope theory should recover and preserve the insights of both realism and nominalism.[136]

Anna-Sofia Maurin's comments are similar but more detailed:

> To put it simply, when one considers the problems that have faced attempts to develop one-category ontologies without tropes one finds that, at least *prima facie*, these do not seem to be problems that a theory incorporating only tropes would ever have to face. Classical one-category nominalists—nominalists, that

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[136] George Molnar, *Powers: A Study in Metaphysics*, edited by Stephen Mumford (Oxford: Oxford University Press, 2003), pg. 23.

> is, who postulate only the existence of particular concrete objects [i.e., austere nominalists]—run into trouble when trying to account for what we refer to as the 'properties' of these objects. It is as if concrete objects are simply too unstructured and too concrete to be the ultimate constituents of the world. One category universal-realists on the other hand, who postulate only the existence of universals, seem to run into trouble when trying to handle the world's concrete ingredients. The fundamental entities postulated by the universal-realist simply turn out to be too universal to allow us to deal with the apparent existence of concrete objects.
>
> Trope theory seems to fill the gap between these two positions. The trope is particular and thus suitable for dealing with concrete objects, but it is also qualitative and thus suitable for dealing with properties. All of this indicates that the prospects of a one-category trope theory are unusually good.[137]

Maurin's general claim seems to be this: Trope theory is superior to both austere nominalism and universal-realism in that its account of concrete objects incorporates the strengths while avoiding the weaknesses of these views. In addition, she is claiming that trope theory is unique in holding this advantageous position. Of course, the merits of these claims depend upon what Maurin means by a "concrete" object. And on this score, she is less than clear. Consider her statement that "The fundamental entities postulated by the universal-realist simply turn out to be too universal to allow us to deal with the apparent existence of concrete objects." The idea here seems to be that universals aren't the sort of thing that can, by themselves, go together to make a "concrete" object. Thus, Maurin is contrasting the *universal* with the *concrete*. But given that there are different ways to gloss "concrete", there are at least two lines of thought that might underwrite her claim:

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[137] Anna-Sofia Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), p. 6.

Line 1 A universal can be wholly located in more than one place at a time.[138] So whatever you get when you have a collection of universals, what you get won't be something that can't be wholly at more than one place at a time.[139] But a concrete object *is* something that can't be wholly at more than one place at a time. So universals alone cannot suffice to give you a concrete object.

But there is another line of thought that she might have in mind:

Line 2 A universal is a property. So whatever you get when you have a collection of universals, what you get won't be something that can't be a property of something. But a concrete object *is* something that can't be a property of something. So universals alone cannot suffice to give you a concrete object.

So we have two lines of thought. On the face of it, each could be what Maurin has in mind when she says that "The fundamental entities postulated by the universal-realist simply turn out to be too universal to allow us to deal with the apparent existence of concrete objects." After all, *each* line of thought raises a prima facie problem for the universal-realist. But note that the second line of thought could just as well be put as a *tu quoque* objection to Maurin's one-category trope theory:

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[138] For a helpful discussion of the notion of a material object being wholly located in this way, see Josh Parsons, "Entension, or How it could happen that an object is wholly located in each of many places", unpublished paper.

[139] The assumption here would be that if C is a collection and every member M of C is such that M is possibly multiply-located, then C is possibly multiply-located. Notice that this is not a fully general principle like "If C is a collection and every member M of C has feature F, then C has feature F." The latter would seem to commit a fallacy of composition.

> A *trope* is a property. So whatever you get when you have a bunch of tropes, what you get won't be something that can't be a property of something. But a concrete object *is* something that can't be a property of something. So tropes alone cannot suffice to give you a concrete object. [140]

Prima facie, there are genuine problems here for trope theory. But, as I argue in the next chapter, these are not serious problems for troper theory. but I will postpone discussion of them until the next chapter.[141] In a moment we will see a novel version of nominalism that, unlike trope theory, doesn't seem to face this problem.

Given the problem just noted, it seems charitable to take Maurin to have the first line of thought in mind when she criticizes the universal-realist's resources for handling "concrete" objects. So by "concrete" she means "not possibly wholly multiply-located," which is often taken to be synonymous with "particular". In a moment we will see another, arguably distinct way in which something can be a "particular", but for now I will use the term to mean "not possibly wholly multiply-located." With this in mind, we can now understand the way in which trope theory is supposed to be better than both universal-realism and austere nominalism in virtue of avoiding their weaknesses and incorporating their strengths.

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[140] Loux puts the problem this way: "We begin with one property, add another property, add still another. What ultimately emerges is an individual having all those properties. But why should we suppose that agglomeration yields an individual? Why not suppose instead that what results from this agglomeration is just a conjunctive property whose conjuncts are the various properties that have been agglomerated? Nor will it dispel the mystery here to introduce compresence. Let the properties ϕ-ness and ψ-ness be compresent. What is the result? Just the presence in a particular spatiotemporal region of the complex property of being both ϕ and ψ." "An Exercise in Constituent Ontology", unpublished, pg. 33.

[141] See the discussion of "Gap Challenges" in the next chapter.

Let's begin by noting the weaknesses of these rivals. Universal realism is weak when it comes to providing an account of the *particularity* of ordinary objects. Such objects do not seem to be the sort of thing that can be wholly multiply-located. At this moment, for example, this red apple is wholly here and nowhere else. Yet, the universal realist tells us that an ordinary object is nothing but a bundle of universals—each of which *can* be (and typically is) wholly multiply-located.[142] It is thus very difficult to see why a bundle comprised of only wholly-multiply-locatable things would not itself be wholly-multiply-locatable.[143] The point here is that universals do not seem to provide the universal realist with adequate resources for grounding the particularity of ordinary objects. Thus, the trouble with universal realism is that it takes all of the constituents in a bundle to be universals, even though the bundle itself is supposed to be a particular. In contrast, trope theory takes all of the constituents in a bundle to be particulars; it is thus no surprise that the bundle itself would be a particular.[144]

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[142] But see the section below "Another Way to Construe a Universal".

[143] Although it might be tempting for a universal realist to appeal to *haecceities* to ground particularity, doing so does not help. According to Boethius, a haecceity is an "incommunicable property," such as *being identical to Plato*, or "Platonity". The latter isn't a property that can belong to anything besides Plato—it "is one man's alone, and this not just anyone's, but Plato's."[143] But notice that there is nothing incoherent in the notion of a haecceity's being a universal. After all, if Plato is possibly wholly multiply-located then so is Platonity. Thus, if Platonity is a particular, then it is so because of the ontologically prior fact that Plato is a particular. It seems clear, then, that Platonity will not suffice to ground the particularity of Plato. This seems to be true for all haecceities.

[144] It should be noted that this objection against universal realism does *not* deploy (or otherwise imply) a *fully general* principle like "If C is a collection of entities every one of which is F, then C itself is F". Such a principle would seem to be guilty of the fallacy of composition. The operative principle is one that is specific to collections of universals: "If C is a collection of entities every one of which is possibly wholly multiply-located, then C itself is possibly wholly multiply-located." The objection here to universal realism will be a strong as the latter principle is plausible. I work out these issues in detail in the next chapter.

So trope theory seems better than universal realism when it comes to grounding the particularity of ordinary objects. Like trope theory, however, austere nominalism does not founder on particularity. It takes particularity to be a primitive fact about ordinary objects and denies that those objects have any metaphysical parts—much less any *universal* parts which might threaten the particularity of the whole. The trouble with austere nominalism concerns whether it can adequately account for phenomena attending the *qualitativeness* of concrete objects. Indeed, there seem to be good and widely-accepted reasons to think that austere nominalism is lacking on this score.[145] In large part, the trouble for the austere nominalist stems from her refusal to posit anything besides ordinary objects, qua metaphysical simples. In other words, on the one hand, she refuses to postulate any immanent metaphysical structure—thereby rejecting a constituent ontology. And on the other and, she refuses to postulate a transcendent metaphysical framework—thereby rejecting a relational ontology. Trope theory, however, accounts for qualitativeness by adopting a constituent ontology on which the ordinary object has qualitative items—tropes—as metaphysical parts.

Nevertheless, both austere nominalism and universal-realism have strengths, and these strengths are said to be incorporated into trope theory. According to Molnar, what is right about austere nominalism is that it abstains from the "needlessly reificatory move [of postulating] non-particulars over and above the particulars."[146] What is right about

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[145] This was discussed in Chapter 2. For a review of the case against austere nominalism, see Michael Loux, *Metaphysics: A Contemporary Introduction,* 3rd edition (New York and London: Routledge, 2006).

[146] George Molnar, *Powers: A Study in Metaphysics*, edited by Stephen Mumford (Oxford: Oxford University Press, 2003), pg. 24.

realism is that "[b]y including properties among the irreducible contents of this world, realism allows us to construct the robust explanations, of the facts of predication, of causation, or nomological connection, etc., that are blocked by [austere] nominalism."[147] The trope theorist is supposed to uniquely preserve what is right about these views. She does so by, first, taking the basic entities to be properties (like universals) but particular (unlike universals but like the ordinary objects of the austere nominalist). And second, she takes ordinary objects to be structured (unlike those of the austere nominalist) out of more basic entities (like the objects of a universal-realist).

3.3 Room for Another View Between Austere Nominalism and Universal-Realism: Two Key Distinctions

So trope theory is supposedly unique in its ability to "recover and preserve the insights of both [universal] realism and [austere] nominalism."[148] As it turns out, however, there is room between the latter two views for *another*, novel, one-category constituent ontology. The novel theory—"troper theory"—also incorporates the strengths and avoids the weaknesses of austere nominalism and universal realism. But, in addition, this novel theory is more nominalist in spirit than trope theory and, arguably, has greater elegance and explanatory power.[149] We will see that there is room for this view by

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[147] George Molnar, *Powers: A Study in Metaphysics*, edited by Stephen Mumford (Oxford: Oxford University Press, 2003), pg. 24.

[148] George Molnar, *Powers: A Study in Metaphysics*, edited by Stephen Mumford (Oxford: Oxford University Press, 2003), pg. 23.

[149] In the next chapter, I argue that, relative to trope theory, troper theory provides a more adequate account of the following putative facts: (i) ordinary objects, qua bundles of character-grounding

getting clear on the logical space boxed by two traditional and fundamental distinctions: the particular/universal distinction and the individual/property distinction. After laying out these distinctions I will show that they are not equivalent. I will then show how they leave room for the novel theory.

The distinctions I will now draw have a long and distinguished career in the history of metaphysics. Unfortunately, however, different and conflicting terms have often been used to label these distinctions and sometimes a single term has been used to range over more than one relevant concept. I have chosen what I take to be appropriate labels, but I am not so much concerned to defend their aptness as the genuineness of the distinctions they label. In addition, I expect that it would be difficult to cash out these distinctions in terms that are neutral to (or compatible with) both a relational ontology and a constituent ontology. Fortunately, for my purposes it is not necessary to do so. My reason for drawing these distinctions is to highlight the salient differences between austere nominalism, trope theory, and troper theory. While the latter two theories are constituent ontologies, austere nominalism is neither a relational nor a constituent ontology. Thus, for our purposes, we can draw the particular/universal and individual/property distinctions without trying to do so in a way that accommodates a relational ontology. At any rate, in what follows I've tried to draw the distinctions in a way that is consistent with austere nominalism, trope theory and troper theory.

The particular/universal distinction: This distinction is often drawn in terms of whether something can be multiply-located. More precisely, on this view, universals are

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constituents, are something "over and above" those constituents, (ii) ordinary objects are non-properties, and (iii) ordinary objects are charactered in the ways specified by their character-grounding constituents.

possibly wholly multiply-located at non-overlapping places at the same time, whereas particulars are not.[150] In the preceding I have been using the distinction in this way.

There are, however, other meanings associated with these terms. According to some realist constituent ontologists, such as J. P. Moreland and L. A. Paul, universals are, strictly speaking, not located at all, even though they are metaphysical constituents in located ordinary objects.[151] On this view, a universal is something that can be a metaphysical constituent in two or more spatially non-overlapping entities at the same time, while not being located at all; and a particular is a non-universal. As we will see, this sense of "universal" is not equivalent to one spelled out in terms of possible multiple-location. There are also other, more vernacular, uses of "particular". For example, the term can mean "in this specific instance or place"[152] (E.g., "Let me draw your attention to the beauty of this particular painting.") or "fully-determinate or exact" (E.g., "I don't want you paint my car just any old shade of red, I want you to use the particular shade of red that I have in mind!").

As we might expect, the ambiguity of "particular" can lead to the term being used in a confusing way, especially in a philosophical context in which the central question precisely concerns the extension of a (metaphysically relevant) universal/particular

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[150] Campbell, for example, says "A universal can be in many places at once...", *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990) pg. 12. Cover and Hawthorne say "According to the theory of immanent universals, it is routinely true that universals can be fully present in many places…" "A World of Universals" *Philosophical Studies,* Vol. 91, 1998, pg. 211-12.

[151] According to Evan Fales, G. E. Moore defended the view that properties are not spatiotemporal in his opposition to Stout. See, Evan Fales *Causation and Universals* (London and New York: Routledge, 1990), pgs 164-65; G. E. Moore "Are Characteristics Universal or Particular?" in *Relativity, Logic, and Mysticism, Proceedings of the Aristotelian Society*, supplementary volume 3, 1923, pgs. 95-113; and J. P. Moreland *Universals* (Guildford: Acumen, 2001).

[152] http://dictionary.reference.com/browse/particular

distinction. Jonathan Schaffer, for example, tells us that there is perceptual evidence for trope theory in that we seem to perceive that properties are "particular". He writes:

> Thus one rationale for trope theory is the claim that tropes are the immediate objects of perception. When one sees a rose, it seems that one perceives, not the universal redness, nor some unstructured whole (as per the rival universalist and nominalist conceptions), but rather the particular redness in question (and particular shape, etc.).[153]

Schaffer is claiming that from this kind of experience we can reasonably infer that one perceives, or seems to perceive, that the very shade in question is a "particular." Of course, the plausibility of this claim depends on what Schaffer means by "particular."

On the one hand, if we understand the term to mean "specific", then Schaffer is drawing our attention to the relatively uncontroversial fact that when we perceive a red rose, we perceive a specific shade of red; we perceive that the rose is, say, scarlet, rather than cherry. While this gloss is natural and plausible, it doesn't warrant the metaphysically interesting conclusion Schaffer is drawing.

On the other hand, if we take Schaffer to have in mind either of the other two above glosses on "particular", then he is making at least one of the following claims:

- When we see the rose, we perceive that its redness isn't possibly wholly multiply-located at the same time.
- When we see the rose, we perceive that its redness cannot be a metaphysical constituent in two or more spatially non-overlapping entities at the same time.

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[153] Jonathan Schaffer, "The Individuation of Tropes," *Australasian Journal of Philosophy*, Vol. 79, No. 2, June 2001, p. 247.

Of course, while each of these claims is metaphysically interesting, each is also quite dubious. In addition, they are potentially question-begging.[154] An obvious lesson here is that we should take care when using and interpreting "particular" in these contexts.

In what follows, by "particular" I will *not* mean "specific" or "fully-determinate or exact". This leaves us with the two other aforementioned options for construing the universal/particular distinction. That is, we can construe a universal in either of the following ways:

(U1) A universal is something which is possibly wholly located at two or more non-overlapping places at the same time.

(U2) A universal is something which is possibly a metaphysical constituent in two or more spatially non-overlapping entities at the same time.

I will now argue that outside of the framework of a relational ontology—that is, within the framework of a constituent ontology or within the framework of austere nominalism—it is preferable to construe a universal in the second, (U2), sense just noted. There are two reasons for this preference.

First, as already noted, construing a universal as something that is possibly wholly multiply-located begs the question against realist constituent ontologists like Moreland and Paul, who affirm that universals are not possibly located at all, even though they are

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[154] In addition to being dubious, Schaffer's claim also begs the question against a constituent realist like Gustav Bergmann who claims that by looking at a red spot he perceives that its color is a *universal*: "When I look at a red spot, I know not only that it is just that but also that the spot itself is an individual, that the color is a character (universal), and that the former exemplifies the latter." *Logic and Reality* (Madison: the University of Wisconsin Press, 1964), pg. 9. The fact that Schaffer and Bergmann are opposed in this way suggests that both of their respective claims—that the particularity (universality) of a property can be directly perceived—are not dialectically suitable starting points.

metaphysical constituents in ordinary located objects. Thus, to accommodate views like those of Moreland and Paul, I intend to use the locution "x is a metaphysical constituent in y" as an expression which is consistent with both "x is *not* a spatiotemporal part of y" and "x is *not* located in or where y is located".

The second reason for preferring (U2) is more detailed. Roughly, adopting (U2) allows us to accommodate the distinction between *something being a metaphysical part of two or more spatially distinct things at the same time* and *something being wholly located in two or more places at the same time*. This distinction is worth accommodating. In expressing their allergy for universals, trope theorists have not always been clear about what it is about universals that they find repugnant. While trope theorists tend to agree that universals are "scandalous", the scandal is often described in different ways. More often, the scandal is described as the possible *bi-location* of universals.[155] At other times, however, the scandal is described as the possibility that a universal might *inhere in* two different objects—where "to inhere in" is understood as "to be a metaphysical constituent in".[156] It seems, however, that a trope theorist might find these alleged scandals to be scandalous to different degrees, or, she might even think that *only* the latter—possible bi-inherence—is scandalous. To illustrate this, let's look briefly at the infamous possible world described by Max Black.[157]

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[155] See, for example, Campbell's comments in "The Metaphysic of Abstract Particulars", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 125.

[156] See, for example, Campbells' comments in *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990) pg. 14-5.

[157] Max Black, "The Identity of Indiscernibles" *Mind,* Vol. 61, 1952.

In Black's world, there exists a sphere A and a sphere B such that A and B are spatially disjoint but qualitatively indiscernible. This possibility is said to represent the following difficulty for universal realism. According to universal realism, both A and B are bundles of only universals. And, according to universal realism, if two bundles are qualitatively indiscernible, then they have all and only the same constituent universals. *Ex hypothesi*, A and B are qualitatively indiscernible. Thus, A and B have all and only the same constituent universals. But it is reasonable to think that a constituent ontology is governed by a regulative principle—what Michael Loux calls the Principle of Constituent Identity—according to which "identity in constituents entails numerical identity."[158] Thus, since all the constituents in A and B are universals, and since A and B have all and only the same universals, it follows that A is identical to B. This conclusion amounts to a *reductio* for universal realism, since, *ex hypothesi*, A and B are spatially distinct.

The response I wish to consider is based on a suggestion by Tom Crisp[159] and is modeled after a response by John Hawthorne.[160] The latter rejects a tacit assumption in the above argument. In general terms, the assumption is that being wholly located at different non-overlapping places at the same time is sufficient for being non-identical.

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[158] Loux formulates the principle as follows: "Necessarily, for any complex objects, *a* and *b*, if for any entity, *c*, *c* is a constituent of *a* if and only if *c* is a constituent of *b*, then *a* is numerically identical with *b*." *Metaphysics: A Contemporary Introduction,* 3rd edition (New York and London: Routledge, 2006), pg. 98.

[159] In conversation.

[160] John O'Leary-Hawthorne, "The Bundle Theory of Substance and the Identity of Indiscernibles" *Analysis* Vol. 55, 1995, pgs. 191-96. See also J. A . Cover and John O'Leary-Hawthorne "A World of Universals" *Philosophical Studies,* Vol. 91, 1998, pg. 211-12.

With respect to Black's world, this means that A and B are numerically distinct, since, *ex hypothesi*, A and B are spatially disjoint. In response, Hawthorne argues that the universal-realist could reject this assumption and hold that there is exactly *one* sphere in Black's world—a sphere which is wholly located in two non-overlapping places. After all, the sphere is nothing but a bundle of universals, and (on this view) every universal can be wholly located in more than one place, so there would seem to be nothing impossible about the sphere itself being wholly located in more than one place.

Crisp's suggestion is that there is no reason why a trope theorist couldn't consistently adopt a strategy like that of Hawthorne, but where particular-properties (tropes) are substituted for universal-properties. That is, a trope theorist could also say that there is exactly one sphere in the world and that the sphere is wholly located in two places. So each trope in the sphere is wholly located in two places. What is interesting about this suggestion is that, according to (U2), these bi-located tropes are *not* universals since they are not constituents of two or more non-overlapping entities at the same time. On (U1), the bi-located tropes would be universals.

Thus, both responses to Black's world—that of Hawthorne and that of Crisp on behalf of a trope theorist—show that there is a distinction between (i) *something being wholly located at two or more non-overlapping places at the same time* and (ii) *something being a metaphysical part of two or more spatially non-overlapping things at the same time*. I have construed a universal in terms of the latter. Doing so has the virtue of allowing a trope theorist to accommodate the possible bi-location of individuals (qua bundles of tropes). Thus, adopting (U2) avoids saddling trope theory with an unnecessarily restrictive commitment.

So much for the reasons for preferring (U2) over (U1). We can now draw the universal/particular distinction, within the context of a constituent or non-relational ontology[161], as follows:

- A *universal* is an entity which can be a metaphysical constituent in two or more spatially non-overlapping entities at the same time.[162]
- A *particular* is a non-universal.

That is, a universal can be a constituent in more than one non-overlapping object at the same time; a particular is not capable of such a feat. So much for the universal/particular distinction.

The individual/property distinction: This distinction concerns what has been called "*impredicability*—on which condition an individual substance is not said of (does not inhere in) anything in the way that properties are said of (inhere in) substances…"[163] One might say that this distinction marks the difference between the subjects of our

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[161] I add this to accommodate austere nominalism, which is neither a constituent nor a relational ontology, but according to which there are only *particulars*.

[162] I think this construal will suffice for my purposes, although two things are worth noting. First, further rigor may be desirable, especially for those who think that some universals are properties only of non-spatially located entities like numbers. For example, some might think that *being prime* is a property only of non-spatially located entities—the numbers 3, 5, 7, etc. Second, this construal may not do for a realist constituent ontologist who thinks that (i) true sentences like "Red is a color" require her to take determinable properties like *being colored* as being ontologically on par with (equally real as) fully-determinate properties like *being scarlet-red*, but also that (ii) determinable properties are *not* constituents in ordinary objects. Most constituent ontologists, however, limit themselves to fully-determinate properties and take determinables to be mere "ontological free lunches"—the motto being that "what supervenes is no addition of being." See Armstrong, *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997), pg. 12.

[163] J. A. Cover and John O'Leary-Hawthorne, *Substance & Individuation in Leibniz* (Cambridge: Cambridge University Press, 1999), pg. 11.

discourse and what we say about them. However, this way of putting this distinction can mislead one into thinking that the distinction is a linguistic one, or is at least justified by an appeal to the structure and/or use of language.[164] Instead, I mean only to *express* the distinction by putting it in terms of subjects and predicates. Loux's gloss on the distinction is not misleading in the above way; according to Loux, the individual/property distinction maps the categorial gap between a *property* and a *property-possessor*.[165] Unfortunately, there are also some problems with this construal of the distinction.

First, it won't do to say that an individual is simply a property-possessor. Arguably, if there are properties, some properties are themselves property-possessors. For example, it is reasonable to think that if there is such a thing as redness, then redness has the property of being a color. At the very least, the individual/property distinction should accommodate those ontologies on which there are such higher-order properties.[166]

There is a second problem with Loux's gloss on the distinction. His notion of a "property-possessor" suggests it is impossible that there be individuals but no properties. But, for our purposes at least, the distinction should not have this implication, since it would thus beg the question against the austere nominalist, who will insist that her

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[164] The idea that this distinction can be adequately justified by language structure/use was famously challenged by F. P. Ramsey "Universals", *Mind*, Vol. 34, 1925, pgs. 401-417; reprinted in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997). Ramsey's views have been recently revisited—most notably by Fraser MacBride, "The Particular-Universal Distinction: A Dogma of Metaphysics?" *Mind*, Vol. 114, 2005, pgs. 565-614. For a criticism of Ramsey and MacBride, see Herbert Hochberg, "Russell and Ramsey on Distinguishing between Universals and Particulars", *Grazer Philosophische Studien*, 67 (2004), pgs. 195-207.

[165] This way of making the distinction is clearly implied in his "An Exercise in Constituent Ontology", unpublished, page 37.

[166] Thus, first-order properties which have higher-order properties are not genuine individuals, though they *function like* individuals with respect to those higher-order properties.

ontology is entirely populated by individuals, where those individuals can properly be said to be *charactered things* even though there are no properties, or characteristics, *per se*. In other words, the austere nominalist claims that there are individuals but no properties.

The lesson here is that it is desirable to draw the individual/property distinction in a way that accommodates as many different metaphysical views as possible. Thus, it is desirable to draw the distinction in a way that is consistent with *either* side of the distinction having an empty extension. After all, the austere nominalist will insist that the property side of the distinction is necessarily empty. And some metaphysicians have considered the possibility that only properties exist.[167] So a more accommodating gloss of the relevant distinction is desirable.

Fortunately, there is a time-honored way of drawing the distinction that should suit our purposes. Traditionally, metaphysicians have tended to take the concept of a property to be a basic one, typically introduced via ostension. We are invited to consider, say, the red, round apple in the corner. In distinction from the apple, we notice its redness and roundness. That is, we notice the properties, or characteristics, of the apple and we notice the apple itself. The latter is not a characteristic but it is a charactered thing. And so we arrive at the relevant conceptual distinction. On the one hand, there is the concept of a *property* (characteristic, quality, etc.).[168] And, on the other hand, there is

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[167] James Van Cleve describes this sort of view in his "Three Versions of Bundle Theory", *Philosophical Studies*, Vol. 47, No. 1 (1985), pgs. 95-107.

[168] As I am drawing this distinction, a relation, such as *being-taller-than*, would be a property.

the concept of something which is charactered *but not itself a property/characteristic*. I will call the latter concept the concept of an *individual*.

This way of drawing the distinction allows the austere nominalist to affirm the existence of only individuals. In addition, this gloss on the distinction does *not* entail that a property cannot itself be charactered. After all, there would have to be some sense in which *redness is a color*, *courage is a virtue*, etc.

The aim of this section has been to draw two important distinctions—the universal/particular distinction and the individual/property distinction. These distinctions generate the following four complex notions: *universal-property*, *particular-property*, *particular-individual,* and *universal-individual*. If one looks to the history of metaphysics, one can find each of these concepts, or at least very similar ones. Realists who adopt a constituent ontology, for example, typically take properties to be universals. Nominalists who adopt a constituent ontology typically take properties to be particulars ("tropes"). And, according to most constituent ontologists, an ordinary object is a particular-individual. The final complex concept—that of a *universal-individual*—seems to be currently unemployed by metaphysicians. Nevertheless, the concept is coherent[169] and, indeed, it seems that certain early Medieval realists postulated at least one universal-individual.[170]

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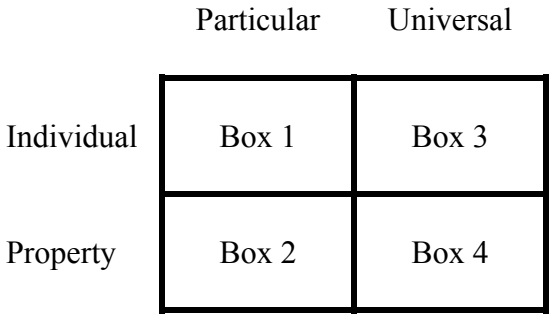
[169] Nevertheless, depending on one's metaphysical view, one might think there are individuals that could not be universals, on the above gloss of universal. For example, if there is a bundle B that is an individual but is not possibly a proper constituent in another bundle, then B is not possibly a universal-individual.

[170] Two Medieval constituent ontologists, William of Champeaux and Odo of Cambrai, might be interpreted as postulating an individual-universal. They seem to have held the view that there is a single metaphysical constituent shared by every human being—the species *man*, where this is viewed as the fundamental property-bearing constituent which is not itself a characteristic. So we have an individual

3.4 Putting the Distinctions to Work

With the individual/property and universal/particular distinctions in hand, we can now see how these distinctions box a logical compass. And we can refer to this compass to note the basic differences between austere nominalism, trope theory and troper theory:



I will first note the agreements and disagreements between austere nominalism and trope theory. I will then introduce troper theory and show how it falls in the theoretical space between the latter two views. The basic *agreement* between austere nominalism and trope theory can be put in terms of the universal/particular distinction. Both views agree that the universal side of this distinction necessarily has an empty extension. They thereby endorse what we might call *strict particularism*, the doctrine that, necessarily, there are only particulars. So they agree that Boxes 3 and 4 are empty.

Man, a constituent in non-overlapping human beings at the same time, hence it is a universal. (For the record, Champeaux also held that particular properties, in addition to the universal individual Man, are constituents in fully charactered human beings.) It isn't certain, however, whether William of Champeaux and Odo of Cambrai took Man to be a *characterizer* of the wholes of which it is a part, thus it isn't clear whether they should be interpreted as taking this Man to be (what I am calling) a universal-individual or a universal-property. At any rate, there seems to be an obvious problem with the view. In particular, it seems to entail that it is possible that the individual Man is both tan and not-tan at the same time (since it is possible for two humans to exist simultaneously, one tan and one not). For an exposition of this Medieval view, see "Immanent Realism: A Reconstruction of an Early Medieval Solution to the Problem of Universals" by Christophe Erisman, *Documenti e Studi Sulla Tradizione Filosofica Medievale*, XVIII (2007), pgs. 211-230.

But while the austere nominalist and the trope theorist agree that there are only particulars, they *disagree* on what *kinds* of particulars there are. The austere nominalist insists that among the particulars there are only individuals, whereas the trope theorist thinks that among the particulars there are both individuals and properties. In other words, the austere nominalist thinks that Boxes 2, 3, and 4 are empty, whereas the trope theorist thinks that only Boxes 3 and 4 are empty.

For the austere nominalist, all entities fall into Box 1 and are thickly intrinsically charactered", in that each can be described in a multitude of ways. Supposing that a given rose is a particular[171], the rose will be said to be of a certain size and temperature—it is thus a thickly intrincisally charactered individual. (The austere nominalist will, of course, deny that she is thereby committed to there being either properties expressed by those predicates or some sort of metaphysical structure in the rose).

For the trope theorist, the entities in Box 1 are somehow constructed out of the metaphysically more basic entities in Box 2. That is, the individual-particulars are entirely[172] constituted by particular-properties, or, more perspicuously, by particular maximally-thin fully-determinate characteristics. With respect to the rose, a trope theorist might say that the rose has multiple constituent properties, such as redness and coolness—where these are maximally thin properties.

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[171] Of course, *which* thickly intrinsically charactered particulars an austere nominalist subscribes to will depend upon her other, more general, ontological commitments. If we had three austere nominalists—an idealist, a physicalist, and a substance dualist—we would find quite different entities on their lists of the particulars.

[172] The special relation that binds tropes together in a bundle—often called "compresence"—is taken by some trope theorists to be a genuine polyadic property. Others take it to be a pseudo property/trope, appealing to what D. M. Armstrong has called the doctrine of the "ontological free lunch"—the thesis "what supervenes is no addition of being." See Armstrong, *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997), pg. 12.

We can now see that there are two primary differences between austere nominalism and trope theory, and that these differences turn on the individual/property distinction. First, whereas the austere nominalist denies that there are properties, the trope theorist claims that there are properties and that properties constitute the metaphysical ground floor of being. Second, while both views affirm that there are individuals, individuals are metaphysically basic on austere nominalism but metaphysically constructed (out of tropes) and hence derivative on trope theory. The basic entities of the austere nominalist are particulars, but they are also individuals—they are charactered things but not characteristics. The basic entities of the trope theorist are particulars but *not* individuals—they are characteristics. For the trope theorist, every individual is "constructed" entirely out of basic particulars, viz. out of particular properties. Specifically, an individual is identical to a bundle of compresent tropes. It is thus apt to describe a trope as a "maximally-thinly characterizing particular", since each trope endows the individual (of which it is a constituent) with a single specific fully-determinate characteristic, where that fully-determinate characteristic is the kind of thing that can be expressed by a single predicate.[173] For example, assuming that a given scarlet-redness is a trope, an individual can be said to be "scarlet" in virtue of having that scarlet-redness as a constituent.

[173] Most trope theorists deny that there are determinable tropes, such as being colored, being heavy, etc.

3.5 Troper Theory as Between Trope Theory and Austere Nominalism

So much for the contrast between austere nominalism and trope theory. We are now in a position to appreciate the room for an interesting view—troper theory—that is closer in spirit to austere nominalism than is trope theory. Since Loux has invented the view, it is appropriate to begin with his summation of it:

> …one might propose a nominalistic ontology that has as its metaphysical atoms what we might call 'tropers.' Whereas tropes are particular properties—things like this redness, this triangularity, this pallor, tropers are thin individuals—things like *this individual red thing*, *this individual triangular thing*, and *this individual pale thing*. The claim would be that familiar objects are bundles of compresent tropers. So the view would again dispense with properties and would insist that the ultimate constituents of familiar particulars are intrinsically characterized or natured, but would construe those constituents as particulars rather than universals. Such intrinsically characterized particulars would be the ultimate or underived sources of character: a familiar particular would be, say, pale because it has a pale troper as a constituent.[174]

We can get a handle on the notion of a troper by considering the failure of austere nominalism. As we saw in a previous chapter, a philosopher who concedes this failure but wants to provide an adequate account of the character of ordinary objects must expand her explanatory resources by appealing to something besides the ordinary object itself, taken as a metaphysically unstructured whole. One way of characterizing the difference between a trope theorist and troper theorist (if there were one) is in terms of how radical their response is to the failure of austere nominalism. As we will now see, trope theory responds by taking, as it were, two steps away from austere nominalism, whereas troper theory takes only one step.

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[174] Loux, "An Exercise in Constituent Ontology", unpublished, pg. 40.

The first step the trope theorist takes is to adopt a constituent ontology; she thus posits metaphysical constituents within the ordinary object. Sometimes this is described as "constructing" ordinary objects out of these constituents.[175] The second step the trope theorist takes is to construe these constituents as *properties*. In effect, this is a significantly bigger step away from austere nominalism than the first, since it concedes something to the traditional realist: the concession being that the category of property needs to be populated after all. Indeed, this second step amounts to giving an analysis that entails a categorial gap between the ordinary object qua *individual* and its constituents qua *properties*.[176] We will examine this gap in detail in the next chapter.

The troper theorist, on the other hand, takes only *one* step away from austere nominalism. She, like the trope theorist, adopts a constituent ontology and thus posits metaphysically more basic constituents as the materials out of which ordinary objects are constructed. But unlike the trope theorist, she does this without the concession to the realist—in other words, *without the further step of construing those constituents as properties*. Instead, the basic constituents of troper theory are *individuals*. To be sure, these are not the richly charactered individuals of commonsense—rather, we might describe them as one-dimensionally-charactered individuals or maximally-thinly-charactered individuals. But tropers are still individuals, and more importantly, tropers are like the individuals of the austere nominalist: on both theories, there are charactered individuals but no characteristics. In other words, both views refuse to populate any box

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[175] Hence, "The Problem of Thing-Construction" is the title of Chapter 6 of Maurin's *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002).

[176] Loux, "An Exercise in Constituent Ontology" unpublished.

other than Box 1. Note that the single step taken by the troper theorist does *not* seem to open a categorial gap between an ordinary object and its constituents—*both* are individuals, both are from Box 1. By way of comparison, note that the basic particulars of the austere nominalist are also individuals—they are charactered things. But the basic particulars of the trope theorist are *not* individuals—while they are charactered they are also characteristics, and no individual is a characteristic. Thus, while austere nominalism and troper theory agree that all entities fall into Box 1, the troper theorist thinks that some members of Box 1 are constituted by other members of Box 1. Thus, while everything is an individual-particular, ordinary objects (*thickly* charactered individual-particulars) are constituted by tropers (*thinly*-charactered individual-particulars). It is in this sense that troper theory is closer in spirit to austere nominalism than is trope theory. Indeed, in virtue of eschewing properties altogether, troper theory is a more thoroughgoing form of nominalism than trope theory.

To flesh out these differences, let's consider how a trope theorist and a troper theorist might think about what we would ordinarily describe as two red, round cherries.[177] Let's name them Charity and Hope. According to trope theory, Charity is an individual entirely composed of tropes (i.e. a bundle of compresent tropes), including redness_1 and roundness_1; likewise, Hope has as constituents redness_2 and roundness_2 (the subscripts are to remind us that these are *particular* properties). According to trope theory, Charity and Hope are similar with respect to being red in virtue of the (primitive) fact that redness_1 and redness_2 are exactly similar. Note that none of the constituent

[177] In what follows, I am assuming that redness is a non-relational and intrinsic property. This assumption and the choice of redness are mainly heuristic in purpose.

tropes is an individual. Instead, they are ingredients that somehow go together ("via compresence") to form an individual (such as Charity). Thus, on trope theory, individuals do not exist at the ground floor of being.

Suppose we use names like red-thing$_1$, round-thing$_1$, etc., as names for certain tropers. Then we can express troper theory's account of Charity and Hope as follows. Charity is composed entirely of basic individuals (i.e. it is a bundle of compresent tropers) including red-thing$_1$ and round-thing$_1$, and Hope is composed of individuals including red-thing$_2$ and round-thing$_2$ (where the subscripts are to remind us that these are *particular* individuals). According to troper theory, Charity and Hope are similar with respect to being red in virtue of the (primitive) fact that red-thing$_1$ and red-thing$_2$ are exactly similar. In addition, Charity, like Hope, is a non-basic individual: It is an individual because its parts are individual, but it is a non-basic individual because it is charactered only in the derivative sense that each of its constituents is (non-derivatively) charactered. Thus, on troper theory, basic individuals exist at the ground floor of being and derived individuals exist at the level of ordinary objects.

3.6 The Sense in Which Tropers are Maximally-Thin

I'd like to conclude this chapter by responding to a potential worry concerning the coherence of troper theory. According to the above account, a troper is supposed to be maximally-*thinly* charactered. However, it would seem that one can truly describe any given troper in a multitude of non-equivalent ways, which suggests that a troper is charactered in a rather *thick* way. Suppose, for example, that a scarlet-red apple is sitting on the fifty yard line in the Notre Dame football stadium. According to troper theory,

there is a troper, call it scarlet-thing$_1$, which is a metaphysical part of this apple. While we can truly describe scarlet-thing$_1$ as "scarlet", it would seem that we can also truly describe it as "on the fifty-yard line", "south of Hesburgh Library", "at a place where Dillingham fumbled the ball", "part of an apple," "a co-constituent with cool-thing$_1$", "either scarlet or divine", "if blue then scarlet", "not identical to the number 3", "not a property", etc. Indeed, on pain of violating the law of excluded middle, it would seem that for any predicate F, *every* troper is truly described as "F or not-F". Clearly, then, any given troper satisfies a large number of non-equivalent predicates. But this suggests that the character of a troper is *thick*. Thus, some clarification is needed, since (i) it cannot be the case that a troper is, without qualification, both a maximally-thinly charactered particular and a thickly charactered particular, and (ii) we should surely reject any theory that exempts its basic entities from the law of excluded middle.

To clarify this issue, a troper theorist will need to draw a principled distinction between different sorts of predicates. If she is to remain consistent, however, a troper theorist cannot do so by saying that some predicates express genuine (reified) properties, while other predicates do not—for there are no properties on troper theory. So a troper theorist needs to draw this distinction in a principled way and without appeal to properties *per se*. On this score, it might appear that *trope theory* has an advantage over troper theory, since only the former has properties to appeal to in drawing a principled distinction between different sorts of predicates. But this appearance is misleading, as Brian Garrett has noticed:

> …the strategy of the trope theorist is to exchange the instantiation relation for the part-whole relation. This works well enough in the case of predications involving concrete particulars, but what about predications involving tropes? We can truly

> say many things of a given redness trope: it is red, coloured, red or green, my favourite trope, in Canberra, persisted through 2006, etc. Since a trope is not a bundle, we cannot regard 'this trope is red' as made true by a bundle's containing a redness trope. How then are we to understand these predications other than in terms of the instantiation of a property in a trope?[178]

In other words, while a trope theorist can appeal to (constituent particularized) properties/tropes in her account of the character of *ordinary objects*, she cannot deploy that strategy when accounting for the character of the *properties/tropes*. The trope theorist needs a different strategy for the latter account.

On this score, then, trope theory is on par with troper theory. This is not surprising, since their accounts are functionally equivalent: like the trope theorist, the troper theorist appeals to constituent (particularized) individuals. In other words, both theories ground the character of an ordinary object in that object's metaphysical *parts*. Thus, with respect to predicates that hold of an ordinary object, both theories have the resources to draw a principled distinction between two sorts of predicates: (i) predicates which hold of an ordinary object solely in virtue of that object having certain metaphysical parts (e.g, this apple "is scarlet" in virtue of having scarlet-redness$_1$ or scarlet-thing$_1$ as a part), and (ii) predicates which hold of an ordinary object but *not solely* in virtue of the object having metaphysical parts (e.g. this apple is "at a place where Dillingham fumbled the ball" in virtue of something besides the apple's metaphysical parts). Thus, when it comes to making principled distinctions between predicates which hold of *ordinary objects*, it seems that trope theory and troper theory are on par.

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[178] Brian Garrett, *What is This Thing Called Metaphysics?* (London and New York: Routledge, 2006), pg. 48.

The interesting question is whether trope theory, in virtue of having properties in its ontology, is better equipped than troper theory when it comes to drawing a principled distinction between predicates which truly describe a given *metaphysical constituent*. On traditional trope theory, tropes are metaphysically basic and simple entities in that they have no proper parts.[179] In particular, no trope is composed of other tropes.[180] This means that a trope theorist cannot deploy the same strategy for tropes as she did for ordinary objects. That is, a trope theorist cannot appeal to a trope's (proper) *constituents* in order to ground a distinction between predicates that hold of that trope. Supposing that the reasons for taking tropes to be simple will equally apply to tropers[181], troper theory is subject to the same limitation. Thus, neither theory can appeal to metaphysical constituents in a basic entity (whether a trope or a troper) in order to draw a principled distinction between predicates that hold of that entity. On this score, the fact that the trope theorist has particularized-properties in her ontology does not give her an advantage over the troper theorist.

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[179] Maurin takes simplicity to be a core doctrine of trope theory. See her *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), Ch. 2.

[180] Trope theorists have tended to be ambivalent about the possibility of complex tropes. Some, like Campbell and Simons, seem to allow for complex tropes. Others, like Maurin, are non-committal and express reservations about them. There are well-known good reasons for the ambivalence, however, and in the next chapter I will present considerations in favor of taking all tropes to be simple. Also, since nobody to my knowledge has defended—much less mentioned—a theory on which *all* tropes are complexes of other tropes (and there are only tropes)—i.e., a gunkish theory of tropes, it will suffice to note that my comments bear on the atomic tropes of a trope theory, whether or not that theory also allows complex tropes. See: Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990); Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002); Peter Simons, "Identity Through Time and Trope Bundles," *Topoi*, 19 (2000), pgs. 147-155.

[181] This supposition seems likely, though I've yet to work it out. Since we are at present interested in whether trope theory has a leg up on troper theory, it is acceptable to assume that the latter does not have an advantage on this score.

Indeed, we can now see that the trope theorist faces the very same problem as the troper theorist: On both trope theory and troper theory, there are simple character-grounding constituents, each of which is supposed to be qualitatively maximally-thin, even though each seems to satisfy a large number of non-equivalent predicates. Thus, each theory faces the same prima facie tension: its basic and simple entities are supposed to be maximally-thinly charactered, but they also seem to be thickly charactered.

So the two theories seem to be on par with respect to being able to draw a principled distinction between predicates that hold of a character-grounding constituent. Of course, it doesn't follow that either can succeed in drawing this distinction in an adequately principled way. Unfortunately, as far as I know, no trope theorist has noticed the need to draw the distinction, much less tried to do so.[182] Nevertheless, there does seem to be a promising programmatic strategy for both theories. Recall that the question with which we began this section concerns whether and how troper theory could consistently say that while a troper is maximally-thinly charactered, it is also—in some distinct sense—thickly charactered. Since our original question concerned troper theory, I will describe the strategy in terms of tropers, but it should be straightforwardly translatable into a trope theory. I will now outline the strategy by noting some different sorts of predicates that hold true of tropers, and suggesting a way of grounding those

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[182] L. A. Paul comes the closest to seeing the general issue here, although she is not a trope theorist (at least in terms of how I've defined "trope"). She suggests that there are two ways one might think about the grounds in virtue of which a predicate like "being identical to x" holds of x. She favors the view that this predicate holds of x in virtue of x having as an *improper* part the fusion x itself. In a footnote she notes that one might alternatively hold that this predicate is simply primitively true of x. See her "Logical Parts," *Nous*, 36:4 (2002).

differences. Note that I do not intend to provide anything like a final classification of such predicates, but only a broadly adequate one.

Once more, consider scarlet-thing$_1$. There seem to be many predicates that are true of this troper, and we can group them into several families. The first family contains what we might call the *categorial predicates* that together hold of *all* tropers. These predicates describe what it is for something to be a troper.[183] This description includes the following predicates: "simple", "particular", "individual," "possibly a metaphysical constituent," and "maximally-thinly fully-determinately charactered." Taken together, these descriptions serve to distinguish the basic entities of troper theory from those of other theories. Taking a lesson from David Lewis, a sober-minded troper theorist will insist on her right to take each of these as a case of primitive predication.[184] Thus, scarlet-thing$_1$, *qua troper* is essentially and intrinsically simple, particular, individual and (maximally-thinly fully-determinately) charactered.

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[183] For the sake of simplicity, I am ignoring a more fundamental family of predicates than the first family. The more fundamental family contains predicates that hold of every existent. I have in mind predicates like "being self-identical" and (for every predicate F) "being F or not-F". Whether the first family and the fundamental family will be taken to be the same depends upon whether the troper (trope) theorist affirms "there is an x such that x is not a troper (trope)". It is likely that the troper (trope) theorist will affirm the latter claim, since, arguably, she should take a *bundle* of tropers (tropes) to not be a troper (trope).

[184] Lewis has convincingly argued that a demand for an analysis of all cases of predication is an impossible, and *a forteriori* a non-compulsory, demand. "Doing away with all unanalyzed predication is an unattainable aim, and so an unreasonable aim. No theory is to be faulted for failing to achieve it. For how could there be a theory that names entities, or quantifies over them, in the course of its sentences, and yet altogether avoids primitive predication? Artificial tricks aside, the thing cannot be done." He raised this as an objection to Armstrong, who used such a demand in his objections to various forms of nominalism. See Lewis, "New Work for a Theory of Universals", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 199.

The second family contains the *privileged predicate* that necessarily holds of a *given* troper, but not all tropers, and which describes the way[185] in which it is essentially and intrinsically characterized.[186] For example, "scarlet" describes the specific maximally-thin fully determinate essential characterized-ness of scarlet-thing$_1$ but not (say) square-thing$_1$. Again, a troper theorist will insist that as a general rule it is a primitive fact that a certain privileged predicate holds of a given troper. Thus, scarlet-thing$_1$ *qua this troper* is essentially and intrinsically scarlet.

The third family contains predicates that do not entail but are entailed by predicates in the first two families. (More formally: where "F" is a third-family predicate, *that scarlet-thing$_1$ is F* does not entail but is entailed by *scarlet-thing$_1$ is G*, where "G" is non-equivalent to "F" and is either a first-family predicate or a second family predicate or a predicate logically constructed from the first two families.) The entailment here is broadly logical.[187] It is not possible to list all of these predicates, but here are a few that would hold of scarlet-thing$_1$: "colored", "either scarlet or divine", and "if blue then scarlet". Recall that "maximally-thinly characterized" is one of the categorial predicates. Part of what this signifies is that a troper has *one and only one* intrinsic dimension of character. The privileged predicate represents this single dimension. Thus, if "scarlet" is the privileged predicate that a troper satisfies, then it

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[185] The troper theorist, of course, will want to insist that talk about a troper's "way" of being characterized is *not* talk about a property per se.

[186] For the sake of simplicity, I am counting all equivalent predicates as one. In other words, synonymous terms within the same language and cognates across languages count as equivalent. For example, "scarlet", "scharlachrot", "escarlata", and "scarlatto" all describe the specific maximally-thin fully determinate essential characterized-ness of scarlet-thing$_1$.

[187] Alvin Plantinga, *The Nature of Necessity* (Oxford: Clarendon Press, 1974), pg. 4.

follows that that troper satisfies third-family predicates such as "not intrinsically round", "not intrinsically courageous", etc. In sum, whatever third-family predicates hold of a troper, they do so of necessity, in virtue of the troper being the specific troper that it is; they may or may not describe anything intrinsic about the troper.

The fourth family contains what we might call *accidental predicates*. These are not entailed by predicates in the first three families. If a troper falls under one of these predicates, it does so contingently. Generally, these are predicates that hold of a given troper in virtue of how that troper is situated in its environment or in virtue of other entities (whether near or remote). There is plenty of room for debate[188] over which predicates would be accidental on troper theory, but less controversially accidental ones

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[188] It is worth noting two potential in-house issues that bear on which predicates are accidental. I say these are "potential" in-house issues because they are *actual* in-house issues for trope theory, on which I'm modeling troper theory.

First, troper theorists might not agree on whether a given troper's spatiotemporal location is a contingent matter. Some might argue that a troper is individuated by its spatiotemporal location. With respect to tropes, this was Campbell's original view, described in his "The Metaphysics of Abstract Particulars" *Midwest Studies in Philosophy IV: The Foundations of Analytic Philosophy*, ed. P. French, et al. (Minneapolis: University of Minnesota Press, 1981), pg. 477-88. He later changed his view, in response to criticisms by Moreland and others. For the changes, see his *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990). Others might insist that individuation is a primitive matter, it being a primitive fact that a troper is numerically distinct from every other troper. This is Campbell's mature view, found in his *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990). Still others might deny the spatiotemporal location of tropers altogether. Thus, troper theorists might disagree over whether a predicate of the form "being at such-and-such a location" is what I've called an accidental predicate. For a helpful discussion the individuation of tropes, see Jonathan Schaffer, "The Individuation of Tropes" *Australasian Journal of Philosophy*, Vol. 79, No. 2, June 2001, pgs. 247-57.

Second, troper theorists might not agree on whether or in what cases compresence holds contingently. Some might hold, for example, that in certain cases, it is not a contingent matter that compresence holds of two specific tropers (one might hold, for example, that it is not possible for scarlet-thing$_1$ and round-thing$_1$ to exist without being compresent together). Peter Simons proposes such a view for tropes in "Particulars in Particular Clothing: Three Trope Theories of Substance", Philosophy and Phenomenological Research, Vol. 54, No. 3, 1994. Others might take all cases of compresence to be a contingent matter. Thus, whether "being compresent with round-thing$_1$" is an accidental predicate may be a matter of dispute. Predicates that would probably be less controversially accidental include: "moving at such-and-such a velocity", "being located on top of this table", "being such that Robert is caffeinated", "being to the southwest of Charlie Weiss", etc. This seems to be Maurin's view in *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002).

would include: "on the fifty-yard line", "south of Hesburgh Library", "at a place where Dillingham fumbled the ball", etc. A troper's coming to satisfy one of these predicates would be a case of what Peter Geach calls a "mere Cambridge change."[189] The latter is a pseudo-change that occurs when an object comes to satisfy a new predicate without undergoing any intrinsic change. For example, just a moment ago the last sentence (token) came to satisfy the predicate "being read by an intelligent person", but the sentence did not undergo any intrinsic change. In sum, whatever fourth-family predicates hold of a troper, they do so only contingently and may or may not describe anything intrinsic about the troper.

Whether or not there is a fifth family depends upon what one thinks about the implications of two tropers being compresent with each other. Indeed, there is a question here for *all* one-category constituent ontologies: If two character-grounding constituents are constituents of the same whole, is there any sense in one characterizes the other? For example, if redness and coldness (whether construed as universals or tropes) are metaphysical parts of the same apple, is there any sense in which redness is thereby cold? Some realist constituent ontologists, such as L. A. Paul, seem committed to an affirmative answer to this question, although it threatens the coherence of the view.[190]

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[189] See Geach, *God and the Soul* (London: Routledge, 1969).

[190] In "Logical Parts" (*Noûs*, Vol. 36, No. 4, Dec. 2002), Paul provides the following account of properties. Some properties are located but others are not. Qualitative properties are not, strictly speaking, located. Nevertheless, a qualitative property is located in virtue of being fused with a location property; and a qualitative property is multiply-located in virtue of being fused with different location properties. Suppose you have an apple and a cherry which are the same shade of red. The apple is the fusion of *redness*, *being at L1*, and other properties. The cherry is the fusion of *redness*, *being at L2*, and other properties. Thus, *redness* can be said to be at L1 but also at L2; *redness* is multiply located.

There seems to be an unstated *general* principle at work here: *For any two properties F and G, if F is fused with G, then F can be said to be G.* Thus, redness can be said to be located at L1 in virtue of

But this threat arises in virtue of the fact that the constituents are construed as *universals*, and so does not bear on either trope or troper theory. And as far as I can tell, trope theorists have little to say on this question—aside from vexations over "compresence".[191] Nevertheless, there is something to be said for each way of answering the question, but I think that on balance, it is rather implausible to hold that tropes of the same bundle characterize each other. The same seems to be true with respect to tropers. Suppose, for example, that scarlet-thing$_1$ and cold-thing$_1$ are compresent together in a given apple. The question concerns whether there is any sense in which "is cold" is true of scarlet-thing$_1$ in virtue of the latter being compresent with cold-thing$_1$. On the one hand, it might seem intuitive that there is some sense in which scarlet-thing$_1$ is cold. In defense of this answer, one might argue that if the *entire* bundle can be truly said to be cold (in virtue of having cold-thing$_1$ as a part), then it is plausible to think that all of its constituents are cold. On the other hand, there are some reasons to deny that scarlet-thing$_1$ is, in any sense, cold. First of all, it is not clear what weight we should assign to our *intuitions* about the implications of compresence. Lewis' comment that "plainly the intuitions were made for particulars," [192] seems plausible when it comes to commonsense particulars like

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being fused with *being at L1* and redness can be said to be located at L2 in virtue of being fused with *being at L2*. The threat of incoherence comes from the unrestricted nature of this principle. Suppose, for example, that we have two objects, a red cube and a red sphere. Thus, *redness* is bundled with *cubicalness* in the first object and *redness* is bundled with *sphericalness* in the second object. But given the general principle, it follows that *redness* is both cubical and spherical. But that is incoherent. It is worth noting that this isn't a problem for the traditional trope theorist. For her, there are two numerically distinct rednesses—one in the cube and another in the sphere. So neither redness is both cubical and spherical.

[191] An in-house dispute among trope theorists concerns whether to reify compresence. If you take compresence to be a real trope, then there is a sense in which compresence characterizes its fellow constituents.

[192] David Lewis, "New Work for a Theory of Universals", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 190.

chairs, cats, cantaloupes, and the like, but doesn't seem plausible when it comes to the metaphysically basic, maximally-thinly charactered particulars of a metaphysical theory like trope or troper theory. Second, it is not clear what we gain by supposing that scarlet-thing$_1$ is cold. That is, the supposition does not appear to do any explanatory work. Third, if compresence suffices for co-predication, then troper theory is saddled with an additional way in which something can be charactered. Already the view admits two such ways: There is the way in which an ordinary object is cold—by having a cold-thing as a part; and there is the way in cold-thing$_1$ is cold—primitively and necessarily. Allowing compresence to suffice for co-predication would seem to unnecessarily complicate the semantics of predication—to wit: we'd have a third way something can be cold—by being compresent with a cold-thing. Finally, recall again that one of the categorical predicates of every troper is "maximally-thinly charactered". Part of what this signifies is that a troper has *one and only one* intrinsic dimension of character. Thus, if "scarlet" is a privileged predicate that scarlet-thing$_1$ satisfies, then it follows that scarlet-thing$_1$ also satisfies "not intrinsically cold." So, scarlet-thing$_1$ cannot be *intrinsically* cold. But in what other sense could something be cold? For my purposes, this issue needn't be put to rest. Suffice it to say that if compresence is sufficient for co-predication, then there is a fifth family of predicates whose members are those predicates that hold of scarlet-thing$_1$ in virtue of it being compresent with other tropers.

So much for the different families of predicates that hold of scarlet-thing$_1$. The preceding seems to represent a promising programmatic strategy for drawing principled distinctions among these predicates. It seems that a more detailed deployment of this general strategy would provide an adequate account of the sense in which a troper can be

described as maximally-thinly charactered, even though there are a range of predicates that any given troper falls under. The same seems true for the trope theorist, who could give an exactly similar account (say, for scarlet-redness$_1$). In sum, a natural and plausible way for a troper theorist to privilege a predicate is to say that it expresses the *intrinsic* character of a maximally-thinly-fully-determinately charactered particular. [193]

3.7 What We've Learned in Chapter 3

In this chapter, I have argued that it is a mistake to think that trope theory uniquely occupies the attractive theoretical space between austere nominalism and universal-realism. By getting clear on the universal / particular and property / individual distinctions, I showed that there is also room in this theoretical space for a novel view, troper theory, which is actually closer in spirit to austere nominalism than is trope theory. I finished the chapter by anticipating and resolving a worry about the coherence of troper theory. In the next chapter, I will argue that troper theory is superior to trope theory.

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[193] Loux had the foresight to include this qualification in his construal of a troper as "intrinsically characterized or natured." Loux, "An Exercise in Constituent Ontology", unpublished paper, pg. 40.

CHAPTER 4: TROPERS TRUMP TROPES

4.1 Introduction

In the previous chapter I focused on the theoretical space between austere nominalism and universal realism. Trope theory is sometimes said to have the unique advantage of occupying this space. I argued that this claim is false in that there is also room for a novel theory—troper theory—which is closer in spirit to austere nominalism than is trope theory.

When seeking to give an account of the character of ordinary objects, constituent ontologists have typically accepted a two-fold explanatory burden. This duality corresponds to the two general ways in which ordinary objects are charactered. On the one hand, ordinary objects are charactered in what I will call an "ordinary" way; "ordinary characteristics" include being red, being round, being square, etc. On the other hand, ordinary objects are charactered in what I will call a "categorial" way; "categorical characteristics" include being particular, being a subject of change, being a contingent being, and being an individual.

This chapter has three main sections. In the first, I begin by showing that troper theory has at least as much explanatory power as trope theory in accounting for the ordinary characteristics of ordinary objects and resisting the objections that plague other traditional nominalist attempts to provide such an account. I finish the section by considering some differences between the theories that bear on their relative parsimony

and fit with commonsense. Here there is an important difference between the theories concerning the way each construes the nature of character-grounding constituents. Trope theory endorses what I will call the Property Doctrine (PD), the thesis that character-grounding constituents are properties.

In the second main section, I focus on the sort of explanatory challenges posed by the categorial characteristic of being an individual, or individuality. I begin by showing why it is incumbent upon a constituent ontologist to provide an account of individuality. I then progressively refine the sorts of challenges that individuality poses for the trope theorist and troper theorist.

In the third and final main section, I consider the relative strengths of the two theories in attempting to meet the three challenges posed by individuality. By doing so, I aim to show that troper theory has significantly more explanatory power than its rival.

So the claim is that troper theory is superior to trope theory. The basic argument for this thesis is two-sided. On the one hand, troper theory has at least as much power as trope theory in accounting for the ordinary character of ordinary objects. But, on the other hand, when it comes to accounting for the individuality of objects, troper theory is significantly more powerful and elegant than its rival.

4.2 The Explanatory Power and Economy of the Two Theories

This section has two parts. In the first part I aim to support two general conclusions: (i) troper theory is at least as good as trope theory when it comes to accounting for phenomena concerning the character of ordinary objects (such as resemblances between objects and the meaning of abstract singular terms), and (ii) troper

theory is equally as good as its rival at overcoming objections against traditional versions of nominalism. These points support the general conclusion that troper theory has at least as much explanatory power as its rival. In the second part I will investigate differences between the theories that bear on their relative parsimony and fit with commonsense.

4.2.1 Troper theory has at least as much explanatory power as trope theory

4.2.1.1 Tropers Can Do What Tropes Can Do

First, tropers can play whatever explanatory role tropes are supposed to play. This stems from the fact that each theory is what I will call a particularist constituent mono-ontology. Each is a version of *particularism*, the general view that there exist only particulars. Each is a version of *constituent* ontology in that each accounts for the character of ordinary objects by positing character-grounding constituents (CGCs) as metaphysical parts of those objects, where each CGC is qualitative in a maximally-thin fully-determinate way.[194] In other words, both theories posit CGCs which are qualitative, particular (not universal), and metaphysically basic. Each is also what I will call a *mono*-constituent ontology, in that each takes all the metaphysical constituents of ordinary objects to be of the same category: for the trope theorist, all constituents are properties; for the troper theorist, all constituents are individuals.

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[194] Most trope theorists are averse to the idea of there being merely determinable tropes like "being colored." But in what follows, not much hangs on this issue.

So each theory is a particularist constituent mono-ontology. Because of this, each deploys the same basic strategy for accounting for the requisite phenomena—phenomena surrounding character—and, in particular, resemblances between ordinary objects and the meaning of abstract singular terms. With respect to the former phenomenon, the basic strategy is as follows: on each theory, if two ordinary objects exactly resemble each other in any respect, they do so in virtue of having CGCs which exactly resemble each other. For example, if two ordinary objects exactly resemble each other with respect to their being the same shade of pink, then there are two CGCs (one in each object) that exactly resemble each other; on trope theory, there would be two distinct pinknesses; on troper theory, there would be two distinct pink-things. With respect to providing an account of abstract singular terms, the theories also deploy the same basic strategy. Roughly: an abstract singular term refers to some type of set of CGCs. On trope theory, for example, the set of all exactly resembling redness tropes is the referent for the subject in "Redness is a color." And, "Redness is a color" is true in virtue of Redness (the set of all exactly similar redness tropes) being a subset of Color ("being colored"), which itself is the set of all tropes every one of which is a color. And troper theory says structurally the same thing. It says that the set of all exactly resembling red tropers is the referent for the subject in "Redness is a color." Similarly, the set of all exactly resembling red tropers is a subset of the set of all tropers every one of which is colored. It is in virtue of this that "Redness is a color" is true on troper theory. Thus, in virtue of sharing similar strategies, it seems that a fully-developed troper theory will be at least as good as trope theory when it comes to accounting for the character of ordinary objects and the semantic value of abstract singular terms. In this sense, tropers can play whatever explanatory roles tropes

are employed to play—if tropes can explain the above sorts of phenomena, then tropers can too.

4.2.1.2 Both are Better than Other Versions of Nominalism

Another reason troper theory is at least as good as trope theory concerns the immunity both theories enjoy with respect to the objections haunting traditional versions of nominalism. In this respect they are equally superior to those versions. In the previous chapter, I discussed seven such objections. In what follows, I will quickly note how troper theory stands with respect to these objections. Since these objections are complicated and since I have already discussed them in detail, I will simply sketch out their bearing on troper theory. The reader may consult the previous chapter for the relevant details.

With respect to theoretical ***primitives***, trope theory and troper theory are on par in the following sense. On both views, the bottom-level CGCs are simple. Thus, the fact that a CGC is a certain way is a primitive fact, one *not* grounded in something non-identical to that CGC. (Specifically, the character of a CGC isn't somehow grounded in its having proper parts, nor in its being a member of some set, nor in its resembling some other CGC.) Thus, the primitives of troper theory aren't relevantly different from those of trope theory. With respect to their plausibility, the primitives of each theory are on par. As is the case for trope theory, troper theory admits of no ***anthropocentrism*** or ***arbitrariness*** when it comes to grounding the character of an ordinary object. Troper theory is also immune to ***Goodman's objections***: like a trope theorist, a troper theorist will deny that an ordinary object is (say) red in virtue of that object being a member of a

set. And, the troper theorist is free to give the same sort of account as the trope theorist for talk about redness and roundness—that is, a troper theorist can just as easily construct (fully-determinate) ersatz universals out of sets of (exactly similar) tropers as the trope theorist can construct ersatz universals out of tropes. Thus, talk about redness can be construed as talk about the set of tropers which are each a red-thing, and likewise for talk about roundness. Thus, in a world with only red and round ordinary objects, talk about redness is talk about something different from talk about roundness. Like trope theory, troper theory isn't subject to objections concerning the ***fixed extensions of sets***. The troper theorist needn't ground the character of an ordinary object in that object's being a member of some set. Thus, the sort of objections that plague set-theoretic nominalism have no teeth against troper theory.[195] Finally, when it comes to explaining the character of ordinary objects, troper theory, like trope theory, seems to accommodate the ***intuitive order of explanation***. A troper theorist explains the character of an ordinary object by appealing to a constituent in that object. A troper theorist can also follow Maurin's lead and take facts about resemblances between tropers to derive from prior primitive facts about each troper being charactered as it is.

In sum, the explanatory power of troper theory matches that of trope theory and troper theory is equally good at overcoming or avoiding the objections leveled against other traditional versions of nominalism. I will now explore some of the differences

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[195] Versions of set-theoretic nominalism are committed to the conditional that there are red objects only if R (the set of all red objects) exists. So each is committed to the following unacceptable propositions: (i) There could not be one more or one less red object in the world; (ii) it is not the case that my black car, instead of my red apple, could have been red (keeping the number of red objects the same); and (iii) if I were to eat the red apple on my desk, there subsequently would be no red objects in the world.

between these theories, differences which bear on their relative explanatory power. As I hope to show, it is in virtue of these differences that troper theory is superior to its rival.

4.2.2 The Theories' Relative Parsimony and Fit with Commonsense

4.2.2.1 Differences Concerning Individuals

In the preceding, I have been modeling troper theory on trope theory. If this modeling were further developed, the set of all the tropers would have the same cardinality as the set of all the tropes. That is, there will be a troper for every trope and vice versa. But nevertheless, there are many more individuals on troper theory than on trope theory. Indeed, there are many more individuals than one might, commonsensically, think. This saddles troper theory with what might seem to be two vices. First, with respect to the number of individuals in their respective ontologies, trope theory is much more economical than troper theory. Of course, the counter will be that, with respect to the number of properties, trope theory is much less economical than troper theory, on which there are none. But more importantly, assuming that "entities" is fundamentally univocal and covers both tropes and tropers, the number of entities on each theory is the same. In that sense, neither theory is more or less economical than the other. So the first alleged vice can be dismissed.

Troper theory's second putative vice is that it posits more individuals than we commonsensically take there to be. With respect to the number of individuals in each ontology, trope theory will provide a number that is much closer to what the folk think. This alleged vice isn't as easy to dismiss. According to troper theory, there is an

important sense in which there are many more of what ordinary folk typically call "things". Whereas one might have thought that there is only one thing, or individual, where the dog sits (assuming the dog has no fleas, ticks, parasites, etc.), it turns out that there are numerous things—a full gang[196] of maximally-thinly charactered individuals—there where the dog is. Thus, it would be natural to think that troper theory is at odds with commonsense, and on this score one might judge it to be less plausible than trope theory. Perhaps. But notice that this judgment assumes that trope theory has a rather commonsense view about the number of individuals or things. This assumption will be challenged below. In fact, the challenge will be that on trope theory there *aren't any* individuals. If this is right, then the choice between trope theory and troper theory is the choice, respectively, between no individuals and loads of individuals. It is hard to say, but I'd judge the latter to be closer to commonsense.

4.2.2.2 Differences Concerning Properties

As already noted, both theories agree that character-grounding constituents (CGCs) and ordinary objects stand in something like a part/whole relation, but each theory says something further, and something unique, about how CGCs compare to the wholes whose character they ground. Trope theory says that the ordinary object is an individual whereas its constituents are properties. This suggests that CGCs and their wholes are categorially different in kind. Thus, unlike troper theory, trope theory endorses what I will call the **Properties Doctrine** (**PD**): character-grounding constituent

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[196] In conversation, Loux originated the idea of calling bundles of tropers "gangs of individuals."

particulars are properties. It is important to note that PD amounts to the claim that the CGCs within an ordinary object are entities of a putatively different category from the ordinary object itself. Troper theory, on the other hand, says that both the ordinary object and its character-grounding constituents are individuals. The difference is that tropers are maximally thinly charactered, whereas ordinary objects are thickly charactered.

In the balance of this chapter, I will argue that PD saddles trope theory with serious problems that do not arise for troper theory. First, however, it is worth considering whether the *absence* of properties on troper theory can be taken to be a disadvantage of the theory. A trope theorist, for example, might object as follows:

> "If being at odds with commonsense is a strike against a view, then it is only fair to count it against the troper theorist that on her view there are no properties. The folk talk about properties all the time, but troper theory says there are none."

A few replies are available. First, the claim that the folk "talk about properties all the time" is questionable and question-begging. At the very least, the troper theorist is within her rights to question it. Second, even if it is a fact that the folk talk about properties, it would not follow that an ontological commitment to properties is involved in their talk—the folk talk about "the average family", "sunsets", etc. but few of the folk believe that there literally are such things. Third, one could argue that it is more obvious that the folk are committed to individual than it is that they are committed to properties. Thus, the troper theorist may simply concede the above objection, but (i) go on to argue (as I will later in this chapter) that the trope theorist cannot accommodate the folk belief that there are individuals, and (ii) insist that her view is *less* at odds with commonsense

than the trope theorist's. Finally, and most importantly, "There are properties" *comes out true on troper theory*—viz., there are sets of exactly similar tropers which function as ersatz universals, just like sets of tropes function on trope theory. Granted, "There are properties in the primitive ontology" doesn't come out true on troper theory. But clearly, *this* result isn't at odds with folk talk; ordinary folks don't worry about primitive entities.

So far, I've argued that troper theory has at least as much explanatory power as trope theory. This is because each is a particularist constituent mono-ontology, and so each deploys the same general strategy with respect to the character of ordinary objects. In addition, the theories are equally immune to the objections that haunt other versions of nominalism. However, I've also noted some differences between the theories. Most notably, troper theory alone endorses the doctrine (PD) that character-grounding constituents are properties. For the rest of this chapter my primary concern will be to show how the commitment to PD leads to unique problems for the trope theorist. In the next section, I will clarify and further refine these problems. In the last section, I will consider the relative merits of trope theory and troper theory as regards possible solutions to these problems.

4.3 The Trouble PD Generates for Trope Theory

In this next main section I will focus on the sorts of problems trope theory faces in virtue of endorsing PD. In a preliminary section, I approach these problems by pointing to a family of explananda (concerning ordinary objects) for which the constituent ontologist must provide an account. I will then explore the explanatory challenges

concerning a specific member of this family—namely, the *individuality* of ordinary objects.

4.3.1 Preliminaries

4.3.1.1 Categorical Characteristics & Constituent Ontology

As I will now show, one reason troper theory is superior to trope theory stems from the latter's commitment to PD. For starters, it seems that PD saddles trope theory with theoretical baggage that does no explanatory work. In other words, since tropes and tropers function equally well as character-grounders, etc., it is not clear what theoretical reason there is for adopting PD. The absence of such a reason might be reason enough for preferring troper theory to trope theory.

In addition to being unnecessary, however, PD generates further trouble for the trope theorist. The trouble here concerns the apparent categorial gap between tropes and the individuals that they are supposed to generate. To appreciate the nature and significance of this sort of problem, it will be helpful to think in general terms about the project of constituent ontology. The general strategy of the constituent ontologist is to account for the "characteristics" of ordinary objects in terms of the metaphysical constituents of those objects. The primary and original target explananda for this strategy are what I will call the *commonsense* characteristics of ordinary objects—characteristics like being red, being round, etc. In order to account for the fact that an object is red, for instance, a constituent ontologist might argue that the object is red in virtue of having a redness trope as a part.

But ordinary objects have other characteristics as well. The characteristics I have in mind don't typically feature in ordinary discourse, but are no less commonsensical than the ones that do. The characteristics I have in mind are those an ordinary object has *qua* object, and so are what I will call *categorial* characteristics. These include the following putative[197] characteristics: *being a particular*, *being a subject of change*, *being a contingent entity*, *being an independent entity, being such as to have some properties essentially and other properties accidently*, and *being an individual*.

These characteristics, no less than the commonsense ones, provide important explananda for the constituent ontologist. After all, the strategy of a constituent ontology is fully general: account for the characteristics of ordinary objects in terms of their metaphysical parts. Thus, unless the constituent ontologist provides us with principled reasons for excluding categorial characteristics from this strategy, we have a right to expect her to account for them. But no such reason has been offered, nor is it clear how such a reason could be justified. Thus, it is appropriate to treat categorial characteristics as we do ordinary characteristics—as explandanda to be accounted for. Thus, it is an adequacy criterion for a constituent ontology that it provide an adequate account of the categorial characteristics of ordinary objects. Accounting for categorial characteristics, is not, as it were, supererogatory for a constituent ontology; it's obligatory.[198]

The legitimacy of this criterion is supported by the fact that it is tacitly assumed by constituent ontologists. This can be seen by considering how constituent ontologists

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[197] I say "putative" because some philosophers have denied that some of these are genuine characteristics of ordinary objects.

[198] I thank Brian Boeniger for this nice way of putting it.

have attempted to account for different categorial characteristics. Indeed, as I hope to show, some versions of constituent ontology have been taken to be unable to account for one or another of the categorial characteristics, and for this reason have been rejected and/or significantly revised.

Ultimately, my focus will be on the categorial characteristic of *being an individual*. Before turning to individuality, however, I will first look briefly at how constituent ontologists have accounted for the *particularity* of ordinary objects. Doing so will serve two important purposes. First, it will illustrate the fact that constituent ontologists take categorical characteristics to require an adequate account. Second, it will show that while there is no consensus among constituent ontologists as to how best to deploy the constituent strategy in handling categorial characteristics, there are a few extant ways to do so.

4.3.1.2 Particularity—a Case Study

Among our stock of commonsense beliefs is the belief that an ordinary object isn't the sort of thing that can be wholly located in more than one place at a time. This is often called the *particularity* of objects. In a previous chapter I quibbled with using the term in this way, but I will do so now for the sake of illustration.

Among constituent ontologists, there seem to be three ways of accounting for particularity. The first strategy is to introduce a constituent specially designed to play the role of grounding the particularity of the whole (this constituent may play other roles as well, however). Two instances of the second strategy are worth mentioning. Some constituent realists, such as Allaire, Bergmann, Armstrong, and Moreland, take an

ordinary object to be constituted by both universals and a "bare" or "thin" particular.[199] The latter is a constituent that, by design, grounds the particularity of the whole of which it is a part. The unstated assumption is that necessarily, an ordinary object is a particular if at least one of its metaphysical constituents is a particular—even if every other metaphysical constituent is a universal.[200] L. A. Paul has deployed a putatively different instance of the second strategy. On her view, an ordinary object is the mereological fusion of (immanent) universals, one of which is a fully-determinate location property (i.e., the fusion has as parts not only the determinable *being located,* but the fully-determinate *being located at location L*). Thus, according to her, an ordinary object qua fusion cannot be multiply-located because it has a specific location property as a mereological part.[201] On both of these views, one part in particular plays the role of grounding the particularity of the whole.

The second strategy is to account for particularity by grounding it in the metaphysical parts of the object, but in no part in particular. On this view, there isn't a

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[199] Edwin B. Allaire, "Bare Particulars" *Philosophical Studies*, vol. 14, No. 1-2 (1963), pgs. 1-8; Gustav Bergmann, *Realism: A Critique of Brentano and Meinong* (Madison: University of Wisconsin Press, 1967); D. M. Armstrong, *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997), esp. pgs 123ff.; and J. P. Moreland *Universals* (Guildford: Acumen, 2001).

[200] Armstrong dresses up this assumption by calling it the "Victory of Particularity." See his *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997), pgs 126-7. But aside from that, I've never seen this assumption questioned or defended. So in my next dissertation (!), I'd like to put some pressure on it. After all, why wouldn't a complex of universals and a bare particular be best described as *partly particular but mostly universal*? This would be to treat such complexes like Lewis treats mereological sums: the trout-turkey is partly fish, partly foul. See his *Parts of Classes* (Oxford: Basil Blackwell, 1991), pg. 80.

[201] L. A. Paul, "Logical Parts", *Noûs*, Vol. 36, No. 4, Dec. 2002, pg. 584.

specific constituent that plays the role of grounding particularity.[202] Instead, the particularity of the whole is grounded in the fact that all of its constituents are particulars. This is the strategy of the (one-category) trope theorist, and it works equally well for the troper theorist.

Constituent ontologists who reject the first two strategies may be tempted to "account" for particularity by simply denying it. According to this third strategy, one bites the bullet and denies that ordinary objects are particulars. Arguably, this would count as an account of particularity—at least according to Lewis, who insists that one way to account for something is to say "I deny it." [203] Indeed, Hawthorne has deployed this strategy on behalf of universal-realism, the view that an ordinary object is nothing but a bundle of universals.[204] The radical nature of this strategy underscores an important point—namely, that it is very difficult to see how the particularity of an object can be accounted for solely in terms of its universal constituents. Notice that the problem here for universal-realism is due to an apparent categorial gap between universals and particulars. This sort of "gap problem" anticipates, and is equally serious as, the sort of problems trope theory faces with respect to its ability to account for the *individuality* of an ordinary object solely in terms of its constituent *properties*. More on this below.

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[202] Except in the case of a one-trope bundle, assuming that such a bundle is possible. Trope theorists disagree on whether a one-trope bundle is possible. Such details aren't relevant to my argument here.

[203] After all, as Lewis taught us, one way to account for something is to deny it. "New Work for a Theory of Universals", in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 198.

[204] John O'Leary-Hawthorne has deployed this strategy in his "The Bundle Theory of Substance and the Identity of Indiscernibles" *Analysis* Vol. 55, 1995, pgs. 191-96.

So much for the brief survey of how some constituent ontologists have attempted to account for the particularity of ordinary objects. This survey has shown that constituent ontologists have taken particularity to be an explanandum genuinely in need of an account. This strongly suggests that other putative categorial characteristics—such as individuality—are equally in need of an account. The above survey has also shown three typical ways of accounting for particularity within the constituent framework. This provides the constituent ontologist with three strategies she may look to when considering how to handle other categorial characteristics. For the balance of this chapter, I will turn my attention to the categorial characteristic of individuality. Although I will not take each of the three aforementioned strategies in turn, instances of each will be considered along the way.

4.3.2 Individuality

As mentioned previously, there are other categorial characteristics besides particularity. These include: *being a subject of change*, *being a contingent entity, being an independent entity, being such as to have some properties essentially and other properties accidently*, and *being an individual*. These characteristics have received varying amounts of attention. But in so far as they have been noticed, they have been taken seriously and have been dealt with in moves very similar to the three just noted.[205]

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[205] For a helpful discussion of this, see Loux, "An Exercise in Constituent Ontology", unpublished.

One characteristic that has received relatively little attention is that of *being an individual*, or what I will call *individuality*.[206] In what follows, individuality will be understood in terms of the distinction outlined in the previous chapter. On that account, an individual is something that is charactered but not a property. As I will now argue, individuality presents underappreciated but serious challenges for trope theory but not troper theory.

In the rest of this section, I will progressively refine the sort of challenges that individuality poses for the trope theorist. I will begin by noting how Anna-Sofia Maurin describes the challenge. I will then consider a statement by Loux, in which he objects to trope theory explicitly on the grounds that it cannot account for individuality. It turns out, however, that there are three distinct challenges that underlie Loux's objection. In the remainder of this section, I will progressively extract and refine these challenges. In the next section, I will compare the resources of trope theory and troper theory for meeting these challenges.

The challenge posed by individuality has not gone completely unnoticed. According to Anna-Sofia Maurin, a "fundamental constructive task in the development of a theory of tropes is that of constructing what may be called 'concrete particulars' (or, 'things') from a basic stock of tropes."[207] This task involves accounting for what she

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[206] Notice that *being an individual* is distinct from *being individuated*, in that an account of one may not suffice for an account of the other. (Within trope theory, for example, these accounts can clearly come apart when it comes to the individuality and individuation of the *ordinary object* qua bundle of tropes: One might hold that a bundle is individuated by its *specific constituents*, but hold that the bundle is an individual in virtue of its constituent tropes being at the *same location*.) Thus, as I will use the term, an ordinary object is an *individual* in that it is something which is charactered but is not a property.

[207] *If Tropes*, (Dordrecht: Kluwer Academic Publishers, 2002), pg. 117.

calls "thing-features" or what I've called the categorial characteristics of ordinary objects.[208] Among these features is individuality. She speaks to this feature in the following passage:

> Already according to Aristotle the 'possessiveness' of the thing (or as he called it, the 'primary substance') distinguished it from all other categories. Primary substances were, in this sense, entities that could exemplify attributes, but that could not themselves be exemplified. …That things have properties also serves to distinguish them from tropes. A thing is a complex and can be multiply characterized—a trope, on the other hand, is simple... …a single trope, on the present account, *could not* be a thing (and *vice versa*).[209]

Arguably, Maurin's construal of a "thing" and my construal of an "individual" are more or less the same.[210] Accordingly, it is reasonable to take Maurin to agree that it is

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[208] Maurin's list of "thing-features" includes the following: (i) things are particular, (ii) things have properties, (iii) things are independent, (iv) things are stable, and (v) things monopolize their places. With respect to the latter, she says that things are such that "if one thing occupies a certain region in space-time, any other *thing* is thereby effectively excluded from that place." She doesn't seem to notice that this proposed thing-feature is quite controversial—if we apply it to the case of a statue and the lump of clay that composes the statue, it entails that either (a) the statue and the lump are identical, or (b) either the statue isn't a thing or the lump isn't a thing. *If Tropes*, (Dordrecht: Kluwer Academic Publishers, 2002), pgs. 120-22.

[209] *If Tropes*, (Dordrecht: Kluwer Academic Publishers, 2002), pgs. 121-2.

[210] It is important to note that Maurin explicitly intends for her list to represent those features that we "intuitively" attribute to things such as "houses, trees and books" (120). I think it is fair to say that her list is supposed to represent the pre-theoretical view of ordinary objects. In light of this, it seems to be a mistake for her to include the condition that "things are complex", since by this she clearly means that a thing is *metaphysically complex*—viz. a whole with metaphysical parts—in contrast to something metaphysically simple like a trope. There are three reasons to omit this condition. First, as much as some philosophers might like it to be the case, the folk don't trade in the currency of a constituent ontology; the folk do not take books to have metaphysical parts. Second, this condition begs the question against the austere nominalist, who tries to take seriously the pre-theoretical view of ordinary objects, according to which ordinary objects *lack* metaphysical parts. And third, as the quotation suggests, the distinction Maurin is most eager to capture is the Aristotelian distinction between (i) attributes and (ii) an entity that has attributes but which itself cannot be exemplified. This distinction can be had without the addendum that attribute-having-entities are complex. It can also be made without the addendum "That things have properties also serves to distinguish them from tropes", since this needlessly suggests that properties cannot have properties. Thus, we should ignore these unnecessary addendums, and if we do, my construal of an "individual" and Maurin's notion of a "thing" are pretty much the same.

incumbent upon a trope theorist to provide an account of the individuality of ordinary objects.

Loux, however, has argued that the trope theorist faces a serious problem with respect to giving an account of individuality. He raises the following challenge:

> [According to trope theory, w]e begin with one property, add another property, add still another. What ultimately emerges is an individual having all those properties. *But why should we suppose that agglomeration yields an individual? Why not suppose instead that what results from this agglomeration is just a conjunctive property* whose conjuncts are the various properties that have been agglomerated? Nor will it dispel the mystery here to introduce compresence. Let the properties ϕ-ness and ψ-ness be compresent. What is the result? Just the presence in a particular spatiotemporal region of the complex property of being both ϕ and ψ. [emphases mine][211]

So Loux sees the problem as a general one facing all bundle theorists. With respect to trope theory, the problem concerns the gap between particularized properties and the individual their agglomeration alone is supposed to yield. Loux is correct that this is a problem for the trope theorist, but his formulation is oversimplified. He suggests that there is only one problem here, whereas I will argue that there are three. This can be seen by clarifying two important notions at play in the above passage by Loux. Doing so will shed light on the sort of explanatory challenges that individuality poses for both the trope theorist and the troper theorist.

First, Loux was less than precise with respect to the nature of the part/whole relation that is supposed to hold between tropes and the ordinary object. He uses the rather ambiguous notion of "agglomeration" as well as "compresence." This ambiguity,

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[211] "An Exercise in Constituent Ontology", unpublished paper, pg. 33.

however, is entirely appropriate, given that trope theorists agree on neither the name nor the nature of relation that is supposed to be sufficient to generate ordinary objects out of tropes. Indeed, there are at least three kinds of relations that have been appealed to by trope theorists: mereological fusion, co-location (sometimes called "compresence"), and (some type of) interdependence. In his classic paper, D. C. Williams appeals to both fusion and co-location; ordinary objects are said to be fusions of co-located tropes. Keith Campbell follows Williams in this regard. Peter Simons avoids any appeal to either fusion or co-location, and appeals to a special kind of ontological interdependence. More recently, Anna-Sofia Maurin sticks with the label "compresence" but construes it as a special type of dependence relation that holds between tropes that are present "in the same place".[212] Of course, these only represent the types of relations that trope theorists have, in fact, appealed to. Perhaps there are other relations (or combinations thereof) available. On this score, I might also mention L. A. Paul's view. While she is not a trope theorist, one might nevertheless model a version of trope theory on her theory, on which fusion alone[213] suffices to generate ordinary objects out of properties.

Clearly, there is little agreement among trope theorists about the kind of relation needed to generate an individual out of only tropes. One implication of this is that the above challenge by Loux will need to be put in such a way as to accommodate the various extant, as well as possible, strategies for constructing individuals out of tropes. Speaking very generally, I will use Loux's term "agglomeration" as a theory-neutral way

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[212] *If Tropes*, (Dordrecht: Kluwer Academic Publishers, 2002), pg. 176.

[213] But, for the record, she thinks that composition must be restricted. See her "Logical Parts", *Noûs*, Vol. 36, No. 4, Dec. 2002, pgs. 579-80.

of talking about "whatever it is that suffices to generate an individual out of only tropes." In what follows, I will use "agglomeration" in just this way.

The second notion that needs clarification is that of a "property-possessor." In the paper that is home to the above passage, Loux construes an individual as a "property-possessor". In the previous chapter I argued that to construe an individual in this way is both misleading and incomplete.[214] Accordingly, I will take an individual to be a charactered entity that is not a property.

With the ambiguity of "agglomeration" and the two-fold notion of individuality in mind, two general challenges can be found in the passage from Loux. They correspond to the italicized phrases in the passage. Provisionally, I will express them in question form as follows:

(C1) Why should we suppose that the agglomeration of properties yields something other than a conjunctive property?

(C2) Why should we suppose that the agglomeration of properties yields something that is charactered?

For the remainder of this section, my primary concern will be to refine these questions. With one exception, I will postpone the assessment of answers to the next section. For now, these questions will be addressed to the trope theorist. After refining

[214] In the previous chapter, I argued that Loux's construal of an individual needs to be both revised and supplemented. With respect to revision, the notion of a "property-possessor" suggests that unless there are properties, there could be no individuals. But for our purposes at least, the notion should not have this implication, since it would thus beg the question against the troper theorist, who will insist that her ontology is entirely populated by individuals, where those individuals can properly be said to be *charactered things* even though there are no characteristics *per se*. With respect to supplementation, it needs to be added that individuals are *non-properties*. Without this revision, the individual/property distinction fails to be mutually exclusive, since, arguably, properties are themselves charactered (or "property-possessors"). Thus, it will be better to take an individual to be a charactered entity that is not a property.

the challenges that are specific to trope theory, I will note the parallel ones for troper theory.

4.3.2.1 Refining (C1)

One question that underlies the first challenge is a question specifically about co-location. To wit: What is the best way to describe what results when F-ness and G-ness are co-located? The answer that seems most natural to Loux: the conjunctive property, *being F and G*. While he finds this to be the natural answer, Loux also finds it to be a puzzling one. But of course, it wouldn't be any less puzzling if the most natural answer were "the *disjunctive* property, *being F or G*" or "the *structural* property made up out of F-ness and G-ness." In other words, what is puzzling is not the fact that we'd end up with a *conjunctive* property. Rather, the problem is that it is difficult to see how the co-location of properties would yield something *besides another property*. In principle, this problem will bear on whatever relation plays the role of agglomeration. So (C1) can be improved as follows:

> **(Non-Property Challenge) Why should we suppose that the agglomeration of properties yields a *non-property*?**

Note that this challenge asks for an account of how a *categorial gap* is crossed—the gap between properties and non-properties.

4.3.2.2 Refining (C2)

I'll now consider and refine (C2), which asks why should we suppose that the agglomeration of properties yields something that is charactered. Refining (C2) will take

some work, however, since there are several ways of reading it. One might take (C2) to represent a challenge like that of the **Non-Property Challenge**, where the question concerns how a categorial gap is crossed. In this case, however, the gap to be crossed would be between properties, or characteristics, and characted entities. The question, then, might be this:

> **How do you get a characted entity by agglomerating entities that are not characted?**

But this question mistakenly assumes that tropes are not characted, and so it can be set aside. Perhaps, then, the question is this:

> **I'll grant you that tropes are characted, but how does agglomerating them yield something that is itself characted?**

This question admits of an easy answer: Obviously, each trope that is agglomerated retains its status as a characted entity, thus it is trivially true that agglomeration yields *something* that is characted—namely, any of the tropes you began with. While this answer is a mere ruse, it does reveal that there is a more fundamental question that has so far gone unasked:

> **(Generative Challenge) Why should we suppose that the agglomeration of properties yields a new entity?**

In other words, before we ask whether the "result" of agglomerating tropes itself is characted in such and such a way, we should first ask why there is a *result* at all. This question is fundamental to the others, in that each other challenge assumes that the agglomeration of properties *does* yield something new. Because of this assumption, it will be useful to immediately resist a rather austere answer to the **Generative Challenge**,

namely: "Yes, there are tropes, and yes, they are related in some interesting way, but no, there is no bundle per se that is something over and above the co-located tropes." James van Cleve has entertained such a view[215], which he describes as follows:

> This [view] would decline to *identify* individuals with complexes of properties, offering instead to *translate* any statement ostensibly about individuals into a statement exclusively about properties. For example, it might translate 'There is a red, round thing here' as 'Redness and roundness are here instantiated'. But it would not, to repeat, identify the red, round thing with the complex of properties co-instantiated at the place in question; indeed it would not identify the red, round thing with *anything*. 'Red, round thing' would be a non-referring phrase, susceptible only of contextual definition.[216]

On this view, the Gap Challenges would simply be moot. There is no need to account for the categorial characteristics of the bundle because there isn't a bundle in the first place. Bundles are fictions, however useful or entertaining they might be. The problem, however, is that it is supposed to be the case that some of those "bundles" are *also* entertained. I, for one, am entertained by the suggestion at hand, but the very suggestion is that I am a fiction. I may be entertained by this suggestion, but I am neither amused nor convinced. But neither am I a property, so either I am a fiction or the suggestion is. But I'm not. As van Cleve says, "Anyone who wants to believe that there is such a thing as *himself*, therefore, must reject the [above suggestion]."[217] Notice also that the suggestion that bundles are fictions seems to render moot or uninteresting any

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[215] The view he considers takes properties to be universals and not tropes, but that difference isn't relevant here.

[216] James van Cleve, "Three Versions of the Bundle Theory", in Metaphysics: Contemporary Readings, 2nd ed., edited by Michael Loux (New York: Routledge, 2008), pg. 128-9.

[217] James van Cleve, "Three Versions of the Bundle Theory", in Metaphysics: Contemporary Readings, 2nd ed., edited by Michael Loux (New York: Routledge, 2008), pg. 130.

question about the categorial status of the bundle. It is hard to know what else to say at this point, other than that I find the austere suggestion dubious. Thus, I take it that the **Generative Challenge** cannot be adequately answered with "It *doesn't* yield a new entity." In a moment, I will consider some less austere answers to this question. For now, for the sake of posing other challenges, I will assume that it is possible for the agglomeration of properties to yield a new entity, and I'll call it a "bundle" without committing myself to any claims about its nature.

I can now pick up the thread of the previous question (How does agglomerating tropes yield something that is itself charactered?) and the mere ruse of an answer give above ("Easy—each trope you began with is charactered and survives agglomeration"). The reason this answer is a ruse is because what we wanted to know is how the agglomeration of characteristics results in a *bundle* that is charactered. Thus, the question can be further improved as follows:

> **How is the *bundle* that results from the agglomeration of tropes *itself* charactered?**

Unfortunately, this is not yet the right question, but answering it will show why the issue here is *not* like that of the **Non-Property Challenge**, where the issue concerns an apparent categorial gap. For notice that a bundle of tropes *is* charactered in that it is *self-identical*, *particular*, and *complex*. Recall that on my construal of the individual/property distinction, something can be an individual *even if there are no properties,* viz., something can be charactered even if there are no characteristics. Thus, for example, something can be charactered without it having properties as constituent parts. This allows for there to be individuals even on austere nominalism, and it allows

for the simple character-grounding constituents (on a constituent ontology) to be primitively charactered (and so satisfy predicates like "being simple", "being particular", "being qualitative", etc.). Thus, since the bundle and its constituents are both charactered, on this score there is no categorial gap between them to be traversed. Nevertheless, there *is* a challenge here and it has to do with the fact that the bundle is supposed to be more than *merely charactered.* The bundle is supposed to be charactered in all of the ways specified by those very characteristics (a la tropes) that constitute it. Thus, it is the constituent properties—those that are agglomerated—that need to characterize the result of agglomerating those very properties. So it seems, finally, that the fundamental question behind (C2) is this:

(Character Challenge) How does the agglomeration of specific characteristics yield a new entity that is itself charactered in each of the ways specified by those characteristics?

So much for refining and expanding the original questions. There are now three questions, each of which presents the trope theorist with a specific challenge with respect to her account of ordinary individuals. Of course, three exactly parallel challenges can be raised against the troper theorist. Thus, there are three types of challenges facing both theories. Since I will be discussing all of these in what follows, it will be helpful to restate the challenges in one place, in terms that bear on either theory. Here they are:

(Non-Property Challenge) Why should we suppose that the agglomeration of tropes / tropers yields a *non-property*?

(Generative Challenge) Why should we suppose that the agglomeration of tropes / tropers yields a *new entity*?

(Character Challenge) How does the agglomeration of tropes / tropers yield a new entity that is itself characted in each of the ways specified by those tropes / tropers?

I will call these the "**Gap Challenges**". In the next main section, I will consider the relative merits of the two theories to meet their respective Gap Challenges. By doing so I will show some of the advantages of troper theory.

4.4 Replies to the Gap Challenges

Each theory faces three types of challenges. In the rest of this chapter, however, I will *not* be considering each type of challenge one at a time. There are at least two reasons for this. First, these challenges are intimately related in that how you answer one may bear on whether and how you can answer another. Second, in so far as a trope theorist has tried to handle the Gap Challenges, she usually tries to handle them in the same way. This often amounts to assigning the agglomeration role to a single type of relation, such as co-location. Thus, I will proceed by considering the different types of relations that a trope theorist or troper theorist might appeal to in answering the Challenges. As already noted, there are at least three such relations: mereological fusion, co-location (sometimes called "compresence"), and (some type of) interdependence. I will now consider whether and how each of these might help the trope or troper theorist to meet the Gap Challenges.

4.4.1 Appealing to Fusion

I'll begin with fusion. From what I can tell, it is widely believed that a bundle theorist takes individuals to be mereological fusions of properties—whether those properties are construed as universals or particulars/tropes. Ted Sider's comment is representative:

> [T]he bundle theory says that a particular is exhaustively composed of (i.e., is a mereological fusion of) its universals. …Take a particular, and mereologically subtract away its universals. Is anything left? According to the bundle theory, no.[218]

The mereological composition relation is such that, if it holds between *x* and *y*, then there is a third entity that has *x* and *y* as parts. The third entity is the *fusion* of *x* and *y*. Thus, appealing to trope-fusions might seem to be an attractive option, especially as a way to meet the **Generative Challenge**. Such an appeal wouldn't be *entirely* uncontroversial, since it would assume that tropes (or tropers) can stand in the composition relation, and that (mereological) nihilism is false. But I'll grant these assumptions. One advantage of appealing to fusion would be that the standard principles of mereology are more or less well-understood. Nevertheless, I will raise two problems with appealing to fusion to meet the Gap Challenges. First, for both trope theory and troper theory, fusion alone is arguably insufficient to meet the Gap Challenges. And second, there are reasons to think that even a *partial* appeal to fusion will only hurt the trope theorist.

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[218] Ted Sider, "Bare Particulars," *Philosophical Perspectives*, 20, (2006), pg. 387.

4.4.1.1 Fusion is not sufficient to met the Gap Challenges

An appeal to fusion will not suffice to answer the Gap Challenges. This is true for both trope theory and troper theory. Appealing to fusion carries with it the burden of either specifying a principle that restricts composition or accepting the ontology that results from unrestricted composition. The latter option would be especially problematic if fusion of character-grounding constituents is by itself supposed to generate individuals that are on par with ordinary objects. The problems here are two-fold for both theories.

First, suppose that fusion of character-grounding constituents (whether tropes or tropers) is unrestricted and by itself suffices to generate individuals that are on par with ordinary objects. On trope theory, this would result in fusions of incompossible tropes and thus individuals that are charactered in impossible ways. For example, there would be the fusion of cubicity_1 and sphericalness_1, and the fusion, qua individual, would itself be both cubical and spherical. On troper theory, you get equally unacceptable results, such as the cubical sphere that would result from fusing cubical-thing_1 and spherical-thing_1. Thus, on pain of absurdity, an appeal to fusion must be restricted in some way if fusion is supposed to suffice to generate individuals.

Second, answering the Gap Challenges by appealing to unrestricted fusion alone would result in an ontology that is significantly more implausible (counter-intuitive, costly, etc.) than the ontology normally thought of as resulting from unrestricted composition. While the latter ontology is bloated by scores of fusions, it doesn't necessarily construe all those fusions as being individuals on par with ordinary objects. In other words, it is one thing to allow that for every two entities whatsoever, there is a third entity that is their fusion. But it is another thing to allow that for every two entities

whatsoever, there is a third entity that is their fusion and is ontologically on par with ordinary individuals. What this shows is that, by way of responding to the **Generative Challenge**, it won't do to appeal to fusion alone. For suppose the fusion of tropes (tropers) suffices to generate an individual. Either fusion is restricted or not. If not, there are an absurd number of individuals. But if fusion is restricted, agglomeration involves not just fusion but also the further principle that restricts composition. This will be the case for both trope theory and troper theory. Thus, for both theories, an appeal to fusion will not suffice to meet the Gap Challenges. On this score, the theories are on par.

4.4.1.2 (Restricted) Fusion is Problematic for Trope Theory

The second point concerning fusion indicates an important way that the theories are not on par. Indeed, this point represents a way in which troper theory is significantly better off than trope theory when it comes to meeting the Gap Challenges. Since neither theory can appeal to unrestricted fusion, an interesting question is this: Can either theory appeal to fusion and supplement fusion with some additional restrictive principle? This is an important question because it is with respect to this question that troper theory has a significant advantage over trope theory. Since fusion by itself won't suffice as the part/whole relation that generates individuals, the natural move is to supplement fusion with an additional principle. But whether this move will work depends upon whether and how the parts of a fusion determine the fusion's categorial status. And in the case of property-fusions, it seems that there is good reason to think that the following principle is true:

FP: A fusion of properties must itself be a property.

In a moment I will offer some support for FP. For now, it is important to note FP's significance for the Gap Challenges. FP bars the trope theorist from appealing to both fusion and some additional principle in order to account for how individuals are generated out of tropes. According to FP, a trope theorist cannot consistently assert that *being a fusion of tropes* is a necessary condition for *being an individual*. Since, if X is a fusion of tropes, then X must be a property. I.e., if X is a fusion of tropes, then X cannot be an individual. Thus, an appeal to fusion by the trope theorist, even as only a necessary condition, would seem to backfire as a strategy for answering the Gap Challenges. It is a great advantage of troper theory that it's not handicapped in this way. Of course, the advantage *isn't* that FP doesn't handicap troper theory, since FP doesn't bear on the property-less ontology of troper theory. The advantage stems from the following principle, which is parallel to FP and governs fusions of tropers:

FI: A fusion of individuals must itself be an individual.

Thus, whereas FP forbids the trope theorist from deriving *any* explanatory power from fusion, FI provides the troper theorist with a *great deal* of explanatory power. To wit: a fusion of tropers *must* itself be an individual. Because of this, troper theory has a significant advantage over trope theory when it comes to answering the Gap Challenges. Of course, this relative advantage is predicated on FP and FI. I will now consider the merits of these principles.

What determines the categorial status of a fusion? As interesting as this question is, it seems that little has been said by way of answering it.[219] Fortunately, this fully

[219] This question may be less difficult if you take a fusion to be nothing over and above its parts. David Lewis, for example, thinks that "If you draw up an inventory of Reality according to your scheme of

general question can be set aside by distinguishing between what I will call pure and impure fusions. A *pure* fusion is one whose proper parts all fall under the same category. An *impure* fusion has proper parts from more than one category. It is very difficult to know what to say about the categorial status of an impure fusion, if there are any.[220] Fortunately, this difficulty can be set aside, since the question at hand concerns FP and FI, which concern pure fusions. FP and FI seem to be instances of a general principle concerning pure fusions:

PF: **If all the proper parts of a fusion are of category K, then the fusion must be of category K.**

One might doubt PF, but most constituent ontologists seem to accept it. Indeed, it seems that FP and PF enjoy a fair amount of support from metaphysicians who work on issues concerning properties. This support is usually tacit, but is sometimes explicit.

The first example is D. C. Williams.[221] He construes an ordinary object as a "set or sum" of compresent tropes. He then tells us that the phrase "set or sum" is a deliberate hedge, meant to cover his slight ambivalence over whether we should take ordinary

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things, it would be double counting to list the cats and then also list their fusion." This allows him to deny that there really is a fusion, per se, that has a categorial status: "Describe the character of the parts, describe their interrelation, and you have *ipso facto* described the fusion. The trout-turkey in no way defies description. It is neither fish nor fowl, but it is nothing else: it is part fish and part fowl. It is neither here nor there, so where is it? –Partly here, partly there. That much we can say, and that's enough. Its character is exhausted by the character and relations of its parts." *Parts of Classes* (Oxford: Basil Blackwell, 1991), pg. 81 and 80.

[220] Suppose there is a fusion of the number two and my left toe. What sort of thing is this fusion? Indeed, this suggests an argument for restricting composition (at least in one way): There is no ultimate category of "fusions". Thus, a fusion must fall into some (other) definite category. If there is an impure fusion, it cannot fall into any definite category. Thus, there are no impure fusions. Whether this argument has any merit is beyond the scope of this chapter.

[221] The following quotes are from Williams, "Elements of Being I" in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pgs. 112-25.

objects to be sets or sums. But then he tells us why it is more plausible to take ordinary objects to be sums, rather than sets: because "everybody agrees that a sum is of the same type with its terms." With respect to a set, on the other hand, "there is some excuse for considering it of a different 'type' from its members." It is hard to tell, but the idea here seems to be that taking an ordinary object to be a fusion of tropes would ensure that the fusion would itself be a particular entity—viz., one that is "exhausted in its occurrence."[222] What Williams doesn't seem to notice is that while the principle he appeals to guarantees that a fusion of tropes is a particular, it also seems to guarantee that the fusion is a *property*. Thus, it is ironic that Williams so clearly affirms the principle—PF—that bars the trope theorist from appealing to fusion to answer the Gap Challenges.

A second example is L. A. Paul. While she is not a trope theorist, Paul agrees with the trope theorist that the basic entities that constitute objects are all and only properties. Paul's view is instructive with respect to the utility of appealing to fusion to answer the Gap Challenges, and especially the **Generative Challenge**. This is because she explicitly holds that the relevant constituent/whole relation is straightforwardly and only *mereological*: ordinary objects are fusions of properties. (While she thinks that composition must be restricted, she is non-committal on what does the restricting—she suggests that it may simply be a primitive fact.) What is instructive about Paul's view is that, by her lights, a fusion of properties must itself be a property. She has said this in conversation,[223] but she is also committed to it in virtue of what she has written. For

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[222] I think it was Williams used this phrase, but I can't track it down.

[223] During a Q&A, Loux asked her "Am I a property?" Her answer: "Yes." Fall 2007, University of Notre Dame.

example, she holds that the property, *being identical to Socrates*, is an *improper* part of Socrates. It follows that Socrates is a property.[224] Thus, Paul is clearly assuming (FP) that a fusion of properties must itself be a property. It is worth noting that there do not seem to be any relevant differences between Paul's theory and trope theory that would warrant the claim that FP holds on the former but not the latter. FP would seem to hold regardless of whether properties are construed as universals or particulars. (Indeed, this point finds further support in the dispute over so-called structural universals, to which I will turn next.) Thus, if Paul is right about her own theory, then if a trope theorist appeals to fusion (even as only a necessary condition) in her account of how tropes are agglomerated, then the trope theorist would ensure that the bundle itself is a property and not an individual.

I will now point to a third source of indirect support for PF and direct support for FP—the dispute over so-called structural universals. This dispute is complicated, so I will relegate the details to a long footnote[225] and mention the relevant points in the main

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[224] See "Logical Parts", *Noûs*, Vol. 36, No. 4, Dec. 2002.

[225] The dispute over structural universals concerns the allegation that a realist about universals cannot provide an adequate account of certain apparently complex properties like *being methane*. According to David Lewis, if the realist is to provide a satisfying account of structural universals—one that does not merely appeal to metaphysical magic—then a structural universal needs to be analyzed as having other universals as proper parts, in some sense of "part." The natural way to do this is to take a structural universal to be a mereological fusion of other universals. Lewis describes the mereological analysis of *being methane* as follows:

"The structural universal *methane*, we have supposed, involves three simpler universals: the monadic universals *carbon* and *hydrogen*, and the dyadic universal *bonded*. These are its parts. The central atom of any methane molecule instantiates carbon, the other four atoms instantiate *hydrogen*, and the four carbon-hydrogen pairs instantiate *bonded*. In this way, part by part under isomorphic correspondence, the whole molecule instantiates the whole universal *methane.* On this conception a structural universal is…mereologically composite." ["Against Structural Universals," *Papers in Metaphysics and Epistemology* (Cambridge: Cambridge University Press, 1999), pg. 90]

text. Central to this dispute is David Lewis' claim that a realist about universals cannot analyze a complex property, like *being methane*, as a *fusion* of simpler properties. Interestingly, FP is tacitly granted by Lewis and (as far as I can tell) everyone else in the dispute. In other words, it is granted that a fusion of properties is itself a property. The problem he raises for the realist lies elsewhere. According to Lewis, the problem with structural universals arises from the fact that if X and Y are exactly similar universals, then X is identical to Y. This means that a fusion of universals cannot have numerically

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As Lewis goes on to point out, the problem with this analysis is that the universals *hydrogen* and *bonded* each need to be more than a *single* part of the fusion that is *methane*. But because they are universals, they can only be counted once each:

"Each methane molecule has not one hydrogen atom but four. So if the structural universal *methane* is to be an isomorph of the molecules that are its instances, it must have the universal *hydrogen* as a part not just once, but four times over. Likewise for *bonded*, since each molecule has four bonded pairs of atoms. But what can it mean for something to have a part four times over? What are there four of? There are not four of the universal *hydrogen*, or of the universal *bonded*; there is only one." ["Against Structural Universals," *Papers in Metaphysics and Epistemology* (Cambridge: Cambridge University Press, 1999), pg. 91]

The problem is that if *C-ness, H-ness* and *B-ness* name universals, then the fusions described below are identical:

The fusion of *C-ness, H-ness* and *B-ness*

The fusion of *C-ness, H-ness, H-ness, H-ness, H-ness, B-ness, B-ness, B-ness* and *B-ness*

Thus, the allegation by Lewis is that it won't work to take *being methane* to be a fusion of universals, since universals can only be counted once. Indeed, critics of universals have been eager to point out the advantages of trope theory when it comes to a mereological analysis of complex properties. The advantage, obviously, is that the theories allows for numerically distinct but exactly similar properties. Thus, the trope theorist can easily account for the non-identity of the fusions described below:

The fusion of $C\text{-}ness_1$, $H\text{-}ness_1$ and $B\text{-}ness_1$

The fusion of $C\text{-}ness_1$, $H\text{-}ness_1$, $H\text{-}ness_2$, $H\text{-}ness_3$, $H\text{-}ness_4$, $B\text{-}ness_1$, $B\text{-}ness_2$, $B\text{-}ness_3$ and $B\text{-}ness_4$

Campbell, for example, explicitly argues that the property, *being methane* is a fusion of more basic tropes:

"The way to allow that a property can have four, or ten, different hydrogen constituents is to allow them particularity. The trope analysis is the most direct: the property *being methane* occurs as a particular with four particular hydrogen tropes as constituents." [*Abstract Particulars* (Oxford: Basil Blackwell, 1990), pg. 46.]

distinct parts that are exactly similar. In other words, no universal can count as more than one part of any given fusion. Indeed, critics of realism have been eager to point out the advantage that trope theory has on this score—namely, that tropes can be numerically distinct but exactly similar. Thus, there can be multiple exactly similar tropes that are parts of the same fusion.

Those are the relevant points from the dispute over structural universals. I will now note their relevance for the Gap Challenges. First, it is taken for granted that a fusion of properties would itself be a property—regardless of whether those properties are construed as universals or tropes. In other words, FP is tacitly assumed by all parties. The problem raised by Lewis is one that is *specific* to a mereological conception of structural universals; it arises because (roughly) the principles of mereology forbid the double-counting of parts. Thus, the problem is not a general one that would automatically arise for a non-mereological conception of the sort of relationship that holds between a complex property and simpler properties.

Second, if there were a problem with FP, then there would be a more fundamental problem than the one noted by Lewis. In other words, if a fusion of properties cannot itself be a property, then the problem Lewis raises for the realist is moot. Thus, if there were doubts about FP, you would expect those doubts to be expressed by participants in the dispute over structural universals. Thus, the fact that FP is taken for granted in the dispute over structural universals strongly underscores the intuitive plausibility of FP. I

grant that this line of argument is rather speculative, but the point here is not to *prove* FP but to gather support for it.[226]

So much for the discussion of whether and how an appeal to fusion will help to meet the Gap Challenges. I have argued that appealing to trope-fusions might seem to help the trope theorist meet the **Generative Challenge**, but resulting entities would be a properties and not individuals. Thus, fusion is of no help to the trope theorist. The troper theorist, however, has the option of appealing troper-fusions, so long as she specifies some further principle that restricts fusion in the right way.

4.4.2 Appealing to Dependence Relations

I will now consider another possible general strategy for answering the Gap Challenges. There are numerous ways to develop this strategy, but the basic idea is to postulate some sort of dependence or interdependence relation between the tropes (or tropers) in the bundle and to hold that, as a result, the bundle comes to have a categorial characteristic, like *being an independent entity* or *being an individual*. Both Peter Simons and Anna-Sofia Maurin have developed rather sophisticated trope theories along these lines. Fortunately, in order to asses the relative advantages or disadvantages of trope and troper theory with respect to the Gap Challenges, I can forgo a discussion of the

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[226] The above section suggests a trilemma for trope theory: Either (i) Assume FP and appeal to fusion to account for structural properties; this will give trope theory an advantage over realism, but requires the trope theorist to reject fusion as what suffices to generate individuals. Or (ii) Assume FP and appeal to fusion to account for structural properties, giving trope theory an advantage over realism, but bite the bullet and construe bundles as properties (a la Paul). Or (iii) Reject FP and appeal to fusion as what generates individuals, but find another way to construe a complex property (and probably lose an advantage over realism).

fine-grained details of either Simons' or Maurin's theory. Instead, I will do two things. First, I will focus on a very strong type of interdependence relation to which Simons appeals. As I hope to show, there are principled reasons to think that an appeal to this sort of relation is an unattractive option for both trope theory and troper theory, but is especially problematic for the former. Second, I will consider whether appealing to *any* sort of dependence relation will help answer the Gap Challenges. I aim to show that are reasons to think that this sort of appeal will not help the trope theorist but might help the troper theorist.

4.4.2.1 Appealing to a Token-Interdependence Relation

Traditionally, substances are taken to be independent entities. Tropes, on the other hand, are most plausibly taken to be dependent entities—on pain of allowing the possibility that a single trope, like $redness_1$, exist all by itself in a world. This raises another gap challenge for a trope theorist: how does agglomerating dependent entities result in an independent entity?

Simons has attempted to meet this challenge by holding that when tropes are directly or indirectly dependent on each other for their existence, a system of mutual interdependence arises, where the system itself is independent. The rationale being that "A collection of particulars, all of whose foundational needs [i.e. existence conditions] are met within the collection, is itself independent."[227] Within such a collection are

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[227] Peter Simons, "Particulars in Particular Clothing: Three Trope Theories of Substance", *Philosophy and Phenomenological Research,* Vol. 65, No. 3, 1994, pg. 562.

different sorts of dependence and interdependence relations.[228] Thus, it would be misleading to say that there is a *single relation* that plays the role of agglomeration. Rather, it is a *system* of relations that results in "a particular whole under dependence closure…"[229] Thus, the system is such that for any two tropes A and B in the system[230], necessarily, A exists if and only if B exists. The latter relation I will call *Token-Interdependence* (TID). According to Simons, TID ensures that the bundle[231] enjoys the emergent or gestalt property of *being independent*. Note that TID concerns symmetrical *existential* interdependence in that if tropes F-ness$_1$ and G-ness$_1$ stand in TID, then, necessarily, F-ness$_1$ exists if and only if G-ness$_1$ exists. The subscripts express the fact that this sort of interdependence holds at the *token* level. Not just *any* G-ness trope will satisfy the existence condition for F-ness$_1$. That is, even if G-ness$_1$ and G-ness$_2$ are exactly similar, only the former can satisfy the existence condition for F-ness$_1$.[232]

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[228] Some of these dependencies are indirect: A depends upon B, and B depends upon C, so A depends upon C. Some of these dependencies are said to be "weak", in that for some part P of the collection, P depends upon one of P's proper parts. A dependency between A and B is "strong" if A depends upon B and B is not a proper part of A.

[229] Simons, "Identity Through Time and Trope Bundles," *Topoi*, 19 (2000), pg. 148.

[230] Simons is less than clear on whether "being in the system" is a necessary condition for individuality (or independence, etc.) than standing in TID. Clearly, "being in the same system" cannot be interpreted as "standing in TID", since that would make his construal of TID circular.

[231] I am over-simplifying Simons' account, but I don't think the details will matter for our purposes. Simons holds that the special interdependence relation can, depending on the sort of tropes involved, yield either a whole bundle or a core bundle that is a proper part of a larger bundle. To be fair, in proposing TID Simons is concerned to account for more than individuality. He is also concerned to account for the putative fact that ordinary objects have both essential and accidental properties. In addition, while Simons expresses some concern to account for the fact that a bundle is something that has properties, he isn't concerned to show that the bundle is a non-property.

[232] There seems to be a tension here for Simons. The tension lies in the assumption that two tropes can be exactly similar yet have different token-specific existence conditions. For example, Simons' theory requires the following claims to be consistent: (i) redness$_1$ and redness$_2$ are exactly similar; (i)

I will now argue that when it comes to answering the Gap Challenges, an appeal to TID is an unattractive option for both trope theory and troper theory, and is especially problematic for the former. Indeed, the relative disadvantage of trope theory is similar to that concerning fusion, in that an appeal to TID seems to deliver not just *no answer* but the *wrong answer* to the Gap Challenges.

To see this, suppose that two tropes, redness$_1$ and coldness$_1$, stand in TID and by so doing form a bundle B. (In real cases, there would almost certainly be more than two tropes standing in TID, which presumably is a multi-place relation. I am simplifying for the sake of clarity, but nothing will turn on this.) For the moment, I will set aside the **Character Challenge** and thus assume that redness$_1$'s being a part of B guarantees that B is charactered in a red way; ditto for coldness$_1$.

Notice TID entails that redness$_1$ and coldness$_1$ are such that, necessarily, the existence of one entails the existence of the other. It is here that trouble arises for trope theory. The trouble is that TID gives us good reasons to *identify* redness$_1$ and coldness$_1$. In a moment, I will consider these reasons. But for now, note that if this is right, then taking TID to hold of the tropes in a bundle *guarantees* that the bundle is a *property*. This means that an appeal to TID (or to dependence relations that entail that TID holds) is a non-starter for the trope theorist who wants to answer the **Non-Property Challenge**. The troper theorist, however, is not so unlucky. If TID entails the identity of its terms, and those terms are tropers, then TID yields another troper—that is, another individual.

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necessarily, redness$_1$ exists if and only if coldness$_1$ exists; (ii) not necessarily, redness$_2$ exists if and only if some coldness trope exists.

Thus, appealing to TID seems to be at least an option for the troper theorist who wants to answer **Non-Property Challenge**. It does not seem to be an option for the trope theorist.

But what reason is there to think that if redness$_1$ and coldness$_1$ stand in TID, then redness$_1$ is identical to coldness$_1$? The pressure to identify character-grounding constituents that stand in TID seems especially strong for a constituent ontologist. This is because her general strategy is to explain the character of an object by construing the object as having a constituent/whole structure and postulating constituent properties as that which explains why the whole is charactered as it is. This strategy is supposed to be an improvement upon that of the austere nominalist, who thinks that an ordinary object, qua metaphysically unstructured whole, can itself suffice to explain or account for the fact that it is charactered as it is (or satisfies the predicates it does). The dialectical presence of austere nominalism serves as a reminder that the constituent ontologist shouldn't posit more structure—i.e., character-grounding constituents—than is needed to account for the character of an object. To do so would seem to be explanatorily superfluous with respect to the goal of accounting for the character of objects. With this in mind, consider again the example of redness$_1$, coldness$_1$, and B, the bundle they constitute.

In our example, redness$_1$ and coldness$_1$ stand in TID. This means that, necessarily, the existence of redness$_1$ entails the existence of coldness$_1$, and thus the existence of B. Recall that I am setting aside the **Character Challenge** and thus assuming that if a trope is a part of a bundle, then the bundle is charactered in the way specified by that trope. Thus, the existence of coldness$_1$ guarantees that B is cold, and the existence of redness$_1$ guarantees that B is red. But, given TID, the existence of redness$_1$

also guarantees that B is cold (and that B exists). Notice, then, that the existence of redness$_1$ *ensures* that B is charactered in *every* way specified by the constituent parts of B that stand in TID. Thus, redness$_1$, qua character-grounding constituent, has the same *content* as coldness$_1$. Because of this, there doesn't seem to be any good reason to retain the original assumption that redness$_1$ is non-identical to coldness$_1$. More perspicuously, there doesn't seem to be any reason to retain the original assumption that there is a plurality of character-grounding constituents in B. If those constituents are said to stand in TID, then postulating a *plurality* of character-grounding constituents would seem to be explanatorily superfluous with respect to accounting for B's character.[233]

If the foregoing is correct, then B has only *one* part, a single trope. The original idea was for TID to be a generative relation, one that produces a bundle that itself has categorial characteristics like *being independent*. But if TID entails the identity of its relata, then TID is formally a reflexive relation, much like *being self-identical*. As a result, it is difficult to see how the holding of TID generates a new entity at all. Thus, it would seem that that B is identical to a *trope*. And therein lies the unique trouble for trope theory. To wit: Since, in the above example, redness$_1$ and coldness$_1$ were arbitrarily chosen, the above argument supports the general conclusion that, on trope theory, an appeal to TID will ensure that the bundle is itself a property. Thus, for a trope theorist, appealing to TID, like appealing to fusion, generates the *wrong kind* of bundle. This is not the case, however, for troper theory. If TID entails the identity of its terms, and those terms are tropers, then TID yields another troper—that is, another individual.

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[233] I thank Loux for pointing this out to me.

Thus, in principle, appealing to TID is an option for the troper theorist in answering the Gap Challenges. It does not seem to be an option for the trope theorist.

Notwithstanding this relative advantage of troper theory, there is a reason to think that an appeal to TID might be an unattractive option for *both* trope and troper theory. If TID entails the identity of its terms, then to appeal to TID is, in effect, to collapse the bundle into a metaphysically unstructured whole, albeit one that is supposed to be (as a primitive fact) thickly charactered. But to construe a thickly charactered individual as a metaphysical simple would seem to be at odds with the official strategy of the constituent ontologist. If you recall, the austere nominalist is not a constituent ontologist and yet it is precisely her strategy to construe an ordinary object as a metaphysical simple. Thus, when accounting for the individuality of any given bundle, to appeal to TID alone is, in effect, to adopt a strategy very much like that of the austere nominalist. If a trope theorist accounts for all bundles in this way, then her view turns out to be very much like austere nominalism—the only difference being the unfortunate result that, arguably, each of her bundles would itself be a *property*. If a troper theorist appeals to TID to account for the individuality of all bundles, her view would seem to simply *be* that of the austere nominalist. Thus, while it is not clear why either view would want to appeal to TID alone to answer the Gap Challenges, the troper theorist seems to have the advantage that doing so *would* answer the **Non-Property Challenge.**

4.4.2.2 TID Plus Simons' Core/Halo Proposal?

Those familiar with the details of Simons' theory will be wondering whether the trope theorist can avoid the above untoward conclusions if she supplements an appeal to

TID with Simons' proposal that individuals[234] have a core-bundle + halo-bundle structure. Simons basic proposal (hereafter, just "Proposal") is this: Take the individual to be constituted by two collections of tropes: (i) a *core* bundle of tropes standing in TID, and (ii) a *halo* of tropes standing in various weaker-than-TID dependence relations either to a trope in the core or another trope in the halo. One motive for construing an individual in this way is to accommodate the apparent fact that individuals have both essential and accidental properties. On the Proposal, the essential properties of the individual constitute its core bundle, and the accidental properties constitute its halo bundle. When the individual undergoes change (in an endurantist fashion), one halo is replaced by another. Thus, the core endures through change, whereas any given halo does not.

In accord with Simons' Proposal, suppose that X is an individual that involves a core bundle C and halo bundle H. If the conclusion of the previous section is correct—that TID collapses its terms into a single trope—then a core is itself a trope.[235] Thus, C is a trope. With respect to X, all that is enduring through change is a single trope. It also means that it is never the case that for any two (i.e. numerically distinct) tropes in X, that those tropes stand in TID. In other words, *every* agglomeration relation that is involved

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[234] Simons actually proposes that there are three possible types of individuals. We can roughly distinguish them as follows: (1) bundles constituted by tropes every one of which stands in TID, (2) bundles constituted by tropes none of which stands in TID, and (3) individuals made up of a core bundle (every constituent trope of which stands in TID) and a halo bundle (made up of tropes none of which stand in TID). Individuals of the first sort are subject to the above objections concerning bundle collapse. With respect to individuals of the second sort, the Gap Challenges will need to be met without appealing to TID, and are thus subject to the other problems raised in this chapter. This leaves individuals of the third sort, which we are now going to consider.

[235] Notice also that if this argument is right, then it is not clear that Simons has secured independence for the core. After all, as a result of TID, the core itself looks just like the tropes in the halo—which are not independent tropes.

in the generation of X is weaker-than-TID. Thus, if an appeal to TID is supplemented with Simons' Proposal, then it seems that TID fails to play an agglomerative role, since the only sort of dependence relations that remain are ones that are weaker-than-TID. Because TID falls out of the picture, the resulting view is subject to the problems I wish to raise for any trope theory that appeals to *any* sort of dependence relation to meet the Gap Challenges. I will now turn to this more general issue.

4.4.2.3 Appealing to Any Sort of Dependence Relation

In the previous section I argued that there are good reasons to think an appeal by the trope theorist to a very strong type of interdependence relation will not help her meet the Gap Challenges. I will now consider whether an appeal to *any* sort of dependence relation—whether strong or weak—will help answer the Gap Challenges.

There are a variety of dependence relations[236], but the point I wish to make can be made generally. Recall that the Gap Challenges ask the trope theorist to explain how the agglomeration of tropes yields a new entity that is not a property and that is charactered in the ways specified by those tropes. Thus, the question at hand is this: Is there any type of dependence relation that will help the trope theorist meet the Gap Challenges?

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[236] They differ in at least the following two ways: (i) whether they are symmetrical or asymmetrical, and (ii) whether the dependence is (what I will call) token-specific, type-specific, or determinable-specific. We can give examples in terms of tropes. F-ness$_1$ stands in a token-specific dependence relation on G-ness$_1$ if F-ness$_1$ cannot exist unless G-ness$_1$ exists—no other G-ness trope can satisfy F-ness$_1$'s existence condition. F-ness$_1$ stands in a type-specific dependence relation on G-ness$_1$ if F-ness$_1$ cannot exist unless instance of a G-ness trope exists. Any G-ness trope will satisfy F-ness$_1$'s existence condition. F-ness$_1$ stands in a determinable-specific dependence relation on G-ness$_1$ if F-ness$_1$ requires for its existence the existence of some fully-determinate trope that falls under some relevant determinable. For example, redness$_1$ cannot exist unless some fully-determinate shape trope exists, such as squareness$_1$.

Suppose there exist two tropes, F-ness$_1$ and G-ness$_1$. Suppose also that they stand in some specific type of dependence relation R. If their standing in R generates a new entity, it seems most plausible to take that new entity to be a fact or state of affairs[237], namely, *F-ness$_1$'s standing in R to G-ness$_1$*. For example, if R is an asymmetrical dependence relation, then the resulting entity would seem to be the state of affairs, *F-ness$_1$'s depending on G-ness$_1$*. It might seem, then, that an appeal to a dependence relation *does* help the trope theorist meet the Gap Challenges. The appeal meets the **Generative Challenge** because it succeeds in generating a new entity—a state of affairs. And one might argue that such an appeal meets the **Non-Property Challenge**, on the grounds that the entity it generates—a state of affairs—is not a property. On this score, however, it is worth noting that Roderick Chisholm has argued that states of affairs are reducible to properties.[238] If Chisholm is right about this, then the appeal in question will *not* help the trope theorist meet the **Non-Property Challenge**. This leaves the **Character Challenge**, which asks how the agglomeration of specific characteristics yields an entity which itself is characted in all the ways specified by those characteristics. Unfortunately, it seems that *this* challenge cannot be met by an appeal to dependence relations. This is because a state of affairs like *F-ness$_1$'s depending on G-ness$_1$* is not itself F. Less abstractly, if redness$_1$ stands in a dependence relation to coldness$_1$, then the resulting state of affairs is *redness$_1$'s depending on coldness$_1$*. But the latter only *involves* redess$_1$; it is not itself red.

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[237] In what follows, I use the terms "fact" and "state of affairs" interchangeably. Apologies to Chisholm.

[238] See Chisholm's "Properties and States of Affairs Intentionally Considered", *On Metaphysics* (Minneapolis, University of Minnesota Press, 1989), pgs. 141-49.

Of course, the above example is rather simplified. It doesn't involve a *system* of mutual interdependence relations holding directly and indirectly between numerous tropes. But suppose we complicated the example by introducing new tropes and various types of dependence relations between those tropes. And, suppose some new entity is generated as a result. No less than in the previous simplified example, it would seem most plausible to take the new entity to be a fact or state of affairs. Although such a state of affairs would be difficult to describe and would *involve* its constituent tropes, it is difficult to see why the state of affairs would be *characterized* in all the ways specified by those tropes.

So it seems that the lesson here can be generalized. Postulating dependencies between properties—even particular properties—is most plausibly taken to yield facts *about* those properties, not entities *characterized* by those properties. Thus, it seems that an appeal to dependence relations will not help the trope theorist meet the Gap Challenges.

But what about the troper theorist? Would an appeal to dependence relations help *her* meet the Gap Challenges? If an appeal to dependence relations between tropes is most plausibly taken to generate facts about those tropes, then the same would seem to go for tropers. That is, to postulate a dependence relation between two tropers most plausibly generates a fact about those tropers. So far, the views are on par. Nevertheless, the troper theorist would appear to have a relative advantage, especially with respect to answering the **Character Challenge**. Consider the following facts:

- F1 = *red-thing$_1$'s depending on cold-thing$_1$*

- F2 = *redness$_1$'s depending on coldness$_1$*

Notice that F1 involves something that is *non-derivatively* red, namely red-thing$_1$. The corresponding fact on trope theory does not involve something that is non-derivatively red. Because these theories fall within the framework of constituent ontology, the following would seem to hold: if these facts, *qua wholes with character-grounding parts*, are characted in a red way, then they are *derivatively* characted in a red way. That is, these facts *derive* their character from their metaphysical parts. And herein lies a potential advantage of troper theory. To wit: On troper theory, the relevant fact has a constituent—red-thing$_1$—that is non-derivatively characted in a red way. Thus, the derivative character of F1 might be said to be grounded in the non-derivative character of one of its parts. This provides *something* by way of answer to the **Character Challenge**. But for a trope theorist who answers the Gap Challenges by appealing to dependence relations, F2 will have to be derivatively characted in a red way, even though none of its metaphysically basic parts are non-derivatively characted in a red way. Thus, relative to the troper theorist, the trope theorist seems to have little to offer in answer to the **Character Challenge**.

The argument in this section suggests that even if the previous argument specifically concerning TID is wrong, and TID *doesn't* entail the identity of its terms, it would still seem that TID generates only a state of affairs. And, on trope theory, the state of affairs would not seem to involve anything that is characted in the requisite ways.

4.4.3 Appealing to Co-location

Previously I noted that when it comes to accounting for the individuality of a bundle, three kinds of relations have been typically appealed to by trope theorists:

mereological fusion, (some type of) interdependence, and co-location (sometimes called "compresence"). Of these, only co-location remains to be considered. The foregoing has provided some reasons to think that the other two relations will not help, and may even harm, the trope theorists' attempt to meet the Gap Challenges. The troper theorist is not so unlucky. This puts considerable pressure on the trope theorist to either develop a novel account of agglomeration or put a heavy explanatory burden on co-location. Unfortunately, co-location is ill suited to bear this burden.

4.4.3.1 Neither Theory Should Appeal to Co-location

The appeal to co-location appears front and center in D. C. Williams' trope theory. He takes ordinary objects to be "concurrence" sums of tropes, where "concurrence" is "the limiting value of location."[239] More recent trope theorists seem to be increasingly wary of appealing to the *notion* of co-location in their accounts of individuals. (Unfortunately, sometimes a *label* connoting the idea of co-location is still used[240]). No doubt, this wariness is warranted and due to the controversial and opaque nature of space itself.

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[239] Williams, "Elements of Being I" in *Properties,* D. H. Mellor and Alex Oliver, eds., (Oxford: Oxford University Press, 1997), pg. 117.

[240] Maurin, for example, devotes a third of her book on tropes to a discussion of "compresence", but spends all of her efforts developing a specific type of *dependence* relation. It is only at the end of the chapter that she addresses the issue of spatiotemporal location: "We have…found that the whole complicated matter of the compresence of tropes raises spatiotemporal questions again and again. Simply pondering the notion of 'compresence' (togetherness—presence in the same place) raises some." (*If Tropes*, (Dordrecht: Kluwer Academic Publishers, 2002), pg. 176.) Unfortunately, it is not clear how this parenthetical comment is supposed to fit into her official construal of compresence as a type of dependence relation that holds between tropes.

Given the controversial nature of space, there are two ways one might appeal to co-location in answering the Gap Challenges. These two options represent a dilemma for any theory that appeals to co-location to answer the Challenges. On the one hand, one might appeal to a *specific* view about the nature of space. For example, one might appeal to a substantival view, and hold that two tropes are co-located if there is a place P such that both tropes are at P. Of course, this move will saddle one's theory of individuality with a controversial position on the nature of space. All things being equal, it is a virtue of a theory of one kind of phenomenon to be non-committal on the nature of other types of phenomenon—especially in cases where the latter are controversial. In addition, appealing to a specific view on the nature of space may be especially unhelpful with respect to answering the Gap Challenges.[241] Thus, it seems that a trope theorist would be better off not appealing to a *specific* view on the nature of space.

On the other hand, one might appeal to co-location in a way that is *non-committal* about the nature of space. In effect, one would be saying that tropes are co-located if they are at the "same place", in whatever sense of "same place" that would or will be meant by an ideal or complete physics. The obvious benefit of this move is that it avoids whatever problems attend any current specific view on the nature of space. The cost, however, is that the move would seem to be explanatorily vacuous with respect to the

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[241] This is especially the case for the following two views. First, suppose we answer the Gap Challenges by appealing to co-location understood on a substantival view of places. One worry here is that a *place* will ultimately be either (i) something like a bare particular—i.e., something that underlies all the properties that are said to be at that place, or (ii) the very sort of thing for which we were trying to give an account—namely, an individual. Second, suppose we understand co-location on a relationalist view of places. The worry here is that on such a view, the framework of places arguably *presupposes* a framework of individuals. Thus, if we want an account of individuals (i.e. answers to the Gap Challenges), then appealing to such a framework is unhelpful.

Gap Challenges. For example, it would seem to be tantamount to saying that tropes constitute an individual in virtue of standing in some as-yet-to-be-defined relation. This may not be magic, but it is unhelpfully mysterious.

So it seems that neither a specific nor a non-committal view on the nature of space will be helpful to the trope theorist. Because of this dilemma, it is plausible to think that, all things being equal, a trope theorist would be better off not appealing to co-location in her answer to the Gap Challenges. The same goes for the troper theorist. Thus, at the outset it can be noted that the troper theorist has the advantage of having *other extant options* for answering the Gap Challenges. This advantage stems from the vexed status of our current *theories* about space. This advantage, however, is also supported by the *folk* notion of "being at the same place." To wit: there doesn't seem to be anything in the folk notion of "being at the same place" that would provide either theorist with any resources for answering the Gap Challenges. There is nothing in the ordinary meaning of "being at the same place" that would suggest that (i) if two entities are at the same place, they thereby generate a third entity (a la the **Generative Challenge**), (ii) if properties are at the same place, they thereby generate a new entity that is not a property (a al the **Non-Property Challenge**), or (iii) if properties or thinly-charactered individuals are at the same place, then there exists an entity that is charactered in all the ways specified by those properties or thinly-charactered individuals (a la the **Character Challenge**). Points (i) and (iii) would seem to make an appeal to co-location unhelpful for both trope theory and troper theory. Point (ii) is a unique problem for trope theory.

Thus, the vexed theoretical status of space and the explanatory emptiness of the folk concept of "being at the same place" provide two reasons to think that an appeal to co-location to answer Gap Challenges will be of little use. Notwithstanding this conclusion, three further comments on co-location are in order. The first concerns an important clarification of co-location. The second and third together provide a reason to think that co-location can be neither necessary nor sufficient for individuality.

4.4.3.2 Why Co-location Must Be Closed

Two notions of co-location need to be distinguished. It will turn out that conflating these notions leads to problems for both theories. Trope theorists often talk about co-location, but it is often less than clear what they have in mind. Naturally enough, one might think that two tropes are co-located if they are at the same place. I take it, however, that this is only partly right. On the one hand, the term can be used in this natural way, to describe the relationship between two distinct tropes that are at the same place. For example, one might say that the redness and coldness of this apple are co-located in virtue of being at the same place. On the other hand, however, the term can be used to refer to the relation that holds between tropes, the holding of which is supposed to be sufficient to generate an individual—i.e., something that is not a property and is charactered in all the ways specified by those tropes. It is sometimes said, for example, that the apple is identical to a bundle of co-located tropes.

For important reasons, these two uses of "co-location" need to be kept distinct. If they are conflated, then the following argument is valid.

1. If tropes T_1, T_2,…T_N are co-located, then there is an X such that X is an individual and X has exactly T_1, T_2,…T_N as parts.

2. Suppose that F-ness$_1$, G-ness$_1$, and H-ness$_1$ are co-located.

3. Thus, there is an individual, O_1, that has exactly F-ness$_1$, G-ness$_1$, and H-ness$_1$ as parts.

4. [from 2] Thus, F-ness$_1$ and G-ness$_1$ are co-located.

5. Thus, there is an individual, O_2, that has exactly F-ness$_1$ and G-ness$_1$ as parts.

Given the Principle of Constituent Identity[242], it follows that O_1 is non-identical to O_2. And, given that the first premise stipulates that co-location is sufficient for individuality, it follows that both O_1 and O_2 are charactered in all the ways specified by their respective constituent tropes. This conclusion generalizes. Thus,

(A) For any class C of tropes that is a proper sub-class of the class of tropes that constitutes an individual O_1, there is an individual O_2 that is not identical to O_1, is constituted by all and only the tropes in C, and is charactered in all the ways specified by the tropes in C.

In addition, if co-location is reflexive[243], then

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[242] "Necessarily, for any complex objects, *a* and *b*, if for any entity, *c*, *c* is a constituent of *a* if and only if *c* is a constituent of *b*, then *a* is numerically identical with *b*." Michael Loux, *Metaphysics: A Contemporary Introduction*, 3rd edition (New York and London: Routledge, 2006), pg. 98.

[243] On a relational view of space, it would seem plausible to take co-location as a primitive relation. Thus, it would seem all the more stipulative (i.e., implausible) to deny that co-location is reflexive. On a substantival view of space, it might not be so implausible.

(B) For every located trope there is an individual that has that trope as its only constituent and is charactered in the way specified by that trope.

I take it that the fact that we arrive at (A) and (B) shows that the above argument is a reducio. Some premise must go. There are options, of course, but the easiest thing to do is to introduce a distinct notion of co-location, such that there will be an equivocation in the above argument. In particular, we should introduce the notion of co-location closed under transitivity. One way to express this notion is as follows:

- For every location L, there is a relation that holds of everything at L and nothing else.

So the distinction between *mere* co-location ("being at the same place) and *closed* co-location is needed, on pain of generating too many thickly charactered individuals. This means that if one appeals to co-location to answer the Gap Challenges, one also needs to justify the distinction between mere and closed co-location. It would seem that drawing this distinction might be easier on a substantival view of space. This, after all, is the natural way to interpret the above gloss on closed co-location. However, I don't intend to *argue* that closing co-location is difficult or impossible on a relativistic view of space. I have only a hunch. But if this hunch is right, then an appeal to co-location to solve Gap Challenges will carry with it the baggage of a substantival view of space.[244]

Two final points on co-location. Together, these will suggest that co-location, even if closed, is neither necessary nor sufficient for individuality. This will mean that

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[244] In a previous footnote I mentioned the sort of "baggage" I have in mind.

appealing to co-location is of no help to either theorist. This result will be especially problematic for the trope theorist, who will be out of extant options.

Those of my readers who are theists or mind-body dualists will have anticipated my first point. To wit: If co-location (closed or not) is a necessary condition for being an individual, then, necessarily, all individuals are located. Hence, there are no Cartesian souls, angels, or gods. Worse, since the said condition is necessarily true if true, it would follow that souls, angels and gods are *impossible*. But surely all but a short-sighted naturalist will be unhappy with this result. Thus, co-location (closed or not) is highly implausible as a necessary condition for individuality.

But co-location isn't sufficient either. At least there is good reason to think so. The reason here is very similar to the one already noted concerning an appeal to dependence relations: The result (if there is one) of the co-location (closed or not) of two tropes is most plausibly taken to be a state of affairs involving those tropes, but not a state of affairs charactered in the ways specified by those tropes. If redness$_1$ and coldness$_1$ are co-located, it seems that (at most) there exists the state of affairs, *redness$_1$'s being at the same location as coldness$_1$* or *redness$_1$ and coldness$_1$'s being at the same location*, etc. But again, while such a state of affairs is not a property, it is also not charactered in the ways specified by its constituent tropes. The state of affairs, *redness$_1$ and coldness$_1$'s being at the same location*, is not itself red or cold. Thus, co-location isn't sufficient to yield an individual.

This is a good place to take stock. My general concern is to investigate how a trope theorist or troper theorist might meet the Gap Challenges. So far, I have considered three types of explanatory principles that either theorist might appeal to: fusion,

dependence relations, and co-location. I have argued that there are reasons to think that these principles offer little help to the trope theorist in answering the Gap Challenges. Notice that each of these principles involves concepts that are not unique to constituent ontology. In other words, a non-constituent ontologist could make use of these notions for some explanatory purpose. Perhaps, then, a trope theorist should appeal to explanatory principles that are *unique* to constituent ontology and which she shares with the troper theorist. In the next and final section, I will consider this type of move.

4.4.4 Appealing to Framework Principles of Constituent Ontology

A final way the trope theorist might respond to the Gap Challenges is to appeal to the basic framework of constituent ontology. An example of this response would be the following:

> By calling them Gap "Challenges", you seem to assume that it is somehow *unbecoming* of trope theory to be unable to provide an informative answer to the questions they pose. But to make this assumption is simply to reject the general framework of constituent ontology. In other words, it is a framework principle of constituent ontology that no informative answers to the Gap "Challenges" are available; within such a framework, it is simply a primitive fact that metaphysically basic entities can constitute a whole and ground the fact that the whole is charactered in the ways that it is. Thus, to take the Gap "Challenges" to express genuine problems for trope theory is really to reject the entire framework of constituent ontology. If they represent genuine problems, they are problems facing all constituent ontologies—including your precious little troper theory!

This response is instructive but misses the point. To show why, it will be helpful to consider briefly the nature of a "framework principle" and the dialectical significance of challenging one.

Since appealing to a "framework principle" might be a strategic way to respond to the Gap Challenges, it will be helpful to get clear on what such a principle would be and whether it would suffice as a response. Presumably, for some principle P, if P is a framework principle for constituent ontology, then (i) all constituent ontologists take P to be primitively true, and (ii) some non-constituent ontologists don't take P to be primitively true (either because they take it to be false or because they take it to inapplicable or because they take it to be non-primitively true). The second consequent, (ii), entails that framework principles do not include principles that are common to all sorts of general ontological strategies, principles such as the law of non-contradiction and the Principle of the Indiscernibility of Identicals. An example of a framework principle for constituent ontology—indeed, the only one I have seen described as such—is what Loux has called the Principle of Constituent Identity (PCI)—according to which "identity in constituents entails numerical identity."[245] For example, if all the constituents in X and Y are universals, and X and Y have all and only the same universals, it follows that X must be identical to Y.

Thus understood, if the Gap Challenges put a framework principle in the dock, then the trope theorist has the right to point out that these don't represent *unique*

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[245] Loux formulates the principle as follows: "Necessarily, for any complex objects, *a* and *b*, if for any entity, *c*, *c* is a constituent of *a* if and only if *c* is a constituent of *b*, then *a* is numerically identical with *b*." Michael Loux, *Metaphysics: A Contemporary Introduction*, 3rd edition (New York and London: Routledge, 2006), pg. 98.

challenges for the trope theorist, but for all constituent ontologists—including a troper theorist. Thus, if the Gap Challenges are calling into question a framework principle, then for the purpose of assessing the *relative* merits of trope theory and troper theory, the Gap Challenges can be set aside.

These clarificatory comments about framework principles shed light on why the above response misses the point. This can be seen by considering how a traditional one-category trope theory is supposed to improve upon (by, among other things, being more economical than) constituent ontologies which postulate not only properties but also a substratum or bare/thin particular. As Campbell notes:

> A [bare particular] is a specialist at particularity: it is introduced into theory as that which performs the particularizing role and no other. …Tropes are particular, but not bare particulars. Their role is dual: to be particular natures.[246]

Campbell is constructing trope theory over against a view like the following:

> An ordinary object is best analyzed as a metaphysical complex having both universals and a bare particular as constituents. The character of the ordinary object is grounded in its constituent universals, and the particularity of the ordinary object is grounded in its constituent bare particular.

Against this kind of view, Campbell is arguing that if character-grounding constituents are particular, then they can ground *both* the character and the particularity of the ordinary object—and so the embarrassing and notorious bare particular is unnecessary. In this sense, tropes are supposed to play two roles: *particularizing* and *characterizing* the ordinary object of which they are constituents.

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[246] Keith Campbell, *Abstract Particulars* (Oxford: Basil Blackwell, 1990), pg. 58.

It is true that philosophers who have taken an ordinary object to be constituted by both universals and a bare particular have posited the latter in order to ground the particularity of the object. But Campbell is mistaken in thinking that bare particulars are supposed to perform "the particularizing role and no other." Indeed, there is another equally important reason philosophers have postulated bare particulars: *in order to provide something to be a fundamental possessor of the ordinary properties attributed to an ordinary object*. (By "ordinary properties" I mean those properties that the constituent ontologist says are metaphysical constituents in the ordinary object (e.g., being red, being cold, etc.) and not the categorial characteristics.) The idea here is that unless there is a non-property constituent in a complex that is non-derivatively or fundamentally charactered by the constituent properties in that complex, the complex itself cannot be even derivatively charactered in the ways specified by those constituent properties.[247] A bare particular is supposed to play this role; in terms of my property/individual distinction, a bare particular is an individual—it is a charactered non-property. The claim that a *bare* particular is *charactered* might sound surprising, if not contradictory, since it is widely assumed that a bare particular is supposed to be something that essentially has no properties. But this assumption is mistaken, and arguably traces back to a footnote (!) by Wilfred Sellars in which bare particulars are caricatured in this way.[248] To set the

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[247] The need for a non-property haver-of-properties may be all the more acute if (i) you take properties to be entities which are "incomplete", "unsaturated", etc., and/or (ii) you accept the so-called Principle of Instantiation, which says that, necessarily, no property exists uninstantiated. I won't pursue these matters here.

[248] Sellars argues that the sentence "Universals are exemplified by bare particulars" is self-contradictory, and that this becomes evident as soon as we translate it into logical notation. The sentence then becomes $(x)[(\exists\phi)(\phi\ x) \supset \neg(\exists\phi)(\phi\ x)]$, which means "If a particular exemplifies a universal, then there is no universal which it exemplifies"—a self-contradictory statement. This quotation is from Sellars,

record straight: the bareness of a bare particular is supposed to lie in the fact that there is no property that it has essentially, not that it essentially has no property whatsoever. In addition, the bareness of a bare particular does not entail that a bare particular fails to satisfy any description—indeed, it is because a bare particular can satisfy certain descriptions that it is truly said to be charactered, viz., an individual.[249]

The point, however, is not to defend the coherence of bare particulars.[250] Rather, the point is that Campbell seems to have forgotten the other role that bare particulars are supposed to play—grounding the putative fact that where you have a red object you have something that non-derivatively has redness. Thus, the challenge for trope theory is to provide an account of how tropes can play the role that a bare particular would have otherwise played, qua basic possessor of ordinary properties. The problem is that an ontology of only tropes—whether taken singly, jointly, or jointly via co-location, fusion or interdependence—does not contain anything that can play this role. This is because on trope theory there are no entities that are non-derivatively charactered in the relevant ways (i.e. in the "ordinary" ways). Yet, there are supposed to be entities that are *derivatively* charactered in those ways—namely, the bundles that are supposed to result

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Science, Perception and Reality (London: Routledge & Kegan Paul, 1963), p. 282, fn. 1. See also his "Particulars," *Philosophy and Phenomenological Research*, Vol. XIII, No. 2, Dec. 1952, pp. 184-99. The logical notation is Robert Baker's, and is different from Sellars' only in style; see Baker, "Particulars: Bare, Naked, and Nude," *Noûs*, Vol. 1, No. 2, May 1967, pp. 211-12.

[249] With the proviso that the predicates necessarily satisfied by a bare particular hold primitively, in that they do not name reified properties. Thus, the predicates "being a bare particular", "being such as to have no property essentially" (etc.) do not name properties. J. P. Moreland and Timothy Pickavance have developed a theory of bare particulars along these lines: "Bare Particulars and Individuation: Reply to Mertz" *Australasian Journal of Philosophy*,Vol. 81, No. 1, March 2003.

[250] I have tried to do this in "On the Notion of Bare Particular", unpublished. See also the recent paper by Ted Sider: "Bare Particulars" *Philosphical Perspectives* 20 (2006), pgs. 387-97.

from the agglomeration of properties. This is the mystery to which the **Character Challenge** points.

These points about bare particulars show why the above response to the Gap Challenges misses the point. The Challenges do *not* tacitly (or otherwise) deny a framework principle of constituent ontology—namely, the principle that metaphysically basic entities can constitute a whole and ground the fact that the whole is charactered in the ways that it is. Rather, the above discussion of the Gap Challenges strongly suggests that if the *only kind* of metaphysical constituents within a whole are *properties*, then the co-location, fusion or interdependence of those constituents isn't sufficient to generate something that is charactered in the ways specified by those properties, even charactered in a derivative sense. Thus, even if tropes suffice to ground the *particularity* of a bundle, it doesn't follow that tropes can play the role of grounding the *individuality* of the bundle. The troper theorist, however, has a more satisfying explanation. Tropers are non-derivatively charactered individuals (even though there are no characteristics per se). The ordinary object, qua bundle (or gang) of tropers, is charactered in a *derivative* sense, and this fact is grounded in the prior fact that there are, within that object, non-derivatively charactered individuals—the constituent tropers.

Perhaps I can put the point concerning framework principles more lucidly if I allow myself the latitude of using fact-locutions: Where X is an ordinary object, the core strategy of a constituent ontology is to ground *X's being F* in terms of X's metaphysical constituents. So far so good. But acceptance of this general strategy doesn't require one to accept that *X's having property F as a part* is sufficient for *X's being F*. A constituent ontologist is not required to accept this because she could very well think that there are

other facts that have to obtain, in addition to *X's having property F as a part*, in order for *X's being F* to obtain. And indeed, it is precisely such thinking that has led some constituent ontologists to postulate non-property constituents, such as bare particulars or substrata. An interesting example is C. B. Martin, who postulates substrata *along with tropes* precisely in order to provide something to play the role of being that which is characterized by tropes.[251]

The lesson here is this. Constituent ontologists share the general strategy of accounting for the character of ordinary objects in terms of their metaphysical constituents. They disagree, however, on what *sorts of constituents* are needed for an adequate account. Thus, whatever else the framework principles are, they are *general* enough to accommodate this disagreement. This means that a framework principle will be too general to suffice as an answer to the Gap Challenges. This is true both for trope theory and troper theory. Neither theorist can meet the Challenges by appealing to the framework principles of constituent ontology.

4.5 Summary and Conclusion

In the last section I argued that framework principles are too general to be of help to either theorist in meeting the Gap Challenges. And previously, I argued that more general principles—those involving fusion, dependence relations, or co-location—provide the troper theorist with significantly more explanatory resources than the trope

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[251] C. B. Martin, "Substance Substantiated" *Australasian Journal of Philosophy*, Vol. 58, 1980.

theorist. Indeed, arguably these general principles offer *no* help to the trope theorist. To underscore this last point, and to tie things together, a brief review will be helpful.

Fusion. Appealing to trope-fusions might help the trope theorist meet the **Generative Challenge**, but the entities thereby generated would be properties and not individuals. Thus, fusion seems to be of no help to the trope theorist. The troper theorist, however, has the option of appealing to troper-fusions, so long as she specifies some further principle that restricts fusion in the right way.

Co-location. Appealing to co-location as a necessary condition for individuality is not an option for any theorist who wants her theory to be consistent with the possibility that there are gods, angels and Cartesian souls. That is a significant deterrent. But there is another. In virtue of the vexed nature of space, arguably either theorist should appeal to co-location only as a last resort. And even here, it seems that the trope theorist is at a further disadvantage. The co-location of tropes most plausibly yields a state of affairs, such as *redness$_1$ and coldness$_1$'s being at the same place*. But this state of affairs wouldn't itself be charactered in the right ways; it would be neither red nor cold. And, the state of affairs wouldn't involve any constituents could explain how the state of affairs could be *derivatively* charactered in the right ways; there is nothing in the state of affairs that is itself red or cold. The troper theorist has an advantage here. A state of affairs involving the co-location of tropers could itself be plausibly construed as *derivatively* charactered in the right ways. For example, *red-thing$_1$ and cold-thing$_1$'s being co-located* involves a constituent that is red; thus, it is would be plausible to take the state of affairs to be derivatively red. At least, it would be *more* plausible than it would be if the state of affairs involved only tropes.

Token-interdependence. Appealing to the token-interdependence (TID) of tropes seems to effectively collapse the bundle into a single metaphysically simple trope. Ditto for tropers. This is an unattractive, even if non-fatal, result for either theory qua *constituent* ontology. However, this result would be especially problematic for the trope theorist since the bundle would collapse into a *property* and not an individual. Thus, for the trope theorist, appealing to TID appears to backfire as a way to meet the **Non-Property Challenge**.

Dependence relations in general. Appealing to any sort of dependence relations between tropes or tropers most plausibly yields a state of affairs. The results here are exactly similar to those resulting from the co-location of tropes or tropers. Consider a state of affairs involving tropes: *redness$_1$'s depending on coldness$_1$*. This state of affairs is neither red nor cold. Furthermore, it doesn't seem to involve any constituents which could explain how the state of affairs could be *derivatively* charactered in the right ways, for there is nothing in the state of affairs that is itself red or cold. Again, the troper theorist has an advantage. A state of affairs like *red-thing$_1$'s depending on cold-thing$_1$* does involve entities that are *non-derivatively* charactered in the right ways. Thus, the state of affairs could itself be plausibly construed as *derivatively* charactered in the right ways. At least, it would be *more* plausible than it would be if the state of affairs involved only tropes.

So much for the review. In conclusion, it seems that general principles—those involving the notions of fusion, co-location or dependence—provide the troper theorist with significantly more explanatory resources than they do the trope theorist. It also seems that the framework principles of constituent ontology offer no help to the trope

theorist. Thus, it seems very likely that the best a trope theorist can do is to appeal to primitive principles that are specific to her needs and ontology. Because the troper theorist can appeal to less idiosyncratic—and arguably better understood—agglomeration principles, her overall view enjoys greater explanatory power and elegance than that of a trope theorist. On this important score, troper theory is superior to trope theory.

Notwithstanding all of the preceding, there is the real possibility that *no* version of constituent ontology has an *entirely* satisfying answer to the Challenges. This is consistent, of course, with some versions having more satisfying answers than other versions. And in my view, this is precisely one of the advantages troper theory has over trope theory.

As I will show in the next chapter, however, troper theory is subject to many of the traditional objections that plague trope theory. Thus, while troper theory is superior to trope theory, it too ultimately fails as an account of the character of ordinary objects.

AFTERWORD: TROUBLE FOR TROPES AND TROPERS

5.1 Introduction

In previous chapters I have argued that the best version of nominalism is troper theory. Notwithstanding this honor, troper theory is vulnerable to some of the traditional objections that plague trope theory. Or so I will now argue. The general upshot is this. If you are not convinced that traditional objections to trope theory are conclusive and you want to be a nominalist, then you should abandon trope theory and adopt troper theory. If you take traditional objections against trope theory to have significant force, then you should reject both theories.

I must emphasize that my aim here is not to provide comprehensive attacks on trope and troper theory. Nor is my aim to provide a full-dress presentation of each objection I mention. Pursuing such aims would require a separate dissertation.[252] Instead, my aim is to show that some of the traditional worries about trope theory also

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[252] For criticisms of trope theory, see Arkadiusz Chrudzimski "Two Concepts of Trope" *Grazer Philosophische Studien* (2002) Vol. 64, pgs. 137-55; D. M. Armstrong, *Universals: an Opinionated Introduction* (Boulder: Westview Press, 1989); Chris Daly "Tropes" in *Properties*, ed. by D. H. Mellor and Alex Oliver (Oxford: Oxford University Press, 1997), pgs. 140-59; Herbert Hochberg "A Refutation of Moderate Nominalism" *Australasian Journal of Philosophy* (1988) Vol. 66, pgs. 188f.; David Manley, "Properties and Resemblance Classes" *Noûs* (2002) Vol. 36, pgs. 75-96; J. P. Moreland, *Universals, Qualities, and Quality-Instances* (Lanham, Md.: University Press of America, 1985); Moreland, "A Critique of Campbell's Refurbished Nominalism" *The Southern Journal of Philosophy* (1997) Vol. 35, pgs. 225-246; Moreland, *Universals* (Guildford: Acumen 2001); Fredrik Stjernberg, "An Argument Against the Trope Theory" *Erkenntnis* (2003) Vol. 59, pgs. 37-46.

bear against troper theory. To accomplish this goal, I will describe each objection with enough detail to provide a sketch of how the problem arises for both theories.

In what follows, I will discuss four objections. These objections concern *abstract singular terms*, the *individuation* of tropes/tropers, the *exact resemblance* of tropes/tropers, and the *compresence* of tropes/tropers. These notions give rise to some of the traditional objections to trope theory, and they also have a significant bearing on troper theory. Because these objections are originally aimed at trope theory, I will initially present them as such, and then go on to note their bearing on troper theory.

5.2 Problems Concerning Abstract Singular Terms

The first objection concerns the semantic value of abstract singular terms. As noted above, the trope theorist tells us that resemblance classes of tropes provide the value of such terms, at least when they occur in true sentences. According to Loux, however, this account of abstract singular terms commits the trope theorist to obvious falsehoods. He argues:

> Now, the trope theorist tells us that courage is just a set of resembling tropes, the set of virtue tropes that are each a courage [and such that no courage trope is not a member of the set]. Given that sets have their members necessarily, the trope theorist is committed to the claim that the set that is courage could not have had a different membership. It could not have had more members than it does, and it could not have had fewer members than it does. On the trope theorist's account, however, concrete objects, persons, are courageous just in case they have a trope that is a member of the set that is identical with courage. But if that set could not have had more or fewer members than it does, we have the result that there could

> not have been more or fewer courageous individuals than there, in fact, are. [But this consequence] strikes us as obviously false.[253]

In sum, Loux argues that if the trope theorist holds the above account of abstract singular terms, she must deny many claims that seem to be true. She must deny, for example, that it is possible for there to be a different number of courageous persons than, in fact, there are.

But the above account is problematic in another way. Presumably, the trope theorist will apply the above account of abstract singular terms only to those terms that stand for fully determinate, ground floor characteristics. That is, she will not apply the account to obvious determinables like "shape" or "color", nor to "red" or "yellow", since there are various shades of red. Nevertheless, for the sake of simplicity, I will assume that "red" and "yellow" name fully determinate characteristics, but nothing hangs on this assumption. Now consider what seems to be a necessary truth:

(1) Red is darker than yellow.

Suppose we apply the above account to the abstract singular terms in (1). Thus, "Red" corresponds to the set of all and only redness tropes, such that "Red" could not have had a different membership than it, in fact, does. Call the latter set RED. Similarly, "Yellow" in corresponds to the set of all and only yellowness tropes, such that "Yellow" could not have had a different membership than it, in fact, does. Call the latter set YELLOW. But this means that the apparent meaning of (1) is misleading. After all, it

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[253] Loux, *Metaphysics: A Contemporary Introduction*, 3rd Edition (New York: Routledge, 2006), pg. 79.

would seem to be a category mistake to assert that one set is darker than another set. Thus, (1) cannot be taken to mean:

(1*) RED is darker than YELLOW.

Presumably, then, (1) will be understood as something like:

(1**) Any member of RED is darker than any member of YELLOW.

But now we run into a difficulty. If (1) is a necessary truth, then so is (1**). But if the latter is true in every possible world, then both RED and YELLOW exist in every possible world. Thus, if, in fact, there are two redness tropes and four yellowness tropes, then, necessarily, there are two redness tropes and four yellowness tropes. But that seems obviously false.

So much for the objections against trope theory's account of abstract singular terms. These objections straightforwardly bear on *troper* theory as well. Troper theory is modeled after trope theory, and so will account for the semantic value of abstract singular terms in terms of resemblance classes of tropers. Thus, the very same problems will arise.

5.3 Problems Concerning Individuation

A second objection concerns the individuation of tropes/tropers. The sort of "individuation" problem I have in mind concerns the identity conditions of tropes. It arises when we try to decide how many exactly similar tropes would exist in certain situations. Keith Campbell noticed the problem and stated it in terms of color tropes:

> Now in almost all normal cases we are presented with more than the bare minimum of color… A typical color patch is a uniform expanse larger than the

> minimum area required for an object to be colored… In such ordinary cases, are we in the presence of one trope of the given color…or of many? Either answer has its difficulties, and if we answer 'Both', we abandon any definite notion of a trope. If we take an unbroken uniform expanse of…green, of normal size, and claim that it is just *one* trope, then its left half is not a trope, but merely part of one. Yet were that left half to exist on its own, it would be a perfectly good trope in its own right. So by the mere Cambridge operation of painting the *right*-hand half of the original trope light blue, I can change the *left*-hand side from a non-trope to a trope. But the whole idea of *an item becoming a trope* strikes at the heart of the idea that tropes are ontologically basic. *Being a trope* cannot have any genuine fundamental status if it can be gained or lost by items that retain their identity throughout the transformation. ...On the other hand, if we [take unbroken uniform expanses of green] to be combinations or unions of many distinct tropes, then we must be able to specify how many. We can begin on that issue by determining the minimum size for [green tropes, that is, by] discovering how small a green surface there can be.[254]

Campbell is willing to grant, for the sake of argument, that there is a specific minimum surface area that a green trope must have. The problem, as he sees it, is that the area must also have a determinate *shape*:

> For there are, unfortunately, indefinitely many ways to partition our original green patch…into minimal areas. This is particularly obvious for situations, like the present one, in which there are no *shape* constraints on how it must be done. …[Thus, t]here is no one way of dividing the original expanse with any experiential or theoretical salience. So there is no basis for taking any division as *the* correct way to partition the whole. This is not a problem for color alone: temperature, texture, compressibility, magnetic power are all in the same boat.[255]

For example, because a square and a triangle can have the same area, it is not enough that a greenness trope must have a minimal area—a greenness trope must also have a definite *shape*. But, even if we assume that green tropes have a definite minimum

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[254] Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pgs. 136-37.

[255] Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pgs. 137-38.

area, there could be no principled ground for greenness tropes having, say, a square shape rather than a round shape. But, as Campbell notes,

> …if tropes are really basic, the line between one trope and another, even another of the same general kind, is as deep and as natural as anything can possibly be. The elements of being should not come with indeterminate boundaries, either spatial or temporal.[256]

Thus, there are minimally-sized color tropes only if their shape is arbitrary. But such arbitrariness is unbecoming of metaphysically basic entities, so there can be no minimally-sized color tropes. Put differently, according to Campbell, arguments[257] of the above sort show that the trope theorist will be unable to provide identity conditions for the tropes in question.[258]

The above sort of problem is not limited to colors. Indeed, Campbell claims that it bears on all properties that admit of continuous variation: colors, temperatures, solidity, textures, sizes, shapes, tastes, sounds, and so on. Campbell's way out of this problem is, to put it mildly, quite radical. Indeed, it is so revisionary that I know of no other trope theorist who follows him in this regard. His solution is to take there to be only four or five tropes—*total*. And each of the privileged few is a *field* trope that is not vulnerable to the above sort of problem:

> Taking our clue from space-time itself, we now propose that all the basic tropes are partless and edgeless in the ways that space is, and that they change only in

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[256] Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pg. 139.

[257] Campbell actually mentions several arguments of this sort. See Chapter 6 of *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990).

[258] Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pg. 141.

> space-time's innocent way. All basic tropes are space-filling fields, each one of them distributes some quantity, in perhaps varying intensities, across all of space-time. …How many physical tropes are there in the world? If we include space-time, and the weak nuclear force is independent, five; otherwise, four.[259]

Colors, shapes, sizes and the like are construed in an instrumentalist fashion—as "quasi-tropes":

> The manifest world is a world of things rather than of fields. It is dominated by concrete, medium-sized specimens of dry goods, limited to small parts of space and time, distinct from one another, highly complex. It is these familiar objects, such as toothbrushes and loaves of bread, which make life liveable. Their salience is responsible for substance ontologies, and for the natural impulse to take as the paradigms of tropes characteristics which seem to be confined to a specific local existence. The world of fields dethrones such tropes, of course. But it cannot simply dismiss them. They must be given their due; they are not illusions, and they are not fabrications; they are *well-founded appearances* (at least), and must be treated as such. …Let us call a spatially restricted subsection of a field, which we have already noted is merely a pseudo-part, a *quasi-trope*. Quasi-tropes are not human inventions. But there is an element of human relativity in which quasi-trope boundaries strike us as significant; and once a quasi-trope has been singled out as significant, an element of choice in quite where its boundaries lie. It is to some degree up to us where we draw the line between the different colors, the different smells or the significantly different impenetrabilities, textures or temperatures that make up our familiar manifest world.[260]

I'll now point to a couple problems with Campbell's field-trope theory. First, Campbell's solution seems to come at a very high price. It is one thing to give a trope theoretic account of fields. It is another to give an instrumentalist account of the putative objects and properties of common sense. Presumably, if the properties of commonsense

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[259] Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pgs. 146, 150.

[260] Campbell, *Abstract Particulars* (Cambridge, Massachusetts: Basil Blackwell, 1990), pgs. 151-52.

are pseudo-properties, then bundles of them are pseudo-objects. Thus, Campbell himself turns out to be a pseudo-object, his own boundaries marked out largely by convention. But at this point it is hard to suppress the feeling that Campbell's revisionary theory has gone too far. There are, it would seem, more natural joints in the world than Campbell's account is able to cut.

The second criticism is related to the first. If the objects of the manifest world are pseudo-objects, then we seem to loose the original explananda for which trope theory was supposed to provide an account. J. P. Moreland puts the point as follows:

> As far as ontology is concerned, the existence of [tropes] is justified in terms of various metaphysical or linguistic arguments from the manifest world, especially the phenomena of predication, resemblance and abstract reference. To the degree that Campbell's basic tropes still exhibit these phenomena (e.g. most of his tropes have the property of being a field), then to that degree he has not solved difficulties in regard to them but merely relocated those difficulties. If basic tropes do not exhibit these phenomena, they why accept the existence of basic tropes? …For example, Campbell calls space (or space-time) a trope. But he also tells us that it can change and expand. Space also has various properties (e.g. elasticity, extension, shape, volume, various other geometrical and topological properties), and the trait (whatever it is) that distinguishes empty space from the material stuff or fields that fill it. Given that Campbell is an absolutist regarding space, what is it that justifies treating it as a trope as opposed to a substance with various properties?[261]

Let's take stock. We've seen that the individuation problem concerns whether the trope theorist can avoid arbitrariness in the identity conditions of color tropes. And, according to Campbell, arbitrariness can be avoided only if we deny that color properties are genuine tropes. This strategy, however, undermines the plausibility of the resulting trope theory.

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[261] Moreland, *Universals* (Guildford: Acumen 2001), pgs. 66-67.

With respect to these matters, the troper theorist is no better off. A troper, just like a trope, is a particular entity. Thus, on troper theory there are exactly similar but numerically distinct tropers. This leads to the same type of problem concerning identity conditions. When presented with an evenly colored red patch, the troper theorist faces the question "Are we in the presence of one red troper, or of many?" And again, either way of answering the question leads to trouble.

5.4 Interlude: Tropes, Tropers and Relations

Several traditional objections to trope theory concern the status of relations in general and relations of *exact resemblance* and *compresence* in particular. A traditional worry of the general sort concerns whether a relation by itself can suffice to link two distinct entities. F. H. Bradley, for example, argued that relations are impossible, on the grounds that (i) there is a relation R only if R succeeds in connecting its terms, and (ii) R can connect its terms X and Y only if some further relation R* succeeds in connecting R* and X. But this starts a vicious regress, so it is impossible for a relation to ever succeed in relating its terms. Hence, relations are impossible. In what follows, I will set aside this objection. I do so because the objection, *if it is a good one*, undermines not just trope theory and troper theory, but many versions of constituent and relational ontology.[262] Instead, I will focus on two specific relations that play important roles in trope/troper theory: *exact resemblance* and *compresence*. Beginning in the next section, I'll discuss each in turn.

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[262] For the record, I do not think Bradley's objection to relations is unanswerable.

First, however, I would first like to address an issue that is specific to *troper* theory. The issue concerns whether it makes any sense to speak of *relations* on troper theory. After all, a relation would be a polyadic property, but there are no properties on troper theory. Thus, there are no relations on troper theory and hence it would seem that there could be no problems concerning relations.

It is correct that there are no relations on troper theory and, thus, there are no problematic relations *per se*. But this does not mean that the troper theorist is off the hook. As we will see, the next two objections to trope theory ultimately concern whether the theory can account for two sorts of *relational facts*: facts concerning the exact resemblance of tropes and facts concerning the compresence of tropes. There will be similar facts on troper theory (some tropers exactly resemble and some are compresent). Thus, the troper theorist will need to account for such relational facts and so the following objections concern her as well.

In general terms, each of the next two objections against trope theory can be seen as a dilemma. Either there are exact resemblance (compresence) relation tropes or there are not. If there are, trouble arises. If there are not, trouble arises. Thus, *at best,* the fact that there are no relations on troper theory implies that the *dilemma* doesn't arise. It doesn't imply that *trouble* doesn't arise. In addition, the fact that there are no relations on troper theory may be irrelevant, since there may very well be a type of troper that plays the *explanatory role* that a relational trope of exact resemblance (compresence) plays on trope theory. If so, then the objection concerning exact resemblance (compresence) would concern this type of troper.

For both theories, the question is whether the theorist must employ special entities (tropes or tropers) to play the relation role. Of course, it might sound less odd to employ a trope/property rather than a troper/individual to play a relation role. But the troper theorist will point out that whatever oddness this involves is a relatively small price to pay to secure a property-less ontology. She will also point out that it is precisely her *general* strategy to employ non-properties—viz. individuals qua tropers—to play what are often described as "property" roles. And, if a troper can play a monadic property role, why can't a troper play a polyadic property role? At the very least, it is not *ad hoc* for the troper theorist to employ tropers to play such roles. It is simply an instance of her general strategy for accounting for the character of ordinary objects.

In sum, the objections concerning exact resemblance and compresence are objections that concern either theory's account of a certain class of relational facts. As we will now see, both theories face difficulties on this score.

5.5 Problems Concerning Exact Resemblance

The third objection, then, concerns the ontological status of exact resemblance. A central doctrine of trope theory is that some tropes exactly resemble each other. This is important because it provides the trope theorist with an account of resemblances between ordinary objects. For example, two apples are red because they each have a constituent trope such that those tropes are numerically distinct but exactly resemble each other. In addition, exact resemblance classes of tropes are supposed to provide the semantic values for certain abstract singular terms. For example, the subject of "Red is a color" is supposed to express a class of tropes closed under exact resemblance. Given its central

role in the theory, it is not surprising that objections concerning exact resemblance have been at the center of the dispute concerning trope theory. The most forceful of these objections concerns the ontological status of exact resemblance itself—or better, all token cases of exact resemblance. Should the trope theorist take each case of exact resemblance to involve an exact resemblance trope? For example, should she take the fact that $redness_1$ and $redness_2$ exactly resemble to involve a relational trope—exact $resemblance_1$—that holds between $redness_1$ and $redness_2$? The problem is that there doesn't seem to be a good way to answer this question. Let's consider each option.

First, suppose there *are* exact resemblance tropes. On this view, the fact that $redness_1$ and $redness_2$ exactly resemble each other involves an exact resemblance trope, R1, which holds between $redness_1$ and $redness_2$. This raises a Euthyphro-like dilemma: Which of the following is the case?

(A) $Redness_1$ and $redness_2$ exactly resemble because there is an exact resemblance trope, R1, which holds between them, or

(B) There is an exact resemblance trope, R1, which holds between $redness_1$ and $redness_2$ because they exactly resemble each other.

If the trope theorist opts for (A), then a vicious regress would seem to ensue. This sort of problem was described by Bertrand Russell, and the argument goes as follows.[263] The strategy represented by (A) seems to be a fully general one: if any two tropes exactly resemble, then their resemblance is grounded in a resemblance trope. Presumably, there will be numerous cases of exact resemblance, and so numerous exact

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[263] In this paragraph, I am summarizing Chris Daly's construal of Russell. See Daly, "Tropes" in *Properties*, ed. by D. H. Mellor and Alex Oliver (Oxford: Oxford University Press, 1997), pgs. 140-59.

resemblance tropes. Let's name two of them "R1" and "R2". But notice that a further case of exact resemblance holds between any two resemblance tropes. R1 and R2, for example, exactly resemble each other with respect to being resemblance tropes. And so the general strategy represented by (A) would require that the latter case of resemblance be grounded in a further resemblance trope, RR1, which holds between R1 and R2. But then there will be numerous such higher order resemblance tropes, RR1, RR2, etc., for which the general strategy will require further resemblance tropes, RRR1, RRR2, etc. This regress is apparently vicious. As Chris Daly notes:

> At every stage [of the regress, the trope theorist's] account will entail that there are resemblances between tropes which have not been accounted for. It follows that at every stage the account offered fails to show that resemblances between [ordinary objects] can be accounted for solely in terms of tropes. It is this failure which drives the regress and makes it vicious.[264]

Thus, if the trope theorist holds that there *are* exact resemblance tropes, she should reject option (A). That is, she should deny that redness_1 and redness_2 exactly resemble *because* there is an exact resemblance trope, R1, which holds between them. This leaves option (B), on which there is an exact resemblance trope, R1, which holds between redness_1 and redness_2 because they exactly resemble each other. On this view, an exact resemblance trope supervenes on its terms, and the grounding relation does not generate a vicious regress. But there are two problems with option (B). First, because a resemblance trope does not ground the resemblance of its terms, it would seem to be a

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[264] Daly, "Tropes" in *Properties*, ed. by D. H. Mellor and Alex Oliver (Oxford: Oxford University Press, 1997), pg. 150.

superfluous entity with respect to accounting for their resemblance. Thus, on this view there would seem to be no reason to reify resemblance relations.

On to the second problem. Notice that to reject (A) is to deny that the resemblance between $redness_1$ and $redness_2$ is grounded in anything distinct from either $redness_1$ or $redness_2$. This leaves the trope theorist with two options. Either their resemblance is grounded or it is not. If their resemblance *is* grounded, then it must be grounded in $redness_1$ and $redness_2$ themselves. The problem, however, is that for this to be the case, there must be something in the nature of $redness_1$ that is directed[265] towards $redness_2$, and vice versa. Put differently, it would seem that the content of $redness_1$ must essentially involve something besides $redness_1$. But this would seem to be impossible, given that a trope is both simple and particular. Thus, there is no universal—i.e. general—content in a trope. Hence it would seem impossible for a trope to have content that is "directed" at all, much less directed towards anything outside of itself. Thus, it seems that if the trope theorist opts for (B), she must take it to be an ungrounded, primitive fact that some tropes exactly resemble and some do not. Indeed, she must take *every case* of exact resemblance between two tropes to be a distinct primitive fact. Because there is nothing "in" the nature of any trope that connects it with another trope, if there is such a connection in any given case, it will be a primitive fact. Thus, the trope theorist will have to take *every* such connection to be primitive. This means that the theory must postulate a distinct primitive fact for every pair of tropes that exactly resemble. This quickly leads to an untoward number of primitive facts: for each case of

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[265] I'm laying aside the question of what it would mean for a trope to have content that is "directed".

attribute agreement between ordinary objects, the trope theorist postulates a pair of exactly resembling tropes (one in each object). Thus, there will need to be a distinct primitive fact for every such case. In addition, it seems that such a view would fail to explain *any* significant phenomena of resemblance. By my lights, this is reason enough to reject the view.

Let's take stock. We've been considering the view on which there *are* exact resemblance tropes. On this view, the fact that $redness_1$ and $redness_2$ exactly resemble each other involves an exact resemblance trope, R1, that holds between $redness_1$ and $redness_2$. We considered the two ways one might hold this view. The first option, (A), is to take $redness_1$ and $redness_2$ to exactly resemble because there is an exact resemblance trope, R1, which holds between them. We saw that this seems to generate a vicious regress of the sort the Russell had in mind. The second option, (B), is to hold that there is an exact resemblance trope, R1, which holds between $redness_1$ and $redness_2$ because they exactly resemble each other. We saw that this view seems to saddle trope theory with explanatorily superfluous resemblance tropes and an untoward number of primitive facts.

As a final option, the trope theorist could hold that there *are no* exact resemblance tropes. Unfortunately, this move is little better than option (B) above. While it would avoid the postulation of explanatorily superfluous resemblance tropes, it would still seem to saddle the view with an untoward number of primitive facts. The argument here is the same as the one given concerning (B); namely, there is nothing "in" the nature of any trope that connects it with another trope, so if there is such a connection, it will be a primitive fact. And, there will be a distinct primitive fact for every pair of tropes that exactly resemble. So it seems that the final option is also unsatisfactory.

The foregoing objection against trope theory has equal force against troper theory. On the one hand, if the troper theorist takes there to be tropers that play the same role as resemblance tropes, then she faces the same options—(A) and (B)—construed in terms of tropers, and the same types of problems that those options lead to: either a vicious regress or an untoward number of primitive facts. On the other hand, the troper theorist might deny that there are any resemblance tropers. Indeed, one might think that this is the most plausible way for her to go, since there aren't properties (and hence no relations) on her view. But the problem here is exactly like that for the trope theorist—there will have to be a primitive fact of resemblance for each pair of tropers that exactly resemble. This, too, is unsatisfactory.

5.6 Problems Concerning Compresence

A final objection concerns the ontological status of whatever relation it is that binds tropes/tropers together into an object. In the previous chapter I used the term "agglomeration" to label this functional concept. We looked at three candidate relations that might play the agglomeration role, and we saw that, on trope theory, none of these provided the trope theorist with adequate resources for meeting the Gap Challenges. We also saw that troper theory fared better on this score. In this section I will discuss a different problem concerning agglomeration. This problem arises when we try to decide whether to reify whatever it is that plays the agglomeration role. In what follows, I will stick to the traditional name for this role player: "compresence." The question, then, is whether compresence is itself a trope/troper.

As far as I know, the most worked-out account of compresence is that of Anna-Sofia Maurin. Because of this, I will focus solely on her view. She holds that compresence is indeed a trope, but a trope related in a special way to other tropes:

> For it to be true that *a* is compresent with *b* there must exist, apart from *a* and *b*, a *compresence-trope*. A compresence-trope is, contrary to an 'ordinary' trope, a *relation*-trope. The difference between an ordinary trope and a relation-trope is this: a relation-trope is such that, although its existence is contingent (that is, it might or might not exist) it must, *given that it exists*, relate exact the entities it does in fact relate. In other words, any relation-trope is *specifically* dependent on the tropes it relates. This is true while, on the other hand, the related tropes are *not* likewise dependent on the existence of the relation-trope in question. That is, the specific dependence which characterizes the relation-trope is one-way. We might also put the position as follows: the relation of compresence is *external* to the tropes it relates, but, simultaneously, the related tropes are *internal* to the relation of compresence.[266]

So, there are compresence tropes and each stands in *asymmetrical specific dependence* to the tropes it relates.

Before I raise an objection, let me briefly unpack and motivate Maurin's view. First, there *are* compresence tropes. The motive seems to be this. There is nothing in the nature of a given token trope that necessitates that it be compresent with any other token trope.[267] For example, the redness$_1$ in this apple is compresent with the coldness$_1$ in this apple, but redness$_1$ and coldness$_1$ could exist and not be compresent. Thus, something further is needed to ground or account for the fact that those tropes *are* compresent. This something further is a compresence trope. Second, compresence is an *existential dependence* relation. This is supposed to ensure the impossibility of a compresence trope

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[266] Anna-Sofia Maurin, *If Tropes* (Dordrecht: Kluwer Academic Publishers, 2002), pg. 164.

[267] Note that this view is inconsistent with Peter Simons' account of agglomeration, which we examined in the last chapter.

existing without relating other tropes. Third, the dependence is *specific* in that it is token-level. For example, suppose t_1, t_2 and t_3 are numerically distinct tropes and C is a compresence trope. If t_1 and t_2 stand in C but t_3 does not, then it is impossible for t_3 to stand in C. This is the case even if t_3 is exactly similar to t_1 (or t_2). Apparently, the motive here is to forestall a certain type of regress. If it was not *necessary*, given the existence of C, for C to relate t_1 and t_2, then there would seem to be a need for a further ground of why C relates those tropes and not others. But now a regress threatens, since the same worry would arise with respect to the further ground, which would presumably be another relation trope. To avoid this regress, Maurin takes compresence tropes to be token-dependent on their terms. Fourth and finally, compresence is an *asymmetrical* dependence relation, in that its terms do not existentially depend upon the compresence relation. This ensures the possibility that those very terms/tropes exist but not be compresent (or that they be compresent via a different token compresence trope). It is desirable to ensure this possibility because, again, there is nothing in the nature of a given token trope that necessitates that it be compresent with any other token trope. Note that because of this asymmetry of dependence, a compresence trope does *not* supervene on its terms. Thus, as Maurin concedes, compresence cannot be construed as a "pseudo entity" or "an ontological free lunch." Rather, compresence relations are genuine entities.

I will now raise an objection to Maurin's account of compresence. By way of a preview, the problem is that Maurin's account of compresence is true only if there is a distinct primitive fact for each pair of compresence tropes. This results in an untoward number of primitives and so robs the view of both plausibility and explanatory power.

First of all, if there are compresence tropes, then any two of them are exactly similar and only numerically different. After all, in laying out the above account, Maurin is offering a *general* characterization of compresence. That is, she intends to characterize *all* compresence tropes. And, because she takes there to really *be* such tropes, she presumably will treat the subject in "Compresence is an asymmetrical specific dependence relation" as she would any other abstract singular term (such as the subject in "Red is a color"). That is, she will take the subject of that sentence to refer to the exact resemblance class of all and only compresence tropes. And, according to trope theory, the members of a resemblance class are exactly similar and only numerically different. Thus, the above account of compresence implies that any two compresence tropes are exactly similar and only numerically different.

Now on Maurin's view, compresence tropes have different token-level existence conditions. That is, where C1 and C2 are numerically distinct compresence tropes, there is some further trope T1 such that (i) necessarily, if C1 exists then T1 exists, but (ii) not necessarily, if C2 exists then T1 exists. But because C1 and C2 are exactly similar, the fact that they have different existence conditions cannot be explained by appealing to anything about C1 and/or C2. And, on Maurin's view, it is possible for T1 to exist without C1; thus, T1 cannot explain the fact that C1 and C2 have different existence conditions. But there isn't anything else on trope theory that could explain this fact. Thus, on Maurin's account it must be a primitive fact that C1 and C2 have different existence conditions. Furthermore, because the above tropes were chosen arbitrarily, we get the result that there is a *unique* primitive fact for every pair of compresence tropes.

Taking this many facts to be primitive would seem to rob the account of both plausibility and explanatory power.

The above objection was spelled out in terms of trope theory, but it bears equally on troper theory. The reasons for reifying compresence are the same on each view. The troper theorist will want to postulate special tropers to play the compresence-relation role. But the best way to do this is to adopt a modified version of Maurin's account, where the relevant role players stand in asymmetric specific dependence relations to other tropers. But then the very same sort of problem arises: there will be an untoward number of primitive facts, one for each pair of tropers that play compresence-roles. Thus, compresence seems to present significant problems for both troper theory and trope theory.

5.7 Conclusion

In this Afterword, I've discussed four of the traditional objections to trope theory and indicated how they also bear on troper theory. As noted at the outset, my aim was not to provide a full-dress attack on trope and troper theory, but simply to sketch out the typical objections and note their equal bearing on both theories. Thus, there is much more that could be said about each objection, but the foregoing suggests that if you take these objections to have significant force, then you should reject both theories. However, if you are not convinced that traditional objections to trope theory are conclusive and you want to be a nominalist, then, given the argument of the previous chapter, you should consider adopting troper theory.

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