ABSTRACT

Explanation in Metaphysics

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One of the primary tasks of the philosopher is to *explain what it is* for something to be the case—what it is for one event (substance, fact) to cause another, what it is for an action to be obligatory, what it is for an object to bear a property, what it is for a proposition to be true necessarily, what it is for a person to know something. This activity of explaining what something is or what it is for something to be the case, of identifying what I call *ontological explanations*, is of special importance to metaphysics, since the task of metaphysics generally is to get to the bottom of reality. The concept of ontological explanation is usually buried a layer deep in most discussions, however, and theses about it are either presupposed or clothed as claims about other things. In some cases, this leads to confusion and frustration, and in many other cases the discussion could benefit from a long look at ontological explanation even if that look isn't strictly necessary to remedy confusion.

My goal is to give ontological explanation that long look, and then use the clarity gained to reinterpret, reorganize, and even make progress on some long-standing disputes in metaphysics. In the first two chapters I examine ontological explanation itself and

connect it to a host of important metaphysical issues, including ontological commitment and truthmaker theory. In the third and fourth chapters, I apply the work done in the first two chapters to a pair of important metaphysical arguments that crucially employ infinite regresses of ontological explanations—Bradley's Regress and McTaggart's Paradox.

Explanation In Metaphysics

by

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To my father, who taught me to live the life of the mind

CHAPTER ONE

Ontological Explanation and Ontological Commitment

1. Introduction

1.1 General Introduction

One of the primary tasks of the philosopher is to *explain what it is* for something to be the case—what it is for one event (substance, fact) to cause another, what it is for an action to be obligatory, what it is for an object to bear a property, what it is for a proposition to be true necessarily, what it is for a person to know something—there are nearly as many items on this list is as there are topics in philosophy. This activity of explaining what something is or what it is for something to be the case is of special importance to metaphysics, since the task of metaphysics generally is to get to the bottom of reality. It is a bit ironic, therefore, that metaphysicians have spent so much more of their time investigating concepts related to this kind of explanation—supervenience, emergence, ontological dependence, and so on—than they have investigating explanation itself. As we will see, the involved discussion of scientific and causal explanation in the philosophy of science and the philosophy of religion is peripheral to the sort of explanation relevant here, what I will from here on call *ontological* explanation. This isn't to say that metaphysicians and other philosophers haven't said anything relevant to ontological explanation; indeed, they could hardly have avoided doing so, given how intimately bound up with explanation so many of their projects are. Instead, the concept of ontological explanation remains buried a layer deep in most discussions, and theses

about it are either presupposed or clothed as claims about other things. In some cases, this leads to confusion and frustration, and in many other cases the discussion could benefit from a long look at ontological explanation even if that look isn't strictly necessary to remedy confusion.

My goal is to give ontological explanation that long look, and then use the clarity gained to reinterpret, reorganize, and even make progress on some long-standing disputes in metaphysics.

The two disputes I have particularly in mind are those over a pair of metaphysical infinite regress arguments, Bradley's Regress and McTaggart's Paradox. Both have been around for a long time—McTaggart's argument for over a century and Bradley's for far longer, since it is a version of Plato's Third Man argument from the *Parmenides*—and both remain at the center of peculiarly intractable controversy. It is my contention that the notion of ontological explanation lies buried at the center of the discussion of both arguments. Two consequences follow, which I aim to establish in each case. First, much of the variety of arguments and views surrounding each argument can and should be recast as arguments or views about ontological explanation, either as attempts to motivate (or deny) demands for it, or as restrictions or denials of restrictions on it. Realizing this can help in evaluating these arguments and views, or at least in clarifying exactly what is at stake. Second, this means that the positions it is permissible to take on these particular arguments are constrained by general truths about ontological explanation: its nature, restrictions on it, and general demands for it.

Because of this, I need first to zoom out and look at ontological explanation itself. In the first chapter, I'll look at the nature of ontological explanation, explore some of its

features and its relations to a family of other concepts, and argue that it is important because of its connection to ontological commitment. In the second chapter I'll defend a proposed restriction on ontological explanation—namely, the claim that ungrounded infinite regresses of explanations fail to satisfactorily explain—and then explore a couple of general demands for ontological explanations of certain sorts of facts. Finally, in light of all this, I'll treat Bradley's Regress and McTaggart's Paradox in the third and fourth chapters, respectively.

1.2 Chapter Introduction

Ontological explanation lies at the heart of the practice of metaphysics and ontology. It is by means of ontological explanation that we get to the bottom of reality. That is what I aim to establish in this first chapter: ontological explanation is central to metaphysics and ontology, and its centrality is mainly due to its connection to *ontological commitment*. To be more precise, I'm claiming that the ontological commitment carried by a proposition is determined by features of that proposition's ultimate ontological explanation. The only way, therefore, to identify a proposition's ontological commitment is to identify its ultimate explanation. So a proposition's apparent ontological commitments can be "explained away"—that is, a proposition may appear to carry an ontological commitment that it does not because its ultimate explanation does not carry that commitment. The converse is also true: a proposition may carry more of a commitment than it initially seems to, a commitment revealed only by uncovering its ultimate explanation.

I will begin, in section 2, by getting as clear as possible on the nature of ontological explanation. I will identify some of its essential properties and distinguish it

from and relate it to, on the one hand, other kinds of explanation and, on the other, a family of ontologically important related concepts. I will not give a full analysis of ontological explanation—an ontological explanation of it, if you will—because I cannot give an accurate set of logically necessary and sufficient conditions for it. I will say enough, however, to enable a grasp of it and to see its relations with other concepts important for ontological theorizing.

In section 3, I will deliver the central argument of the chapter, with the conclusion that ontological explanation determines ontological commitment. That is, a proposition's ontological commitment is determined by features of its ultimate ontological explanation. Along the way, I'll state and defend a position on the nature of ontological commitment that solves a number of the problems raised in the literature. The most important of my conclusions will be that advocates of the truthmaker account of ontological commitment were wrong to advance it as a competitor of the other prominent account, Quine's quantifier account; not only is the truthmaker account compatible with the quantifier account, but the truthmaker account actually entails the quantifier account. And, according to the best versions of either account, a proposition's ontological commitment is determined by features of its ultimate ontological explanation.

In section 4, I will reply to a series of arguments given by Robert Roberts and Jay Wood, which I collectively term their "anti-theory." These arguments include rejection of two of the properties I ascribe to ontological explanation, necessity and asymmetry.

2. The Nature of Ontological Explanation

2.1 Identifying Ontological Explanation

It is remarkably difficult to give a general account of explanation. The word is used in a bewildering variety of ways, and at least some of those uses must be analogical rather than univocal, disallowing a unified account of "explanation" in all its uses. What is more, it is difficult to say precisely which uses of the word are analogical and which primary, so it is difficult to narrow down the linguistic data enough to begin to try to give an account even of only the central use of the word. Add to this the significant difficulty of analysis itself even with a less problematic set of linguistic data, and the task of analyzing explanation looks Herculean.[1]

Because of this difficulty, I cannot pick out the sort of explanation I'm interested in by giving a general account of explanation and then specifying the features which distinguish ontological explanation from other types. Fortunately, ontological explanation is easy to pick out ostensively, since it involves some distinctive linguistic features. Explanation is often associated particularly with the words *why* and *because*. What I mean by ontological explanation, by contrast, is explanation *what*—I can explain *what* a table is, or *what it is* for the table to be red, and so on, and in doing so I am identifying the ontological explanation for the table or for the table's being red.[2] There

[1] For a heroic attempt to analyze a very general, but perhaps not perfectly general, type of explanation, explanation *why*, see C.S. Jenkins, "Romeo, Rene, and the Reasons Why: What Explanation Is," in *Proceedings of the Aristotelian Society* 108(1), April 2008, 61-84.

[2] Sometimes ontological explanations can be appropriate answers to why-questions, just as other kinds of explanation, but sometimes it is awkward at best to use the words *why* and *because* in connection with ontological explanation. The reason for this seems to be that why-questions are most often requests for another kind of explanation, especially causal explanation, and so giving an ontological explanation in response is awkward or even wrong. So an ontological explanation, though sometimes an explanation *why*, is always an explanation *what*.

are other sorts of explanation which may have as good a claim to the label "ontological," but I'm stipulating the label to pick out explanation *what*.

Ontological explanation can take two major forms: objectual (an explanation of what something is, for instance, a table) and propositional (an explanation of what it is for something to be the case, for instance, for the table to be red). The objectual form of ontological explanation reduces easily to the propositional form: I explain (identify the explanation of) what some X is just in case I explain (identify the explanation of) what it is for X to exist.[3] I will therefore consider the propositional form of ontological explanation to be the primary form, and the rest of my discussion will focus on it.

There is a complication in identifying the linguistic features that pick out the objectual form of ontological explanation.[4] Not every answer to a "what is it?" question is what I call an ontological explanation. For example, suppose you ask me what a horse is (since you have no idea), and I reply that a horse is a sort of animal that people ride. I have answered your question correctly and in some sense explained to you what a horse is. I haven't told you *what it is* for a horse to exist, though—because there could exist an animal that people ride without there existing a horse, and there could exist a horse without there existing an animal that people ride. In other words, I haven't given an ontological explanation of a horse because I haven't given a set of conditions both necessary and sufficient for the existence of a horse. So an explanation can have the linguistic form of an objectual ontological explanation—explaining what X is—without

[3] Perhaps with some emphasis on "X" rather than "exist." See the later discussion of the context-sensitivity of explanation. Note that this reduction of the objectual form to the propositional form is much easier than a corresponding reduction of other important concepts that have objectual and propositional forms, like understanding and knowledge.

[4] Thanks to Alexander Pruss for pointing this out to me.

being what I call an ontological explanation. How can I specify which of the answers to "what is it" questions are the true ontological explanations? True objectual ontological explanations are the ones that can be reduced to the propositional form of ontological explanation, since the propositional form does not share the ambiguity of the objectual form. If, when I explain what X is, I have identified the ontological explanation of X just in case I have thereby identified *what it is* for X to exist.

As I mentioned before, there has been hardly any discussion of ontological explanation itself. There has been some discussion of explanation generally, but it is ontological explanation's distinctive features, those features which connect it to ontological commitment, which make it an object of interest for me. The involved discussion of explanation in the philosophy of science and the philosophy of religion (in connection with the cosmological argument), when it isn't just a discussion of explanation generally, is almost exclusively a discussion of causal or nomic explanation.[5] Since ontological explanation is not a form of causal or nomic explanation, that discussion remains peripheral at best to an investigation of ontological explanation. Before I discuss the connection between ontological explanation and ontological commitment, then, I'll identify some of the more important features of ontological explanation, and I'll conduct my discussion more or less independently of the discussion about scientific explanation.

[5] Those who deny that scientific explanation is causal or nomic are usually noticing some kinds of explanation other than causal or nomic explanation and are trying to broaden their analysis of scientific explanation to encompass all types of explanation — in which case they are talking about explanation generally.

2.2 Features of Ontological Explanation

I can't give a full analysis of ontological explanation—an ontological explanation of ontological explanation, that is—because I don't know an informative set of conditions both necessary and sufficient for it. I can, however, pick out a number of important features of ontological explanation, five in fact: necessity, asymmetry, transitivity, objectivity, and the entities which it relates.

Necessity. If *p* ontologically explains *q*, then *p* is metaphysically necessary and sufficient for *q*. Assume, for the sake of argument, *that the object is red* is explained by *that the object exemplifies the universal redness*—that is, *what it is* for the table to be red is for the table to exemplify the universal redness. It follows that the table's exemplifying redness is both necessary and sufficient for the table's being red. For imagine if the table could be red without exemplifying the universal redness—then the table's exemplifying redness clearly isn't *what it is* for the table to be red, since the table can be red without exemplifying redness. Likewise, if the table could exemplify redness without being red, then the table's exemplifying redness isn't *what it is* for the table to be red, since its being red, in this case, is something other than merely its exemplifying redness. So, if what it is for an object to be red is for the object to exemplify the universal redness—that is, if *that X is red* is ontologically explained by that *X exemplifies the universal redness*—then the latter truth is both necessary and sufficient for the former. This holds for all ontological explanations.

A closely related property of ontological explanation is the fact that it holds necessarily—if *p* ontologically explains *q*, then necessarily, *p* ontologically explains *q*. This assumes that the relata of the relation of ontological explanation—propositions, as

I'll argue later—exist necessarily. If propositions do not exist necessarily, then ontological explanation has only conditional necessity—it obtains necessarily conditional on the existence of the propositions it relates. I don't have an additional argument for this claim; denying it just seems implausible. If the table's exemplifying redness is *what it is* for the table to be red, and so the table is red in all and only the possible worlds in which it exemplifies redness (as I established in the previous paragraph), does it seem likely that there is some possible word in which the table is red and exemplifies redness, but in which the table's exemplifying redness is not *what it is* for the table to be red? I can't think of any scenario in which this is remotely plausible.

An interesting related point is that, unlike many other sorts of explanation, ontological explanation is not factive. Suppose that *what it is* for a unicorn to exist is for a horse with a horn on its forehead to exist. This may be true even though it is false that there are unicorns and false that there are horses with horns on their foreheads. Contrast causal explanation: if the table is red because I painted it, then it is true that the table is red and true that I painted it.

Asymmetry. If p ontologically explains q, then q does not ontologically explain p. The necessity condition on ontological explanation doesn't have a direction—if p is necessary and sufficient for q, then q is necessary and sufficient for p. Ontological explanation, though, consists of more than this mere modal relation. If it is true that the table's exemplifying the universal redness is *what it is* for the table to be red, then the reverse isn't true: it isn't true that the table's being red is what it is for the table to exemplify the universal redness. Circular explanations are out; explanation flows in only one direction.

Transitivity. If *p* ontologically explains *q* and *q* ontologically explains *r*, then *p* ontologically explains *r*. Consider the following three propositions:

(a) S knows that p.

(b) S justifiedly and truly believes p.

(c) S believes p truly as the result of a reliable process.

Assume (contrary to fact) that (b) ontologically explains (a) and that (c) ontologically explains (b)—what it is for S to know that p is for S to justifiedly and truly believe p, and what it is for S to justifiedly and truly believe p is for S to believe p truly as the result of a reliable process. It clearly follows from this that (c) also explains (a): what it is for S to know that p is for S to believe p as the result of a reliable process. So ontological explanation is transitive.

Objectivity. Ontological explanation is objective in the following sense: truths about ontological explanation are independent of human activity. Ontological explanations are not human creations; explanation is a relation which holds between propositions, and it is a relation which holds necessarily, as I argued above. If *p* ontologically explains *q*, then necessarily *p* ontologically explains *q*, whether or not there are humans around to acknowledge that fact. (Now, in the event that propositions are not necessary entities but are human creations, then humans do play a causal role in making truths about explanation obtain, because in that case ontological explanation is only necessary conditional on the existence of the propositions it relates. If this is so, though, truths about explanation still have a kind of objectivity, since human beings cannot influence which propositions explain which other propositions, given that the propositions already exist.)

The claim that explanations are not human creations and are independent of human activity conflicts with a common way of speaking—a way of speaking, in fact, in which I myself have engaged already in this chapter. It is common to speak of explanation, even ontological explanation, as an activity (and to use it as a verb), and to speak of proposing alternative, incompatible explanations for the same fact and evaluating them as better or worse. My claim that explanation is the means by which we get to the bottom of reality is an instance of this way of speaking. It treats explanation as a human activity and explanations as human creations which may or may not be correct. Both of these ways of treating explanation conflict with my claim that ontological explanations obtain necessarily and independently of human activity.

This other way of speaking picks out a derivative sense of explanation. Proposed explanations, explanations which may or may not be correct and which can be evaluated as better or worse, are proposed *candidates* for the more objective kind of explanation I'm talking about. The activity of explaining is the activity of seeking to identify the (independently true) explanations. My own claim that ontological explanation is the means by which we get to the bottom of reality is really shorthand for the claim that it is by *identifying* ontological explanations that we get to the bottom of reality. So this way of speaking doesn't conflict with ontological explanation's being objective in the above sense. The objective sort of ontological explanation is my primary concern, but I will continue at times to use the term "explanation" in the derivative sense, trusting that context will suffice to clearly identify that use.

Relata: propositions. Ontological explanation relates propositions—not objects, not states of affairs or facts, not sentences, but propositions. First, objects don't make

good candidates for the relata of ontological explanation because the objectual form of ontological explanation reduces so easily to the propositional form. (Again, I have explained what X is just in case I have explained what it is for X to exist.) There is no such easy reduction the other direction.

Second, propositions are better candidates for the relata of ontological explanation than other entities which bear a propositional structure, like states of affairs or perhaps facts,[6] because propositions are more fine-grained, and ontological explanation is quite fine-grained. Consider again the following propositions:

(a) S knows that p.

(b) S justifiedly and truly believes p.

Suppose (contrary to fact) that (b) ontologically explains (a)—what it is for S to know that p is for S to justifiedly and truly believe p. A philosopher should be unwilling to admit distinct states of affairs into his ontology to account for each truth, one for (a) and another for (b). This is because there is only need for one state of affairs to ground both truths.[7] However, (b) bears the relation of ontological explanation to (a) but not to itself. So there is something more there than the state of affairs, something more fine-grained, and it is this something more which bears the relation of ontological explanation. Propositions are the natural candidates.[8]

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[6] "Fact" is a pretty flexible word; sometimes it can be used interchangeably with "true proposition." When it isn't, though, it generally is closer to "state of affairs."

[7] The state of affairs may be complex — that is, it may be a combination of multiple atomic states of affairs — but the very same complex state of affairs which grounds the one truth grounds the other as well.

[8] I am assuming here a notion of states of affairs which conceives of them, as Armstrong does, as more coarse-grained than propositions and as obtaining of and only if they exist. So I do not mean what Alvin Plantinga means by states of affairs in *The Nature of Necessity* (Oxford: Clarendon, 1974), according to which there is a state of affairs for every proposition and states of affairs exist whether or not they

Third, propositions are better candidates for the relata than are sentences. The reason for this is tied to the necessity condition on explanation: if *p* explains *q*, then *p* is necessary and sufficient for *q*. If *p* and *q* were sentences, then many sentences employing indexicals couldn't be explained by sentences not employing indexicals. For instance, "I am a human" couldn't be explained by "Dan is a rational animal" despite the fact that "I" and "Dan" refer to the same person, because the first sentence has different truth-conditions than the second—the first could be false when uttered by someone else, while the second would continue to be true. However, many of these sentences employing indexicals surely *can* be explained by sentences not employing indexicals: Dan's being a rational animal *is* what it is for me to be human, since I am Dan (assuming for the sake of argument, of course, that humans are rational animals). The propositions expressed by the sentences do not vary in truth-value as the sentences do, since the reason the sentence employing the indexical changes its truth-value is that it expresses a different proposition when uttered in a different context. So ontological explanation relates the propositions expressed by sentences, not the sentences themselves.[9]

My claim that propositions are the relata of ontological explanation is neutral on many of the competing accounts of propositions and many of the debates concerning them. There is a sense in which an English speaker who utters the sentence "a table is red" and a Spanish speaker who utters the sentence "una mesa es roja" *say the same thing*; that which both express is what I mean by a proposition.[10] Propositions are

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obtain. I see no reason to believe in Plantinga's states of affairs, unless they are simply reducible to propositions.

[9] This will play a very important role in chapter four in evaluating one of the major arguments for the B-theory of time.

[10] It is unclear to me that I am thereby committed to saying that propositions are the meanings of declarative sentences, due to the ambiguity of the word "meaning."

therefore bearers of truth and falsity, but I do not take a position on whether they are the primary bearers of truth and falsity because I do not take a position on whether propositions are reducible to other, more fundamental entities. Propositions are also likely the objects of belief and other propositional attitudes and the referents of that-clauses, though Kripke's puzzle raises some difficulties for the former thesis.[11] As I said, I remain neutral on many of the debates over propositions, especially over their nature. In particular, my view is compatible with reducing propositions to other, more fundamental sorts of entities, and even with identifying them as constructions from sentences (as Sellars would have it).[12] This means, incidentally, that if we assume the theory of ontological commitment I will give in the next section, my claim that propositions are the relata of ontological explanation is compatible with not being ontologically committed to propositions—which means my claim is compatible with nominalism about propositions. However, I cannot remain neutral on all the debates over propositions. For instance, I am committed to there being distinct propositions which are true in all the same possible worlds (due to the necessity condition on ontological explanation I defended above), which means I deny the theory of propositions which identifies them with sets of possible worlds because I need propositions to be more fine-grained. I am on relatively solid ground in doing so, however, because such theories of propositions have been abandoned by many philosophers precisely because they fail to

[11] See Thomas McKay and Michael Nelson, "Propositional Attitude Reports," *The Stanford Encyclopedia of Philosophy* (Spring 2011 Edition), ed. by Edward N. Zalta, URL: <http://plato.stanford.edu/archives/spr2011/entries/prop-attitude-reports/>, for a brief treatment.

[12] See Michael Loux, *Metaphysics: A Contemporary Introduction*, 2nd edition (New York: Routledge, 2002), 150-164, for a summary.

account for the possibility of distinct propositions which are true in all the same possible worlds.[13]

Full, partial, ultimate, and mediate explanations. Two further distinctions will prove to be important: one between full and partial ontological explanations and another between ultimate and mediate ontological explanations. A proposition *p* is a partial ontological explanation of *q* just in case *p* is only part of what it is for *q* to be the case. The proposition *p* is a full explanation of *q* just in case *p* is the whole of what it is for *q* to be the case. The features of ontological explanation I've identified above are features of full, not partial, explanation, though partial ontological explanation shares some of the features and has modified versions of others.[14] When I speak of ontological explanation I mean full explanation.

A proposition is an ultimate explanation just in case it is an explanation and has no further explanation. A proposition is a mediate explanation just in case it is an explanation and it does have a further explanation. The ultimate/mediate distinction runs orthogonal to the full/partial distinction. It is possible to have a series of explanations; the series stops with the ultimate explanation if there is one.

The context of a request for explanation, or of the statement of an explanation, is important in a different way for ontological explanation than for other sorts of explanation. In the case of causal explanation, context can allow partial explanations to stand in for full explanations. If I ask why the table is red, and you respond that you painted it, you may have sufficiently answered my question even though there are many

[13] See Peter Hanks, "Recent Work on Propositions," *Philosophy Compass* 4 (2009), 470.

[14] The necessity feature of ontological explanation, for example, is different in the case of partial explanation: if *p* is a partial explanation of *q*, then *q* necessitates *p* but not vice versa.

more causal factors than your activity which went into the table's being red and which form essential parts of the full explanation of that fact. This isn't the case, however, with ontological explanation. Partial ontological explanations must always be identified as such. If I ask *what it is* for the table to be red, and you say that it is for the table to exist and redness to exist, I can rightly chastise you by insisting that that is only *part* of what it is for the table to be red.[15]

Context can, however, specify which *mediate* ontological explanation is called for. If I ask what it is for a table to be red, context can specify which element I want explained. Perhaps I'm interested in the explanation of tables, perhaps in the explanation of the property of redness, perhaps in the nature of the instantiation relation ("to be"): what is it for the *table* to be red, what is it for the table to be *red*, what is it for the table *to be* red? The ultimate ontological explanation of the proposition *that the table is red* will reduce all three of these elements of the proposition (assuming, of course, that all three can be reduced). Different mediate explanations, however, will reduce some elements but not others, and context can specify which of those mediate explanations is the one being called for.

So far I've identified a number of important features of ontological explanation. They fall short, however, of a full ontological explanation of ontological explanation, because they probably aren't sufficient for ontological explanation. An ontological explanation of ontological explanation would have to look deeper and find what grounds some of these features, particularly the asymmetry condition. I cannot give a satisfactory ontological explanation of ontological explanation, but I can give a *recipe* for such an

[15] The table must *exemplify* redness as well. This is one step in Bradley's regress; see chapter 3 for a treatment.

explanation, a recipe that will be applied differently depending on one's theory of the nature of propositions and the nature of truth. The recipe has two parts: first, if *p* ontologically explains *q*, then *p* and *q* somehow "pick out the same portion of reality" or are "about the same thing;" and second, *p* is somehow "closer" to that reality than *q* is. This is why *p* is necessary and sufficient for *q* and why ontological explanation is asymmetric. This characterization is too vague, though, too indeterminate and metaphorical, to really embrace as a satisfactory ontological explanation of ontological explanation, which is why I've called it a mere recipe. The recipe will generate different ontological explanations depending on how the "aboutness" (first condition) and "closeness" (second condition) ideas are cashed out, which will in turn depend on particular accounts of the nature of truth and the nature of propositions.[16] Even though I haven't committed to a particular ontological explanation of ontological explanation, I've certainly said enough to greatly clarify its nature, and this clarification will enable us to discern the connection between it and ontological commitment.

[16] Here is one such explanation, which takes Joshua Rasmussen's account of propositions and truth, from *What Propositions May Correspond To and How They Do It* (Ph.D dissertation, University of Notre Dame, 2010). According to Rasmussen, propositions are arrangements of individual essences (haecceities), which correspond to states of affairs which are arrangements of instantiations of those individual essences. The first condition on ontological explanation, if Rasmussen's view is right, is this: if *p* ontologically explains *q*, then *p* and *q* necessarily correspond to all the same states of affairs (call them S). There are a number of options for the second condition (the "closeness" condition). One is: if *p* ontologically explains *q*, then there is at least one individual essence contained in *q* which is not contained in *p*, and all the individual essences contained in *q* (call them Q) but not in *p* (call them P) are such that S (all possible corresponding states of affairs) exemplifies Q by virtue of exemplifying P. This option seems to work, but has the disadvantage of reducing ontological explanation to the "in virtue of" relation, which also seems to be a relationship between propositions, though a different relationship. There may be other acceptable specifications of the "closeness" condition, even just on Rasmussen's view, which can overcome this limitation.

2.3 Related Concepts

I have also said enough about ontological explanation to be able to carefully distinguish it from and relate it to a number of other important concepts, some of which are easily confused with ontological explanation. I'll discuss five: conceptual analysis, paraphrase (or translation), supervenience, ontological dependence, and ontological emergence.

Conceptual analysis. Much of what goes under the heading of conceptual analysis just is ontological explanation, and so in many cases conceptual analysis and ontological explanation are interchangeable. The label "conceptual analysis" is misleading in at least a couple of ways, though, which are important to point out, and if these misleading connotations are taken as essential defining characteristics of conceptual analysis, then conceptual analysis turns out to be something importantly distinct from ontological explanation.

First, conceptual analysis has connotations of a priority and analyticity. Ontological explanation need not be either *a priori* or analytic. Explanation-facts are, to be sure, necessary truths, but necessary truths may be known *a posteriori* and may be synthetic. Now, to be sure, much of what is called conceptual analysis makes no pretensions to being *a priori* or analytic, and if we may insist that conceptual analysis need be neither, then I have no objection to using conceptual analysis interchangeably with ontological explanation. Some, however, have thought of conceptual analysis as essentially *a priori* and thought that a disagreement over a conceptual analysis was a failure of one of the parties to use language competently. I want to be clear that

ontological explanation, and the sort of conceptual analysis I'm interested in, need not be *a priori* or analytic.

Second, the label "conceptual analysis" suggests that the primary object of concern is something within me: my concept. (This may in fact be at least part of the source of the connotation of a prioricity.) Whether concepts are abilities to distinguish and relate things or are something else, they most certainly reside within the person. Ontological explanation, however, relates propositions, and propositions exist independently of any (human) person.[17] Now, oftentimes "conceptual analysis," the analysis of the structure of a concept, actually takes the various true propositions which involve the concept and gives ontological explanations of those propositions—so, often conceptual analysis just amounts to ontological explanation. For example, analysis of the concept of knowledge often takes the form of giving an ontological explanation of the proposition *that S knows that p*. In other words, conceptual analysis often isn't really an investigation into something which exists in me (my concept) but instead is an investigation into what my concept picks out—for example, the analysis of the concept of knowledge is really about knowledge, not about my concept of it. When it is clear that this is what is going on, conceptual analysis ends up being the same thing as ontological explanation.

In short, conceptual analysis may be equivalent to ontological explanation, but if so, then the label carries some misleading connotations that need to be resisted. In order to avoid these misleading connotations, I will continue to speak almost exclusively of ontological explanation.

[17] Perhaps they do not exist independently of God.

Paraphrase. It is particularly important to clarify the relationship between paraphrase and ontological explanation, since paraphrase has often been thought to be connected with ontological commitment, as I take ontological explanation to be. The most important difference between paraphrase and ontological explanation is that paraphrase is a relation between sentences, while ontological explanation is a relation between propositions. Sometimes, when one sentence is a paraphrase of another, the proposition expressed by the sentence is the ontological explanation of the other. Because paraphrase is a relation between sentences while ontological explanation is not, however, it is possible to have an explanation without a paraphrase and a paraphrase without an explanation. The major example of explanation without paraphrase involves indexicals: ontological explanation need not respect indexicals as paraphrase must. If we assume (with Aristotle) that what it is to be human is to be a rational animal, then "Dan is a rational animal" ontologically explains "I am human"—what it is for me to be human is for Dan to be a rational animal, for I am Dan. However, while the former sentence indeed expresses the ontological explanation of the latter, it is not a good paraphrase of the latter, because the latter sentence may express a different proposition when the two are uttered in a different context (and be true while the former sentence is false, or vice versa).[18]

A second important difference between paraphrase and ontological explanation is that paraphrase doesn't have a direction. That is, paraphrase is symmetric, while

[18] It is also possible to have a paraphrase without having an explanation, though this is less important for the connection to ontological commitment. "La mesa es roja" is a paraphrase of "the table is red," but neither is the ontological explanation of the other — each expresses the same proposition, and so there aren't distinct propositions to stand in the relation of ontological explanation. The same is true of "someone is talkative" and "someone is garrulous."

ontological explanation is asymmetric. If a sentence *s* is a paraphrase of another sentence *t*, then *t* is also a paraphrase of *s*. Not so with ontological explanation.

In the next section, I'll show that both of these differences—the fact that ontological explanation relates propositions rather than sentences and so need not respect indexicals as paraphrase must, and the fact that ontological explanation is asymmetric as paraphrase is not—make ontological explanation better suited for the connection to ontological commitment that paraphrase has often been thought to enjoy.

Supervenience. Supervenience is usually cast as a relation between sets of properties: the set of properties A supervenes on the set of properties B just in case there cannot be a difference with respect to A-properties without a difference with respect to B-properties. Types of supervenience relations can then be distinguished by specifying what sort of modality is involved in the "cannot" (metaphysical, nomological, etc.), by specifying the bearer of the properties in question (individual things, regions of space-time, or possible worlds)[19], and by getting clearer on the exact modal relation involved.[20]

The closest connection between supervenience and ontological explanation is that ontological explanation entails a supervenience claim: if *p* ontologically explains *q*, then *p*'s truth and *q*'s truth supervene on one another (since *p* is metaphysically necessary and sufficient for *q*). This means that if a two-way (mutual) supervenience relation between the truth of two propositions is identified, one possible explanation for that supervenience relation is that one of the propositions is the ontological explanation of the other. So the

[19] Yielding individual supervenience, regional supervenience, and global supervenience, respectively. See Brian McLaughlin and Karen Bennett, "Supervenience," *The Stanford Encyclopedia of Philosophy* (Spring 2011 Edition), ed. by Edward N. Zalta, URL: <http://plato.stanford.edu/archives/spr2011/entries/supervenience/>.

[20] This yields weak and strong individual supervenience and various forms of global supervenience.

existence of mutual supervenience can be evidence for the existence of a relation of ontological explanation.

However, there are many differences between supervenience and ontological explanation. For one thing, supervenience falls far short of ontological explanation in a number of ways. Supervenience does not have the asymmetry that ontological explanation does. For another, some kinds of supervenience don't even have the metaphysical modal force that ontological explanation does (if the modal force of supervenience is taken as nomological or some other non-metaphysical modality). Also, supervenience is a relation between properties and sets of properties, not propositions. It may not always be possible to construct propositions which bear explanation relations out of sets of properties which bear supervenience relations, even mutual supervenience relations.

Supervenience, like paraphrase, has often been invoked in the role I envisage for ontological explanation: some have thought that supervenient properties are "ontologically innocent" and incur no ontological commitment beyond their subvenient base. I think this is a mistake; without the reduction which is achieved by an ontological explanation, there is no avoiding ontological commitment. As we'll see in the next section, because of its asymmetry and restriction to propositions, ontological explanation is a far better candidate for the connection to ontological commitment than is supervenience. I suspect that a reason many have been tempted to think that supervenience is connected to ontological commitment is because supervenience can be evidence for the existence of an ontological explanation; I will insist, though, that it is ontological explanation which is primarily connected to ontological commitment.

Ontological dependence. There is no agreed-upon account of ontological dependence, and I don't want to have to resolve those debates just to say how ontological dependence relates to ontological explanation. It is generally (though perhaps not universally) agreed that if a is ontologically dependent on b, then necessarily, if a exists then b exists. There isn't much more common ground than that, though. So the easiest way to relate the two relations, by looking and seeing which features they have in common and which they do not, is out. We'll just have to settle for assuming a fuzzy pre-theoretical notion of ontological dependence: the idea of *dependence for one's being*. This is enough, though, to show that ontological explanation is not equivalent to ontological dependence nor a special case of it, and that the two do not bear any very direct connection.

From the fact that a pair of propositions bear the ontological explanation relation it does not follow that they bear an ontological dependence relation. Suppose that *what it is* for the table to be red is for it to exemplify the universal redness. It doesn't follow that the proposition *that the table is red* in any way *depends for its being* on the proposition *that the table exemplifies redness*. I don't know of any account of propositions that would connect ontological explanation and ontological dependence in this way. Suppose that propositions are the thoughts of God; in this case, they depend for their being only upon God, not upon the propositions which explain them. Suppose they are necessary beings which exist in a Platonic heaven; in this case, they depend for their being upon nothing. Suppose they are constructions from actually uttered sentences; in this case, they depend upon the utterances, not the other propositions which explain them. So ontological explanation is not a special case of or equivalent to ontological dependence.

Nor is there a corresponding dependence relation between the states of affairs or objects picked out by propositions which bear the ontological explanation relation. This is because (anticipating some of my conclusions connecting ontological explanation and ontological commitment) you don't need distinct states of affairs or objects to correspond to distinct propositions if one of those propositions ontologically explains the other. If what it is for there to exist a difference between Dick and Jane is for Dick and Jane to differ, then the difference between Dick and Jane does not *depend* on Dick and Jane differing; it just *is* Dick and Jane differing. The state of affairs *there being a difference between Dick and Jane* is not anything distinct from the state of affairs *Dick and Jane differing* that could be dependent on it. So there isn't an ontological dependence relation between states of affairs picked out by propositions which bear the ontological explanation relation to one another.

It may be easy to mistakenly think that there is an ontological dependence relation between two things—say, humans and rational animals—when in fact one reduces to the other and there aren't two things at all. That is, if you miss the fact that one proposition ontologically explains another, this may lead you to believe that the two propositions actually pick out distinct states of affairs or objects, one of which is ontologically dependent on the other. A case of ontological explanation, then, may easily be mistaken for a case of ontological dependence. This is the closest connection I can see between ontological explanation and ontological dependence; there is no more direct connection between the two.

Ontological emergence. Emergence, when it is not directly opposed to ontological explanation, simply doesn't imply anything about it at all. The central

defining idea of ontological emergence is that there are properties or substances which are not reducible to the properties or substances out of which they emerge, but which are still closely tied in some way to that emergence base—the properties or substances in the emergence base are still somehow more fundamental than the emergent properties or substances. The trick in theorizing about emergence is to say exactly what this close but nonreductive tie is. Some characterize it in terms of supervenience at a time, while others characterize it in terms of certain sorts of causal relations.[21] For my purposes, it suffices to note that the irreducibility condition on emergence (if I may assume my conclusions in the next section) puts ontological emergence directly at odds with ontological explanation. If the emergent properties are not reducible to their emergence base, then the propositions predicating the properties are not ontologically explained by propositions involving that base—because, e.g., if *what it is* for X to have a certain mental property is for it to have a certain physical property, then the mental property is reducible to the physical property. So ontological emergence rules out ontological explanation.

There are other ways of characterizing emergence which may not put it at odds with ontological explanation. Many theorists conceive emergence in epistemological rather than ontological terms, so that the irreducibility of emergent properties to their emergence base is some kind of epistemic irreducibility (such that, e.g., knowledge of the base doesn't enable us to deduce or predict the behavior of the emergent properties, or some such condition). Some sorts of epistemological emergence may entail ontological emergence, in which case they are incompatible with ontological explanation; the sorts of epistemological emergence which don't entail ontological emergence, though, just don't

[21] Timothy O'Connor and Hong Yu Wong, "Emergent Properties," *The Stanford Encyclopedia of Philosophy* (Spring 2011 Edition), ed. by Edward N. Zalta, URL: <http://plato.stanford.edu/archives/spr2011/entries/properties-emergent/>.

imply anything one way or the other about ontological explanation, since I've left it open how we come to know that one proposition ontologically explains another.

3. Ontological Commitment

3.1 Introduction

We now should be much clearer on the neglected notion of ontological explanation than when we started. Now I want to show one reason why ontological explanation is so important, to philosophers and especially to metaphysicians. Ontological explanation is important because constrains Ockham's Razor: subject to a refinement below, the ontological commitment carried by a proposition is determined by features of its ultimate ontological explanation. The only way to tell what entities the existence of which you are committed to by virtue of what you believe about the world is to seek to identify the ultimate explanations of the propositions you believe. What is more, realizing the importance of ontological explanation for ontological commitment can significantly advance our understanding of ontological commitment. I'll argue that introducing ontological explanation into the account of ontological commitment enables us to find more defensible versions of the two most prominent contemporary views—and, most interesting, reveals that the best versions of the two views are not competitors at all.

Here is the needed refinement: if a proposition doesn't have an ontological explanation—if it is the ultimate explanation in the series—then its ontological commitment is determined by its own features, not the features of its ultimate ontological explanation (since it doesn't have one). I'll introduce a new term to help make the thesis more precise. A proposition *p* is the *base proposition* of another proposition *q* if and only

if either p is the ultimate ontological explanation for q or q has no ontological explanation and $p=q$. My thesis is that a proposition's ontological commitment is determined by features of its base proposition.

First, in section 3.2, I'll discuss the received view of ontological commitment: Quine's quantifier view. As Frank Jackson noticed almost thirty years ago, the major difficulties faced by the quantifier view have to do with the role it grants to paraphrase. I'll argue that these difficulties can only be met by making use of ontological explanation rather than paraphrase in the analysis, and making use of it in a way that substantiates my thesis. The resultant modified view also escapes all of the other major extant objections to the quantifier view.

Second, in section 3.3, I'll discuss the major competitor to the quantifier view of ontological commitment, the more recent truthmaker view. I'll argue that the proponents of the truthmaker view are fundamentally wrong to see it as a competitor to the quantifier view (at least to the modified version of the quantifier view I defend); they should instead see it as an *elaboration* on the quantifier view. The truthmaker view actually entails the quantifier view, though the truthmaker view goes beyond the quantifier view: the truthmaker view depends on some additional substantial claims about what truths must have truthmakers, claims the quantifier view does not depend on. If these additional claims are right, though, and the truthmaker view is correct, then the truthmaker view and the quantifier view give the same results as to a proposition's ontological commitment. The truthmaker view, then, also substantiates my thesis. I'll argue that the view also escapes all the major extant objections to it. The best versions of the two major views of

ontological commitment, then, are compatible, and both ascribe to ontological explanation the role I have claimed for it.

After meeting an objection and discussing the relationship between my take on ontological commitment and some important alternatives (in 3.4), I will conclude (in 3.5) by stepping back from the quantifier and truthmaker accounts of ontological commitment to argue that, even if neither of these accounts is the correct one, the arguments I've advanced give us good reason to believe that, whatever theory is correct, ontological explanation will still play the role I have claimed for it: a proposition's ontological commitment is determined by features of its base proposition.

A proposition's ontological commitment is the demand it imposes on the world, what its truth requires in terms of the existence of entities; or, in other words, a proposition's ontological commitment is what it (explicitly or implicitly) says there is. (Notice that ontological commitments are themselves propositions, not any other sort of entity, because false propositions can still have ontological commitments even though the entities to which they are committed do not exist.[22] It is therefore somewhat more precise to say that a proposition *p* is committed to *the existence of* Fs, rather than simply saying that it is committed to Fs, because that highlights the fact that ontological commitments are propositions and ontological commitment is a relation between propositions rather than one between a proposition and an object.) There are at least two ways all of this could be taken, though, two senses of the term "ontological commitment." One corresponds to reduction: if an entity or a type of entity, *x*, is reducible to another, *y*, then I am not committed to *x*, even though the proposition *that x exists* is strictly true. There is

[22] For support on this point, see Michaelis Michael, "Implicit Ontological Commitment," *Philosophical Studies* (2008) 141.

a sense in which *y* is all that really exists—*x* isn't anything over and above *y*, and so I am committed only to accepting *y*. The other sense of ontological commitment corresponds to elimination: I am not committed to an entity or type of entity, *z*, just in case the proposition *that z exists* is just *false* and *z* is therefore completely eliminated from my inventory of the world. In this case, the fact that *z* can be reduced to another entity is irrelevant and I am committed to *z* so long as I continue to admit that *z* exists.

It might be tempting to think that the sense of ontological commitment which corresponds with elimination is the primary one and the sense corresponding with reduction a strange deviation; it is a bit weird, after all, to claim that it is true that *x* exists and yet deny being committed to *x*. Even so, it is actually the *reductive* sense of ontological commitment which is the primary one in the philosophical discussion, both of ontological commitment itself and ontology in general. The issue of ontological commitment generally arises in the context of a desire to respect Ockham's Razor, and respecting Ockham's Razor often does not require elimination but reduction. A theorist driven by Ockham's Razor does not generally go about *denying* all sorts of ordinary beliefs about the world, but instead tries to account for the truth of as many of those beliefs as possible with as few entities as possible—and does so by *reducing* the many sorts of entities believed in to a smaller number and kind of entities. Ockham's Razor does sometimes license elimination rather than reduction, but reduction seems to be the primary interest of philosophers (as opposed to scientists or historians) who appeal to Ockham's Razor. Even in the seminal contemporary discussion of ontological commitment, Quine's "On What Is," context strongly suggests that it is the reductive sense of ontological commitment which is relevant. The problem which starts his

discussion is not Ockham's Razor but Plato's beard, the apparent but suspect ontological commitments of names like "Pegasus" and definite descriptions like "the present king of France." Ockham's Razor is mentioned, though, and Quine's concern is pretty obviously reductive rather than eliminative, because he (like the theorist driven by Ockham's Razor) is not interested in denying the truth of claims involving Pegasus and the present king of France but in removing the appearance of ontological commitment.[23]

In short, philosophers who are interested in ontological commitment are usually interested in reduction, not elimination, and so it is the reductive sense of ontological commitment which is the primary one in philosophical contexts. When I speak of ontological commitment, I am speaking almost exclusively of the sort which corresponds to reduction. In doing so, I believe I am following the usual philosophical practice.[24] I will mark explicitly when I speak of the sort of ontological commitment which corresponds to elimination.

3.2 A Modified Quinean Quantifier View

The most important approach to ontological commitment is Quine's. I'll defend a series of modifications to Quine's view and argue that the resulting view substantiates my thesis, that a proposition's ontological commitments are determined by its base proposition. I'll then defend this modified Quinean account against a number of objections which have been urged against the Quinean approach.

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[23] W.V.O. Quine, "On What There Is," in *From a Logical Point of View* (Cambridge, MA: Harvard University Press, 1953), 1-19.

[24] There may be some parties to the discussion, however, who either don't follow this practice or who don't distinguish clearly enough between the two sorts of ontological commitment. Jonathan Schaffer may be one example. I'll reply to him in section 3.3.

Quine's approach is to see a proposition's ontological commitments as a function of its quantifiers: "this is, essentially, the only way we can involve ourselves in ontological commitments: by our use of bound variables."[25] More precisely,

> The variables of quantification, 'something', 'nothing', 'everything', range over our whole ontology, whatever it may be; and we are convicted of a particular ontological presupposition if, and only if, the alleged presuppositum has to be reckoned among the entities over which our variables range in order to render one of our affirmations true.[26]

The usual way of formalizing this is to interpret it modally:

> *Quine's quantifier account* (QQA):
>
> A proposition *p* carries commitment to the existence of Fs iff necessarily, if *p* is true, then Fs are among the entities over which the variables of *p* range.[27]

This initial formalization isn't right, though, because a merely modal relation between the truth of a proposition and its domain of quantification isn't enough for ontological commitment. As it stands, this criterion rules that all propositions carry a commitment to all necessary beings (because necessary beings will always be in the domain of quantification for all propositions). Surely, though, a claim that there exists a table doesn't carry a commitment to the existence of God or to the existence of numbers (assuming both exist necessarily). The theory needs modification.[28]

This isn't an indictment of Quine himself, though, because Quine doesn't characterize the relation of ontological commitment in purely modal terms: he says that

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[25] Quine, "On What There Is," 12.

[26] Ibid., 13.

[27] Alternatively, but equivalently, Fs are in the domain of quantification of the variables of *p*, or Fs are counted among the values of the variables of *p*. Analogous criteria apply to the ontological commitments of theories or sentences. I'll stick with talking about propositions. I owe this exact formulation to Berit Brogaard, "Inscrutability and Ontological Commitment," *Philosophical Studies* (2008) 141: 27.

[28] Ibid., 27-29.

an affirmation is ontologically committed "if, and only if, the alleged presuppositum has to be reckoned among the entities over which our variables range in order to *render* one of our affirmations true (emphasis mine)."[29] A proposition isn't committed to the existence of *all* the entities the existence of which its truth necessitates; it is committed only to the existence of those the existence of which its truth necessitates *and* which *render* it true. This holds promise for solving the modal problem. The trick is to get clear exactly on what "render" means here. It is tempting to read it as "make true," but that would collapse Quine's view of ontological commitment into the truthmaker view, and Quine's nominalism militates against that.[30] We want something close to the truthmaker relation, though; among the entities that are necessarily in the domain of quantification when a proposition is true, we want those which actually make the proposition true when they are picked out by the variable.

One way to articulate this without committing to the concept of a truthmaker is to speak instead of those entities whose names can be substituted for the bound variable in the sentence expressing the proposition and still make the sentence come out true, or in other words of entities whose names are such that if the sentence's quantifier is *instantiated* (either universal or existential instantiation) using those names the sentence comes out true:

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[29] Quine, "On What There Is," 13.

[30] That is because truthmakers necessitate the truth of the propositions which they make true. If the ontological commitment of the proposition *that the table is red* is to what it needs to make it true, then it would be committed to something the existence of which entails the truth of a contingent predication — something like a universal, a trope, or a state of affairs. Quine needs to be able to say that at least the proposition is committed to tables, but if it has no truthmaker, then on the truthmaker view it isn't even committed to that.

First modified quantifier account (QA1):

A proposition *p* carries commitment to the existence of Fs iff necessarily, if *p* is true, then (1) Fs are among the entities over which the variables of *p* range, and (2) the names of some Fs can be substituted for the bound variables of *p*[31] *salva veritate*.[32]

This modification rules out commitment to all the necessary entities which don't really have anything to do with the proposition in question.[33] However, though this basic approach seems promising, it isn't quite adequate. For one thing, it employs substitutional quantification, and it would be better to avoid the controversy surrounding that device. For another, this modification doesn't completely solve the original modal problem. A subset of necessary truths—quantified tautologies like the proposition *that something is such that if it is a man then it is a man*—carry commitment to all necessary beings, since such beings necessarily exist and their names make the proposition come out true when substituted for the variables. So another reading of Quine's use of "render" is needed. Here is a more successful attempt: we can mimic the name-substitution device, without incurring its problems, by talking about the subdomains which satisfy the proposition.[34] A domain D satisfies a proposition *p* just in case *p* is true with the

[31] Alternatively: *p* can be instantiated using those names and come out true.

[32] Here are some examples, in case this procedure is unclear. Take ∀x∃y(x loves y). One instantiation using the name "Dan" is: ∀x(x loves Dan). Another is: ∃y(Dan loves y). Yet another is Dan loves Dan. This account says that if any one of these turns out true, and the first condition is met (Dan's existence is necessitated by the truth of the proposition), then the proposition carries commitment to the existence of Dan. (Of course, this proposition does not necessitate Dan's existence and so does not carry commitment to his existence.)

[33] This falls short of the truthmaker view, though, because it doesn't say that the mere existence of Fs necessitates the truth of p.

[34] Thanks to Alexander Pruss for pointing this out to me.

quantifiers restricted to D.[35] The domain of entities which are necessitated by a proposition can be divided into subdomains or subsets. Each of these subdomains can be evaluated as to whether they satisfy the proposition or not. The proposition is committed only to those entities or kinds of entities which are in every subdomain which satisfies it.

Second modified quantifier account (QA2):

A proposition *p* carries commitment to the existence of Fs iff necessarily, if *p* is true, then (a) Fs are among the entities over which the variables of *p* range, and (b) there is an F in every subdomain[36] which satisfies *p*.

This solves the problems which plagued the name-substitution account. Universally quantified tautologies don't carry any ontological commitment because they are satisfied by the empty domain. Of those entities whose existence is necessitated by a proposition, only those which actually are relevant for the truth of the proposition are picked out by this criterion. This is therefore the best formalization of Quine's own version of the quantifier account.

The major problems with the quantifier view have to do with the role it must assign to paraphrase, and this is where ontological explanation comes into the picture.[37] As it stands, (QA2) is neither necessary nor sufficient for ontological commitment. It is not sufficient for ontological commitment, because it is surely possible to paraphrase or explain away some ontological commitments. A goodly portion of twentieth-century analytic philosophy is predicated on this possibility, in fact. To use some of Jackson's

[35] Since, unlike Tarski, I am not trying to define truth, I am free to use the notion of truth in defining satisfaction and don't have to go to the trouble of defining satisfaction inductively.

[36] Of the domain of entities necessitated by *p*. I'll omit this characterization henceforth.

[37] The following problems are related to those pointed out by Frank Jackson, though my discussion is organized differently than his. Frank Jackson, "Ontological Commitment and Paraphrase," *Philosophy* (1980) 55: 303-315.

examples, “There are many differences between baseball and cricket” and “there is a good chance that she will come” only commit one to the existence of differences and chances if the sentences cannot be appropriately paraphrased. If they can, if (for example) “there are many differences between baseball and cricket” can be paraphrased as “Baseball and cricket are different in many respects,” then the original sentence doesn’t carry the ontological commitment its quantifiers would seem to demand.

Neither is (QA2) necessary for ontological commitment. Surely there are at least some propositions entirely without quantifiers which still carry some ontological commitment. Consider sentences with definite descriptions: “the present king of France is bald.” This sentence has no quantifiers, but it still surely carries an ontological commitment (to the existence of a present king of France). Quine would insist that definite descriptions don’t, by themselves, carry ontological commitment, because “the present kind of France doesn’t exist” doesn’t carry an ontological commitment. The crucial difference between the two sentences employing the same definite description, “the present king of France,” is their paraphrase. Quine would paraphrase (following Russell) “the present king of France is bald” as “there exists something such that it is presently king of France and bald, and everything which is presently king of France is identical to it,” while he would paraphrase “the present king of France does not exist” as “there does not exist something such that it is presently king of France.” “The present king of France is bald,” then, carries an ontological commitment even though it does not contain a quantifier, and it carries that commitment by virtue of the existence of a paraphrase.

So paraphrase (or something in the vicinity) has the power to give ontological commitment and the power to take it away. Quineans have long recognized this, of course, and made it a part of their practice. However, once we take a closer look and try to modify (QA2) to take this into account, it becomes clear that paraphrase isn't really suited to play the role traditionally assigned to it. For one thing, paraphrase doesn't have a direction: if a sentence *s* is a paraphrase of a sentence *t*, then *t* is also a paraphrase of *s*. So there is no obvious principled way to tell when a paraphrase adds ontological commitment and when it takes it away. The mere availability of an appropriate paraphrase doesn't say anything about a sentence's ontological commitments.[38] (The same fact rules out using supervenience in this role.[39]) For another thing, since paraphrase is a relation between sentences, it has to respect indexicals—a sentence involving an indexical cannot be paraphrased into a sentence without one, because the truth conditions for the sentences will be different. But surely indexicals aren't relevant for ontological commitment. I am not committed to anything different by virtue of my claim "it is red" (where "it" refers to the table) than someone else is by virtue of their claim "the table is red."

Replacing paraphrase with ontological explanation solves both of these problems. Ontological explanation is asymmetric, and so it has a direction. It is a relation between propositions, not sentences, and so need not respect indexicals. It is therefore the

[38] See ibid., 305-307, for arguments closely related to this one.

[39] There are other reasons not to use supervenience here. Supervenience relations are generally much easier to come by than ontological explanations; far too easy to always legitimately enable us to avoid commitment to the supervenient properties.

quantifiers in a proposition's ultimate explanation (or, more precisely, in its base proposition) which matter for determining its ontological commitment:[40]

Third modified quantifier account (QA3):

A proposition *p* carries commitment to the existence of Fs iff necessarily, if *p* is true, then (1) Fs are among the entities over which the variables of *p*'s *base proposition* range, and (2) there is an F in every subdomain which satisfies *p*.[41]

So the best version of the quantifier account substantiates my thesis: a proposition's ontological commitment is determined by features of its ultimate ontological explanation.

Though this last modification is the most important for my purposes, since it brings ontological explanation into the picture, one more modification is required before we have a satisfactory account. There are at least two problems, but the solution to each is the same. First, the account as it stands doesn't satisfactorily handle the ontological commitments of impossible propositions. Assume that humans are rational animals; the proposition *that there is a human and there are no rational animals* surely commits one to the existence of humans (and rational animals) but not to the existence of planets or oceans. On the quantifier view as it stands, however, all impossible propositions carry commitment to everything. Second, as it stands the criterion doesn't handle negative ontological commitments. A proposition can carry negative commitments, commitments to the nonexistence of some entity. The literature to date has, as far as I can determine, entirely ignored these sorts of ontological commitments. The way to solve each problem is to make the *components* of the base proposition the primary bearers of ontological

[40] I am assuming here, and throughout my discussion, that propositions themselves, not just the sentences that express them, can be rightly said to be quantified.

[41] A sentence has the commitment of the proposition it expresses.

commitment, the parts of the base proposition which are not truth-functionally complex, and then build up the ontological commitments of the whole proposition with the same truth-functions that are operative in the proposition itself.

Final Modified Quantifier Account (MQA):

A proposition *p* carries an ontological commitment only if it carries the commitment according to one of the following conditions:

If *p*'s base proposition is not truth-functionally complex, then *p* carries a commitment to Fs if necessarily, if the base proposition is true, then (1) Fs are among the entities over which the variables of the base proposition range, and (2) there is an F in every subdomain which satisfies the base proposition.

If *p*'s base proposition is a negation, then *p* carries a commitment to the nonexistence of Fs if the negated proposition carries a commitment to Fs.

If *p*'s base proposition is a conjunction, then *p* carries a commitment to Fs (or the nonexistence of Fs) if one of the base proposition's conjuncts carries a commitment to Fs (or the nonexistence of Fs).[42]

If *p*'s base proposition is a disjunction, then *p* carries a commitment to Fs or Gs if one disjunct carries a commitment to Fs and the other carries a commitment to Gs.

The key move here is to restrict the previous quantifier account to base propositions which are not truth-functionally complex and then use truth-functions to build the commitments of base propositions which are truth-functionally complex. The above conditions, taken together, can handle any amount of complexity in a base proposition.

[42] I'll omit this qualification from the next condition.

This modification handles the two problems. First, impossible propositions like the proposition *that there is a human and there are no rational animals* do not carry ontological commitment to planets or oceans. This only works, though, for propositions which are impossible because of the truth-functions in their base propositions. Impossible propositions which are impossible because they have impossible propositions which are not truth-functional as conjuncts in their base propositions still carry ontological commitment to everything. I think this is an acceptable result, though; impossible atomic propositions have more wrong with them than propositions which are impossible due to truth-functions, and the demands they place on the world are of necessity very curious and problematic. Second, the criterion very nicely handles the neglected issue of negative ontological commitments.

This modified view escapes the major extant objections to the quantifier account.[43] First, perhaps the most serious objection to the quantifier view is the trouble it has had with necessary beings.[44] I've already shown how the quantifier view can escape this difficulty. Second, advocates of the truthmaker view (especially Armstrong) have objected to an apparently nominalist bias in Quine's quantifier account. By giving existential quantifiers an exclusive role in determining ontological commitment, thinks Armstrong, the quantifier account neglects any possible ontological implications of predicates. Schaffer's reply is to point out that, so long as higher-order quantification is possible, it is possible to ontologically commit to the existence of predicative entities by virtue of propositions involving higher-order quantification. I am sure that Armstrong

[43] The first is from Brogaard, while the second, third, and fourth are all summarized by Jonathan Schaffer, "Truthmaker Commitments," *Philosophical Studies* (2008) 141: 7-9.

[44] Brogaard, 27.

would find this unsatisfactory, because it means that propositions like *that there is a table which is red*, while it commits one to the existence of a table, doesn't all by itself commit one to the existence of something picked out by the predicate "red"—there must be an extra, higher-order claim like *that there is redness* before there is a commitment to a predicate. The realist about universals would be far more inclined, I believe, to insist that the first-order predication itself commits one to the existence of the predicative entity. So a realist like Armstrong would most likely think that Schaffer's reply doesn't completely remove the nominalist bias from the quantifier account. My modified quantifier view gives the resources for a different sort of reply; it removes any nominalist bias that may have been implicit in Quine's original view. On my view, the ontological commitment of a proposition is not a function of that proposition's quantifiers, but a function of the quantifiers of its base proposition. The debate between nominalists and realists, then, is a debate over how to ontologically explain ordinary predicative propositions like *that the table is red*. The realist will insist that the right explanation is something like the proposition *that there exists a table, and there exists a universal redness, and there exists a tie between them* or something along those lines. If this is the actual explanation, then the proposition *that the table is red* does carry commitment to the existence of a universal; if the nominalist is right in rejecting this explanation, then it does not carry that commitment. So my modified quantifier criterion of ontological commitment is itself neutral between the realist and the nominalist. Their debate comes down to a substantial disagreement over what the ultimate ontological explanation is (or what the base proposition is) of certain propositions.

The critics of the quantifier view have gone more wrong with the next two objections; both objections assume that the opposing truthmaker view can do things it can't. (Some of my arguments here will anticipate my discussion in the next subsection.) Third, advocates of the truthmaker account feel that the quantifier account is too tied up with language, and that ontological questions shouldn't be so tied up with linguistic concerns. Heil rails against deciding ontological commitment by analysis, and Cameron similarly dismisses paraphrase.[45] This objection is misguided. My modified quantifier view, by employing ontological explanation rather than paraphrase, does take less of a detour through language than the classical Quinean position, but it still demands that we respect the propositions—and this is only just, because the question of ontological commitment is a question of what entities the existence of which our beliefs require, not the simpler question of what exists. More importantly, the truthmaker theorists have been too quick even by their own lights to abandon analysis and paraphrase—or rather, ontological explanation. As I'll show in the next section, identifying the truthmaker commitments of a proposition will involve identifying that proposition's base proposition. So even the truthmaker theorist must be in the business of identifying explanations in order to identify ontological commitments.

Fourth, some advocates of the truthmaker view, over and against the quantifier view, see in the truthmaker view a way out of some of the very tricky problems associated with the constitution of material objects:

> What's wrong, in my opinion, is the Quinean idea that we have to resist the literal truth of 'there are tables' if we want to avoid ontological commitment to tables.

[45] John Heil, *From an Ontological Point of View* (Oxford: Oxford University Press, 2003), 9, and Ross P. Cameron, "Truthmakers and Ontological Commitment: Or How to Deal with Complex Objects and Mathematical Ontology without Getting into Trouble," *Philosophical Studies* (2008) 140: 5. Both are cited by Schaffer, "Truthmaker Commitments," 8.

> This idea blocks what, intuitively, is a very attractive option: that the nihilist is right about the ontology but that the universalist is right about what sentences are true. Once we allow that the truthmaker for <x exists> can be something other than x this becomes an option on the table: 'there is a sum of A, B, and C' might be true—but perhaps we don't need a complex object to *make* it true: perhaps A, B, and C themselves are enough to make this sentence true.[46]

Now, in one sense I agree with Heil here; I don't think that you have to resist the truth of the proposition *that there are tables* to avoid commitment to tables. My modified quantifier account reflects this. However, the only way to avoid commitment to tables while insisting that there are tables is to reduce tables to something else by identifying an ontological explanation of *that there are tables*. If this is all Heil wanted, my modification of the quantifier account involving ontological explanation would suffice to meet this objection. However, what makes the problems associated with material constitution so puzzling is precisely that they don't merely support a reduction of complex objects to their constituent parts—they support a straightforward elimination of the complex objects. Complex objects (at least, on our ordinary concepts of complex objects) generally can survive the replacement of some constituent parts, and so are not reducible to those parts: this is part of what allows both sorites paradoxes and the paradoxical stories collectively lumped by Rea under the heading of the Problem of Material Constitution to get off the ground.[47] If Heil wants to be able to avoid ontological commitment without there existing a reductive ontological explanation, I cannot follow him. Even on the truthmaker account, as I'll show, the only way to avoid ontological commitment to X while affirming that X exists is to reduce X by identifying an

[46] Heil, *Point of View*, 5, cited by Schaffer, "Truthmaker Commitments," 9.

[47] Trenton Merricks' overdetermination argument against complex objects other than minds might, by itself, seem to urge for reduction rather than elimination, but I'm sure Merricks realizes that, on our ordinary conceptions of material objects, those objects can survive some part-replacement, which makes reduction of the complex objects to their constituents impossible. See Merricks, *Objects and Persons* (Oxford: Oxford University Press, 2001), chapter 3.

ontological explanation of X. Heil is trying to have his cake and eat it too: he wants to affirm the existence of something while neither incurring an ontological commitment to its existence nor reducing it by identifying its ontological explanation. The truthmaker account won't allow avoidance of ontological commitment without reduction, as I'll show, and if there is reduction, then the quantifier account has the same resources as the truthmaker account for avoiding commitment. So the difficulties presented by the puzzles of material constitution can't be solved simply by finding a different view of ontological commitment, but will have to be faced head-on.

Fifth, the quantifier account may run into problems with ontological commitments incurred by the use of names.[48] The proposition

(BO) *That Barack Obama is the president of the United States*

carries a commitment to Barack Obama, but it does not involve any existential quantifier. Is the quantifier view committed to Quine's unpopular claim that names are analyzable as definite descriptions which are in turn (with Russell) analyzable in terms of existentially quantified statements? My reply has two parts. In the first place, my quantifier view *is* committed to the claim that propositions like (BO) which carry ontological commitments by virtue of the use of names have an ontological explanation with an existential quantifier, and that this is the reason they carry the ontological commitment they do. This is a plausible view. After all, some propositions that employ names do not carry ontological commitments; consider the proposition

(SH) *that Sherlock Holmes lives at 221 Baker Street*.

[48] This objection is due to Alexander Pruss in conversation.

(SH) is true and employs a name but carries no ontological commitment to the existence of Sherlock Holmes. What is the difference between (BO) and (SH)? It is plausible that, in context, the two uses of names express importantly different sorts of propositions, one which has a base proposition that employs an existential quantifier and one which does not. In the second place, however, the quantifier view is *not* committed to any particular theory of how names work and how they express these importantly different sorts of propositions. In particular, it is not committed to the (Quinean or Russellian) claim that names are reducible to definite descriptions and that definite descriptions are reducible to expressions involving existential quantification. Here is an example theory that shows this: it may be that (BO) is ontologically explained by the proposition *that there exists something which is identical to Barack Obama and which is the President of the United States*, while propositions invoking the names of fictional characters like (SH) are not explained by propositions which claim that there exists something which is identical to the character. This view is friendly to the quantifier view of ontological commitment, but it doesn't reduce names to quantified descriptions. In short, a range of views as to the proper theory of names is open to the proponent of the quantifier view of ontological commitment, and it is not committed to a Quinean or Russellian account of names or of definite descriptions. I conclude that the phenomenon of ontologically committing names does not at this time pose a problem for the quantifier view.

The quantifier view of ontological commitment, suitably modified to take into account the role of ontological explanation, simultaneously avoids the major extant objections to the view and substantiates my thesis: a proposition's ontological commitment is determined by features of its base proposition.

3.3 A Modified Truthmaker View

Discontent with Quine's quantifier account and the recent surge of interest in theorizing about truthmakers has given rise to an attempt to use the notion of a truthmaker to give an alternative account of ontological commitment. The basic idea is that we shouldn't look to features of the propositions we believe to find out to what we are committed by virtue of believing them—specifically, the quantifiers present in those propositions—but instead we should look to the world, to what must exist to make those propositions true. A proposition *p* is ontologically committed to the existence of whatever must exist to make *p* true. I'll argue, in the rest of this section, that the advocates of the truthmaker account of ontological commitment are wrong in thinking it a competitor to the best version of the quantifier account: the truthmaker account actually entails the quantifier account. It should be thought of instead as an elaboration on the quantifier account. And it, too, substantiates my thesis: that the ontological commitment of a proposition is determined by features of its base proposition.

Let me start by clarifying my use of the term "truthmaker." A truthmaker for a proposition *p* is an *entity* which makes that proposition true. It follows from this that the mere existence of the entity is metaphysically sufficient for the truth of the proposition; if the existence of the entity were not sufficient for the truth of *p*, then it isn't merely the entity which makes it true but something else (perhaps the entity along with some other entity, or a characteristic of the entity). In using the term truthmaker in this way, I conflict with Josh Parsons, who thinks that entities (e.g. tables) can be the truthmakers for truths involving contingent properties of those entities (e.g., the tables' being red).[49] In

[49] Josh Parsons, "There is No 'Truthmaker' Argument Against Nominalism," *Australasian Journal of Philosophy* (1999) 77: 325 — 334.

the common view, which I accept, the tables do not make true the proposition that the tables are red, because the tables could exist without their being red—which means it is something in addition to the tables which makes it true that they are red. Now, this isn't really a substantive critique of Parsons. His interest is to see whether there is any real reason having to do with truthmakers to favor nominalism over realism, and I don't at this point contest his argument.[50] I would just recast his thesis as a claim that simple predications don't need truthmakers in my sense (that is, *entities* which make them true), but are made true not by things but ways things are.

So if X makes *p* true—if X is a truthmaker for *p*—then X's existence is metaphysically sufficient for *p*.[51] This, of course, is not sufficient for being a truthmaker; truthmaking is not reducible to a merely modal relation. Otherwise, all entities would be truthmakers for necessary truths, but surely the table in front of me doesn't make it true *that 2+2=4*. Various candidates for the extra property that characterizes truthmaking have been proposed, but I don't want to commit to any of them; I'll rest content by simply pointing out that X's being sufficient for *p* is not enough for X to be a truthmaker of *p*.[52] Though "truthmaker" is to a certain extent a term of philosophical art, the concept it expresses—a thing which makes a proposition true—carries enough intuitive (pre-

[50] I'll discuss the truthmaker argument against nominalism in chapter three and truthmaker theses in chapter two.

[51] Note Merricks' qualification: conditional necessity.

[52] Trenton Merricks thinks that the extra property that characterizes truthmaking is a kind of intentionality: if X makes *p* true, then *p* is in some way "about" X. This seems initially plausible, but it needs some work before it can be accepted. For instance, the proposition *that if Socrates is human then 2+2=4* is in some sense about Socrates and the existence of Socrates is metaphysically sufficient for its truth, but Socrates is not a truthmaker of it. See Merricks, *Truth and Ontology* (Oxford: Oxford University Press, 2007), chapter 2.

stipulative) content that I don't need an analysis of it to use it. A *truthmaker thesis* is a claim that a certain class of truths necessarily have truthmakers.[53]

A first pass at a formalization of the truthmaker view of ontological commitment might look like this:

Truthmaker Account (TA):

A proposition *p* carries commitment to the existence of Fs iff necessarily, if *p* is true, Fs exist.

As it stands, this view runs into problems with necessary entities very similar to the problems afflicting the initial formulation of the quantifier account. On *(TA)*, every proposition carries a commitment to the existence of all necessary beings, which is surely wrong. Out of the class of the entities whose existence is necessitated by the truth of the proposition, we want the proposition to be committed only to the existence of those which actually make it true. Fortunately, there is an easy fix:

First modified truthmaker account (TA1):

A proposition *p* carries commitment to the existence of Fs iff necessarily, if *p* is true, Fs exists and make *p* true.[54]

This is the basic truthmaker account of ontological commitment. A proposition carries a commitment to what it needs to be its truthmaker. I should reiterate that, on the truthmaker account as well as the quantifier account, the ontological commitment of a proposition is given by another proposition. I'll call the statement of what a proposition

[53] This is purely stipulative. We can call a claim that a certain class of truths contingently have truthmakers a *watered-down truthmaker thesis*. I don't know of many claims like this.

[54] Need a modification for constituent parts of the truthmaker, if it is a complex state of affairs.

needs to make it true the *statement of the minimum truthmaker*, since it gives the minimum of entities sufficient to make the proposition true.[55]

As the quantifier account did, the truthmaker account still needs another modification. There are four problems which all motivate the same modification. First, on this criterion, all impossible propositions carry commitment to everything. Second, this criterion has trouble with conjunctive commitments. The proposition *that there is a dog and there is a cat*, on this criterion, doesn't carry commitment either to a dog or to a cat, since neither makes the conjunctive proposition true on its own. But surely that is mistaken. Third, the criterion as it stands does not handle negative ontological commitments, ontological commitments to the nonexistence of something, which as I mentioned before have been completely neglected in the literature. Fourth, the criterion as it stands is committed to truthmaker maximalism. The following Additive Principle seems obviously true: if *p* carries a commitment to *x*, then for any proposition *q*, *p and q* also carries commitment to *x*. It follows from this and (TA1), though, that all propositions have truthmakers. For if *q* doesn't have a truthmaker, then neither does *p and q*, but then *p and q* would have no ontological commitment, not even the one that *p* itself has, which would violate the Additive Principle. For example, the proposition *that there is a dog and there are no unicorns* surely carries an ontological commitment (to a dog), but that would mean that it has a truthmaker, which would mean that negative truths like *that there are no unicorns* have truthmakers. Truthmaker maximalism is implausible, though, precisely because of negative truths like *that there are no unicorns*.

[55] I mean something different by this than what Armstrong and others have meant by the term "minimal truthmaker," which will become important when we consider objections to the truthmaker account. See Adolf Rami, "Introduction: Truth and Truth-making," in E. J. Lowe and A. Rami, eds., *Truth and Truth-Making* (McGill-Queen's University Press, 2009), 24.

All four of these problems are solved the same way, by applying the truthmaker test for ontological commitment to the parts of a proposition which are not truth-functionally complex and then building up the commitments of the whole proposition truth-functionally. Actually, we must apply the criterion to the non-truth-functionally-complex components of the proposition's *base* proposition, because the above problems can apply to propositions which themselves are not truth-functionally complex but which have base propositions which are truth-functionally complex. Consider, for example, the proposition *that Dan is alone in the room*. There is no conjunction in this proposition. However, this proposition picks out a complex state of affairs, a mix of the positive (Dan's presence in the room) and the negative (the absence of anyone else in the room). In other words, this proposition is ontologically explained by a complex proposition but is not itself complex—but it runs up against the problem of finding truthmakers for negative propositions. So the modification must be this:

Final Modified Truthmaker Account (MTA):

A proposition *p* carries an ontological commitment only if it carries the commitment according to one of the following conditions:

If *p*'s base proposition is not truth-functionally complex, then *p* carries a commitment to Fs if, necessarily, if the base proposition is true, then Fs exist and make it true.

If *p*'s base proposition is a negation, then *p* carries a commitment to the nonexistence of Fs if the negated proposition carries a commitment to Fs.

If *p*'s base proposition is a conjunction, then *p* carries a commitment to Fs (or the nonexistence of Fs) if one of the base proposition's conjuncts carries a commitment to Fs (or the nonexistence of Fs).[56]

If *p*'s base proposition is a disjunction, then *p* carries a commitment to Fs or Gs if one disjunct carries a commitment to Fs and the other carries a commitment to Gs.

This solves all four problems. Impossible propositions which are impossible because of truth-functions don't carry commitments to everything, though propositions which are impossible because some non-truth-functionally-complex component of their base proposition is impossible still carry a commitment to everything. Conjunctive commitments and negative commitments are accounted for. And the criterion avoids commitment to truthmaker maximalism. This is the best version of the truthmaker account of ontological commitment.

My burden is to show that this account entails the modified quantifier account I defended in the last subsection. Both views make the ontological commitment of a proposition *p* a function of the components in *p*'s base proposition which are not truth-functionally complex. The differences are these: the quantifier view picks out the entities which must come within the range of the (non-truth-functionally-complex) proposition's quantifiers (variables) and which are in all the subdomains which satisfy it; the truthmaker view picks out the entities which must exist and make the proposition true (given by the statement of the minimum truthmaker). In order to show that these different views will always give the same result, I need to show two things. First, I'll

[56] I'll omit this qualification from the next condition.

show that the statement of the minimum truthmaker for the non-truth-functionally-complex component of *p*'s base proposition *just is* that very component proposition—*if* the component proposition needs a truthmaker to be true. Second, I'll show that this component proposition must be existentially quantified and state the existence of a thing (or type of thing) which is in all the subdomains which satisfy it. Finally, I'll show that the component propositions that confer ontological commitment according to the quantifier view must have truthmakers if the truthmaker view is to be true at all. It turns out, then, that in spite of their different criteria, the two views of ontological commitment give the same results, if the truthmaker view is true at all.

The first step toward realizing all this is to notice that there is a deep connection between the base proposition for any proposition *q* and the statement of the minimum truthmaker for *q*. In fact, if *q* must have something which makes it true in order to be true, then the statement of the minimum truthmaker for *q* is also *q*'s base proposition. For starters, the SMT for *q* has many of the same relationships to *q* as *q*'s base proposition does. The SMT, if it exists, is both necessary for *q* (that is implied by the fact that it states the *minimum* necessary to make *q* true) and sufficient for *q* (since it states the existence of a truthmaker for *q*, and the existence of a truthmaker for a proposition is metaphysically sufficient for that proposition to be true)—and necessity and sufficiency are marks of a base proposition. The SMT is a proposition, as is the base proposition. Also, the SMT for *q* is made true by all and only the same things as *q* is, which means that the SMT for *q* is its own SMT—there is no further proposition that gives the minimum necessary truthmakers for it. This is exactly the situation of *q*'s base proposition. It is the stopping point. Finally, in addition to sharing all these

characteristics, there are two reasons to suppose that the SMT and the base proposition are the same. First, consider the nature of the SMT for *q*. It has the same truthmaker as *q* and even the same truthmaker commitments as *q*. If Merricks is to be believed, they are "about" the very same parcel of reality, and so there is a sense in which they pick out the same parcel of the world, despite being different propositions. What differentiates them? The statement of the minimum truthmaker is somehow *closer* to the reality of the situation, and there is no way to get any closer than it does (since to state its minimum truthmaker would be to repeat it). This is exactly the situation of a base proposition. There is a sense in which a proposition's base proposition picks out the same parcel of reality as it does, but the explanation is somehow closer to the reality of the situation that it is. This provides good reason to suspect that SMT for a proposition just is that proposition's ultimate explanation. Second, consider some examples. If the minimum truthmaker of the proposition *that a table is red* is a table, a universal redness, and a particular instantial tie, isn't it true that *what it is* for a table to be red is for a table, the universal, and a tie to exist? If the minimum truthmaker for the proposition *that a human exists* is an animal, the property of rationality, and an instantial tie between the two, isn't it true that *what it is* for a human to exist is for an animal, the property of rationality, and an instantial tie between the two to exist? I conclude, then, that there is good reason to suppose that the statement of a proposition's minimum truthmaker is always that proposition's base proposition.

I have just shown that *if* a proposition needs a truthmaker to be true, then that proposition's SMT is also its base proposition. So consider again the non-truth-functionally-complex component proposition in *p*'s base proposition (the locus of

ontological commitment on both views): if that component proposition needs a truthmaker to be true, then its SMT is also its base proposition. But the component proposition is already a component in a base proposition, and if it had a further ontological explanation, there would be a further ontological explanation for the proposition of which it is a part. But that is impossible, for that proposition is itself a base proposition. So the component proposition must be its own base proposition, which means that if it needs a truthmaker to be true (and thus has an SMT which is identical to its base proposition), it must be its own SMT. So if the conjunct needs a truthmaker to be true, it is its own SMT. (This means that it states its ontological commitments according to the truthmaker view—call these the truthmaker commitments of a proposition.)

SMTs are always existentially quantified statements—they state that something exists, something which is necessary to make the proposition true. What is more, the thing (or sort of thing) the existence of which is asserted by the SMT for *q* is must be in all the subdomains (of the domain of entities necessitated by q) which satisfy *q*. If, for example, the SMT for the proposition *that there is a human being* is the proposition *that there is a rational animal*, then the former proposition is satisfied by all and only the domains which contain a rational animal. Therefore, if the conjunct of *p*'s base proposition needs a truthmaker to be true, then it states its truthmaker commitments (because it is its own SMT), *and* it states its quantifier commitments or the ontological commitments it has according to the quantifier view. In other words, if the conjunct in question needs a truthmaker to be true, then the quantifier view and the truthmaker view have the same results—they both pick out the very same proposition as the ontological commitment.

So the truthmaker view and the quantifier view have the same results—*on the supposition that* the component proposition (in the base proposition) which confers the ontological commitment needs a truthmaker to be true. This means that the two views are equivalent only on the supposition of a particular sort of truthmaker thesis: it must be the case that for every proposition which carries an ontological commitment on the quantifier view, the non-truth-functionally-complex component propositions in the base proposition which confer that commitment must need truthmakers to be true. Now, this is a modest truthmaker thesis. It is weaker than the most famous truthmaker thesis, truthmaker maximalism. It is even weaker than the truthmaker thesis I will defend in the next chapter: the claim that all non-truth-functionally-complex base propositions need truthmakers to be true.[57] It is compatible with denying that negative truths need truthmakers. However, I'll settle for the following conditional claim. If the truthmaker view of ontological commitment is true, it gives the same result as the quantifier view. If the truthmaker thesis which makes the truthmaker view and the quantifier view give the same results isn't true, then the truthmaker view should be abandoned. That is just to say that the plausibility of the truthmaker view of ontological commitment depends upon the metaphysical thesis that certain important classes of truths require truthmakers—and I don't think that should be controversial. The truthmaker view should be considered an elaboration on the quantifier view—it adds to the quantifier view the claim that a certain class of propositions need truthmakers to be true. So the truthmaker view of ontological commitment (if it is true and the underlying metaphysical claim is vindicated) and the quantifier view give the same results; they are not competitors at all.

[57] My claim is that all such propositions need truthmakers; the truthmaker account of ontological commitment needs merely to claim that all such propositions *which carry ontological commitments* need truthmakers.

I do think that the truthmaker account escapes the major objections to it, and its fate rests pretty much entirely with whether the right sort of truthmaker thesis is defensible. I'll now reply to the major objections in the literature. The most extensive attack on the truthmaker account to date is Jonathan Schaffer's. Schaffer's method of argument is a bit strange: he gives three possible analyses of the notion of a truthmaker, argues that on none of the three analyses is the truthmaker view of ontological commitment right, and then concludes that the truthmaker view of ontological commitment is mistaken. No reason is given, though, to think that any one of the three analyses is actually a correct analysis of truthmaking, and so the failure of accounts of ontological commitment based on these possible analyses doesn't imply anything about the failure of an account based on the notion of a truthmaker. It could be that the analyses fail in accounts of ontological commitment precisely because they fail in accounts of truthmaking. The only way I can think of to salvage Schaffer's method of argument is to ascribe to him an assumption which would make sense of the method. If he is assuming that "truthmaker" is a pure philosophical term of art which carries absolutely no content apart from a stipulative definition, then his method of argument makes sense; the three analyses could be three stipulative definitions which invest the otherwise empty word "truthmaker" with content. I don't really think Schaffer is making this assumption, since he argues that two of the analyses are inadequate even as analyses of truthmaking, and in any case I reject it. I think we do have an intuitive grasp on what it is for a thing to make a proposition true. "Truthmaker" may be a term of philosophic art, but the content of the term, a thing which makes a proposition true, does have meaning independently of proposed analyses of the term. I don't have an analysis of

truthmaking, and I don't need one to analyze ontological commitment in terms of truthmaking.

All this is just to say that getting hold of Schaffer's precise arguments is a bit tricky. Some of his arguments are arguments against the analyses of truthmaking, some against using the analyses to explain ontological commitment, some against using truthmaking to explain ontological commitment. I'll simplify things by ignoring what the conclusion is of each particular argument and just show how they don't threaten the truthmaker account of ontological commitment.[58]

First, Schaffer points out that if truthmaking is reduced to a modal relation—that is, if all it is for X to make *p* true is for X to be metaphysically sufficient for *p*—then there are many trivial truthmakers for *p* (the fact that p is true is sufficient for p and so counts as a truthmaker for it) and every entity is a truthmaker for necessary truths (since necessary truths are true whenever any entity exists, so every entity is sufficient for the necessary truths). Both are clearly absurd and transfer the absurdities to any attempt to use this view of truthmaking to account for ontological commitment: the modal problems I discussed earlier are versions of this problem. Fortunately, this objection is met rather easily by simply noting that truthmaking is not a merely modal relation. X's being sufficient for *p* is not enough to make X a truthmaker of *p*. I don't know what is sufficient—that is, I can't give an alternative analysis—but I don't need to in order to use the notion of a truthmaker to illuminate the nature of ontological commitment.

Second, Schaffer argues that assigning the modal property—that if X makes *p* true, then X is metaphysically sufficient for *p* (necessitates the truth of *p*)—to

[58] I've reordered the objections slightly.

truthmaking at all causes problems. On the one hand, he thinks it forces us on a witchhunt for truthmakers of contingent truths like the proposition *that Socrates is sitting*—Socrates' existence is not metaphysically sufficient for the truth of this proposition, so if truthmakers are metaphysically sufficient for what they make true, we need to go looking for another entity which makes it true. Schaffer thinks this is clearly a mistake. On the other hand, Schaffer thinks it forces us to mishandle negative existential propositions. Negative truths like the proposition *that there are no dragons* can't be necessitated by ordinary actual entities, and so if negative truths have a truthmaker, it is something like a "*totality fact*, which is a negative second-order fact that there are no further facts."[59] Schaffer thinks this, too, is implausible.

Neither of these problems is particularly serious. As for the first problem, someone who thinks that the proposition *that Socrates is sitting* has a truthmaker *should* think that the truthmaker is more than just Socrates. This is a major reason, perhaps the major reason, why lots of philosophers have come to believe in such entities as universals, tropes, and states of affairs—because these are candidates for the extra entity necessary to make true contingent facts about objects. Now, Schaffer is free to simply reject the thesis that ordinary positive truths have truthmakers, and this would indeed render the truthmaker account of ontological commitment implausible. I don't think that he can affirm, though, that the truths have truthmakers but deny that the truthmakers are metaphysically sufficient for the truths. Also, he hasn't really given any reason to deny the relevant truthmaker thesis, so his objection as it stands doesn't give good reason to reject the truthmaker account of ontological commitment. As for the second problem,

[59] Schaffer, "Truthmaker Commitments," 12.

Schaffer's mistake is to conflate the truthmaker account of ontological commitment with a truthmaker thesis (a claim that a certain set of truths have truthmakers). The former is strictly independent of the latter, though its plausibility depends on the right kinds of truthmaker theses being true. In the case of negative existentials, the advocate of the truthmaker account is free to simply reject the claim that negative existentials have truthmakers—in which case, according to the truthmaker view of ontological commitment, negative existentials simply wouldn't carry any positive ontological commitment (though they could carry the negative ontological commitment I pointed out). And this might be just the right result. Or the advocate of the truthmaker account is free to resist Schaffer's intuitions and insist that negative existentials carry positive ontological commitment—in which case, the "totality fact" that Schaffer finds so repellent probably will be the best candidate for that ontological commitment as well as the best candidate for the truthmaker. In any case, whether negative existentials have truthmakers or not, it seems that the truthmaker account yields the right result for their ontological commitment.

Third, Schaffer discerns a problem with the "minimum" part of the statement of the minimum truthmaker, and calls it the "uniqueness problem."[60] Clearly, a proposition is not committed to its actual truthmaker or all of its possible truthmakers, because a single proposition could be made true by many different entities. This is why the truthmaker account says a proposition is only committed to those truthmakers which its truth *needs* or *necessitates*. I glossed this as a commitment to the existence of the

[60] Ibid., 14.

minimum truthmaker.[61] This is an attempt to specify *which* truthmakers make up the commitments of a proposition, since those commitments do not include all of the proposition's truthmakers. Schaeffer thinks that saying that a proposition is committed to the existence of the "minimum" truthmaker must mean that it is committed to the existence of what Armstrong calls a "minimal" truthmaker. Minimal truthmakers are truthmakers from which "you cannot subtract anything…and the remainder still be a truthmaker for *p*."[62] Schaeffer, following Armstrong, points out that (on the assumption that there is an actual infinity of beings) some propositions fail to have any minimal truthmakers even though they clearly do have ontological commitments. If there is a denumerable infinity of electrons, for instance, the proposition *that there are infinitely many electrons* is made true by any of the infinite sets of electrons, each of which can be subtracted from and still be infinite. Schaeffer could have also pointed out that there are minimal truthmakers for a proposition to which that proposition is clearly not committed—the proposition *that there are human beings* is not committed to Socrates, though Socrates is a minimal truthmaker for the proposition.

Schaeffer is right that a proposition does not carry a commitment to the existence of the "minimal" (in Armstrong's sense) truthmakers. But that isn't what the truthmaker view says in the first place. The truthmaker view says (roughly) that a proposition carries a commitment to the existence of what must exist to make it true (restricted to the non-truth-functionally-complex components of the base proposition, of course). That isn't the same thing as a minimal truthmaker, as Schaeffer has nicely shown. The statement of the

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[61] The final account further restricts this to the conjuncts of the base proposition, but I'll ignore that complication for the purposes of this objection.

[62] David Armstrong, *Truth and Truthmakers* (Cambridge: Cambridge University Press, 2004), 19-20.

minimum truthmaker does not necessarily state the existence of a minimal truthmaker. Schaeffer's fundamental mistake is to forget the propositional character of ontological commitment—a proposition is not ontologically committed to an entity but rather to the proposition that something (some entity or some *kind* of entity) exists, because a proposition can still carry commitment even when it is false and the entities to which it is committed do not exist.[63] Ontological commitment is therefore a relation between a proposition and another proposition—and this other proposition, this statement of the minimum truthmaker,[64] can avoid stating the existence of any *particular* entity. The minimum truthmaker for a proposition is not the minimum particular entity which makes that proposition true, since sometimes a proposition doesn't carry a commitment to any entity in particular but just to some entity of a more general kind. For example, the minimum truthmaker for the proposition *that there are infinitely many electrons* is just an infinite plurality of elections—not any particular infinite pluarlity, but some infinite plurality or other. This proposition's ontological commitment, then, is the proposition *that there exists an infinite number of electrons*. Finding the *minimum* truthmaker, then, doesn't always just mean finding the minimum particular entity, but more generally finding the minimum number and sort of entities which suffice to make the proposition true. Sometimes this involves commitment to a particular entity (and so involves using a name), but often it does not. Schaffer's objection therefore fails.

[63] I have been referencing the propositional character of ontological commitment by constantly speaking of commitment to "the existence of Fs" rather than simply of commitment to Fs.

[64] More precisely, the statement of the minimum truthmaker for one of the non-truth-functionally-complex components of the base proposition, plus any relevant truth-functional operations on that statement.

Fourth, Schaffer argues that the truthmaker view actually presupposes the quantifier view. Statements of truthmaker commitments employ existential quantifiers. Why would such quantifiers ontologically commit in these statements, asks Schaffer, unless they were generally ontologically committing? He concludes that quantifiers are generally ontologically committing, and so truthmaker commitments are parasitic on quantifier commitments. There is a sense in which I agree: the truthmaker view does indeed entail the quantifier view and so is not a competitor for it. Schaffer intends a stronger conclusion, though. He intends to argue that quantifiers ontologically commit even when those quantifiers aren't involved in statements of truthmakers, and so the truthmaker view is false. He issues a challenge which the meeting of which would suffice to reply to his argument:

> Perhaps there is some way to hold a restricted version of the quantifier view, on which (i) existential quantifications are committal only when they also involve some further feature R, and (ii) the existential quantification embedded in the consequent of TNec [alternatively: in the consequent of the right-hand side of the biconditional in (MTA)] is the only type of existential quantification to also involve this feature R. Pending a plausible candidate for being feature R, I can only conclude that truth-necessitater commitments *presuppose* quantifier commitments.[65]

I have met this challenge. Existential quantifications are committal only when they are in a proposition's base proposition—so feature R is the property of being in the proposition's base proposition. And, given that the right sort of truthmaker thesis is true, the existential quantification involved in the statement of the minimum truthmaker for the non-truth-functionally-complex components in a base proposition is the only kind of existential quantification involved in base propositions. This means that the truthmaker

[65] Schaffer, "Truthmaker Commitments," 16.

view (given the relevant truthmaker theses) is correct but compatible with my modified quantifier view.

Fifth, Schaffer thinks the truthmaker view licenses inappropriate ontological shirking. His example is Armstrong's ontology: Armstrong posits states of affairs as truthmakers, and objects and properties as constituents of states of affairs. Schaffer argues that, since the states of affairs are sufficient to make the propositions we believe true, then according to the truthmaker account our views commit us only to states of affairs. But surely we are committed to objects and properties as well. So the truthmaker account is false. This argument is singularly unconvincing. If states of affairs really are the truthmakers for propositions, and objects and properties are abstractions from states of affairs and are therefore reducible to states of affairs standing in certain relations, then we *aren't* committed to the existence of objects and properties—we've reduced them to something else, after all. That isn't to say objects and properties don't exist; it is to say that objects and properties just *are* certain kinds of states of affairs. Now, I'm not sure that this is Armstrong's own view. If he is willing to explain states of affairs as objects, properties, and perhaps a particular instantiation relation, then we remain committed to objects and properties, but not to states of affairs. Perhaps there is a lack of clarity in Armstrong here—but this is no objection to the truthmaker view of ontological commitment. I think Schaffer may not be thinking consistently of the sort of ontological commitment which corresponds to reduction rather than the one which corresponds to elimination—which leads me to his final argument.

Sixth, Schaffer proposes that truthmaker commitments are not ontological commitments but fundamentality commitments. That is, the truthmaker account is a

good account of what exists most fundamentally, while the quantifier account is still the right account of what exists *simpliciter*. Now, I can't be positive what Schaffer means by this, since *fundamental* and the other word he uses more or less interchangeably with it, *grounding*, are pretty flexible words. He could mean that the truthmaker view is the right account of the sort of ontological commitment which corresponds with reduction, while the quantifier view is the right account of the sort of ontological commitment which corresponds with elimination. If this is what he means, I disagree. Both my modified quantifier account and the truthmaker account I've defended are accounts of the sort of ontological commitment corresponding with reduction. What is more, both views give the resources to construct accounts of the other sort of ontological commitment corresponding with elimination:

> *Eliminative quantifier account (EQA):*
>
> A proposition *p* carries ontological commitment (in the sense corresponding to elimination) to the existence of Fs (or the nonexistence of Fs) iff either (1) it carries that commitment according to the quantifier criterion for ontological commitment in the sense corresponding to reduction; or (2) the proposition *that Fs exist* (or *that Fs do not exist*) is completely ontologically explained by *p*'s base proposition or by any combination of its conjuncts.
>
> *Eliminative truthmaker account (ETA):*
>
> A proposition *p* carries ontological commitment (in the sense corresponding to elimination) to the existence of Fs (or the nonexistence of Fs) iff either (1) it carries that commitment according to the truthmaker criterion for ontological commitment in the sense corresponding to reduction; or (2) the proposition *that*

Fs exist (or *that Fs do not exist*) is completely ontologically explained by *p*'s base proposition or by any combination of its conjuncts.

Each of these accounts is just the account of the reductive sense of ontological commitment plus a condition which includes as ontological commitments all the reduced existential statements. Neither account includes as ontological commitments all the existential statements entailed by a proposition, because that would include all necessary existential statements.

Since both the quantifier and truthmaker accounts apply to each of the senses of ontological commitment, it can't be that the truthmaker account applies only to one and the quantifier account to the other. Nor can I think of any other interpretation of Schaffer's claim on which he turns out to be correct. He could have ontological dependence in mind, so that his claim would be that all the quantifier commitments of a proposition which aren't also truthmaker commitments are ontologically dependent on the truthmaker commitments. This also is false; if the statement of the minimal truthmaker for a proposition is that proposition's base proposition, then according to my modified quantifier account, the proposition won't *have* any quantifier commitments other than the truthmaker commitments which could be ontologically dependent on the truthmaker commitments. Both the truthmaker and quantifier accounts put ontological explanation front and center in their view of ontological commitment, and ontological explanation is essentially reductive, so there won't be any room for distinct objects one of which depends on the other.

I conclude that the truthmaker view escapes Schaffer's many-pronged attack. Its fate depends only on the truth of some truthmaker theses—claims that certain classes of

propositions have truthmakers. And whatever its fate, the truthmaker view supports my thesis that a proposition's ontological commitment is determined by features of its base proposition.

3.4 Objections and Alternative Approaches

There is one more objection to be met, a general objection to the approach to ontological commitment common to both the quantifier and truthmaker views I have defended. My answer to this objection brings me into conflict with two important alternative approaches to ontological commitment, one taken by Frank Jackson and the other by Michaelis Michael.

One consequence of my view of ontological commitment—a consequence both of my modified quantifier view and of the truthmaker view—is that we can incur ontological commitments we don't accept. For instance, consider the debate between nominalists and realists about universals. The realist insists that ordinary predications like the proposition *that the table is red* are properly ontologically explained with reference to a universal. The nominalist disagrees. Suppose the realist is right. On my view of ontological commitment, the nominalist is committed to universals by virtue of her assent to ordinary predications. The nominalist therefore has an ontological commitment she refuses to acknowledge. You might think that this is a counterintuitive consequence. You might think that the right story is that the nominalist doesn't have the same ontological commitments as the realist, even if the realist is right about the explanation of ordinary predications.

I can only insist that this is not a counterintuitive consequence. On my view, there are two different sorts of disagreements over ontology. On the one hand, there are

straightforward, first-order disagreements over what exists. You say that there is no God; I disagree. On the other hand, there are disagreements over the ontological commitments of beliefs we share. I say the table is red, you agree—but we disagree as to the ontological consequences or commitments incurred by our shared belief. I, the realist, think that the table's being red requires a universal, while you deny this. In this case, I say we actually incur the very same commitments by our shared belief that the table is red. We simply disagree as to what those commitments are—but our commitments don't change because of our disagreement. Now, if the nominalist is right about the proper explanation of ordinary predications, then the realist incurs an extra commitment by virtue of his belief in universals, over and above the commitments he has by virtue of his belief in ordinary predications. If the realist is right, then by believing that there are no universals the nominalist actually denies one of her own commitments she incurs by her ordinary predicative beliefs. My picture of ontological commitment, then, is one where the ontological commitments of a theory are themselves a matter for investigation, for reasonable debate and disagreement.

My view here brings me into conflict with at least two important approaches to ontological commitment. The first is Frank Jackson's. Jackson reacts to the problem posed by the role of paraphrase in the quantifier account of ontological commitment a little differently than I do. While I think ontological explanation solves the problem, Jackson retreats to talk of semantic metalanguages. He thinks that the moral of the problems posed by paraphrase—the fact that sometimes paraphrase can remove ontological commitment and sometimes take it away—is that sentences in a first-order language don't carry any ontological commitment at all. Instead, only sentences in a

semantic metalanguage ontologically commit. So, for example, when I believe that "there is a good chance she will come" I don't yet incur a commitment to chances; only when I move up a semantic level and believe that "there is something to which 'is a good chance' applies" do I incur a commitment to chances. If I don't have any semantic metabeliefs, I don't have any ontological commitment.

There are at least two serious problems with this view. First, it has the result that ordinary, non-philosophical folk who don't ever think about semantics and so don't have any beliefs expressible in a semantic metalanguage don't have any ontological commitments. But surely this is wrong. Second, Jackson's view incurs a regress problem. Which semantic level determines ontological commitment? What if I believe that there is something to which "is a good chance" applies, but I *disbelieve* that there is something to which "is a thing to which 'is a good chance' applies" applies? Jackson's move to a semantic metalanguage, I conclude, is misguided.[66]

The truth in Jackson's view is the fact that often, very often, when philosophers give a semantics for a sentence what they are doing is identifying its ontological explanation. This isn't always the case—sometimes they are talking about the relation between the sentence and the proposition it expresses rather than explaining the proposition in terms of another—but it very often is. When I give the truth-conditions for a sentence, often I give a reductive analysis, an ontological explanation, of the proposition expressed by that sentence. I think this very well may have been at the edge of Jackson's awareness, and so his talk of semantic metalanguages may well be an inchoate way of getting at my view, which puts ontological explanation at the center of

[66] For further support of this point, see Michael, "Implicit Ontological Commitment," 44-45.

ontological commitment. The way to solve the regress problem is to note that ontological explanations can stop—it is the *ultimate* ontological explanation (or, more precisely, the base proposition) which is relevant for determining ontological commitment.

The second approach with which my view brings me into conflict is that of Michaelis Michael. Michael's investigation into ontological commitment is driven by the fact that not every existential claim entailed by a proposition is a commitment of that proposition—a fact highlighted by both the paraphrase problem and the modal problems I dealt with earlier. Michael takes as a constraint on his investigation, though, that "failing to acknowledge commitments is a rational failing."[67] This isn't a conclusion of his investigation but a presupposition of it. It is here, right at the start of his investigation, that he and I part ways. I disagree that refusing to acknowledge actual commitments is always a rational failure. Michael obviously takes the "commitment" in ontological commitment to mean "rational commitment;" I don't. I am interested in what demands our views make on the world, not primarily in the demands our views make on us (on our rationality, on our beliefs about what the world contains). I think he and I may just be operating with different concepts.

There is reason to think that Michael's concept of ontological commitment is not the one operative in most of the philosophical discussion, though. First, if ontological commitment is rational commitment, then the truthmaker view of ontological commitment isn't even remotely plausible. Belief in the minimum truthmaker of a truth is obviously quite often not a rational requirement of belief in the truth—finding truthmakers is often a difficult process, and we often find ourselves in the situation of

[67] Ibid., 59.

believing a truth but not knowing what its truthmaker is or could be. Surely the advocates of the truthmaker view, then, are operating with a concept of ontological commitment which does not entail rational commitment, and so are all of those advocates of the quantifier view who see the truthmaker view as a significant alternative to the quantifier view. Second, and relatedly, if most philosophers' concept of ontological commitment entailed rational commitment, there wouldn't have been the obsession (present in Quine and in many others) with paraphrase as a way out of and into ontological commitment—since paraphrases are often hotly contested and the rational acceptance of a paraphrase is quite separate from the rational acceptance of the proposition to be paraphrased. (In fact, Michael is forced to say that paraphrase doesn't have much directly to do with ontological commitment as he thinks of it.)[68] Third, only on views like mine is the search for ontological commitments a metaphysically substantive project, which means that the concept of "ontological commitment" I am operating with is of greater metaphysical interest, especially relative to the question of method in metaphysics. So while it might be interesting to know what rationality demands we believe exists, given our views, that isn't really what philosophers have been arguing about; they've been arguing about what determines the requirements our views impose on the *world*. And, according to my take on this sort of ontological commitment, those demands may very well be controversial. We may even be unable to reasonably decide what they are.

[68] Ibid., 57.

3.5 A More General Defense

So far I've argued that ontological explanation is essentially reductive and that the ontological commitments I incur by virtue of the propositions I believe are determined by features of the ultimate ontological explanations (or rather the base propositions) of those propositions. My main argument for thinking that ontological explanation plays this role was that it must play this role in each of the major extant views of ontological commitment. I argued that the best versions of each view are not incompatible and defended each against the major objections they face—some of which were defused by the very recognition of the importance of ontological explanation to ontological commitment.

If, however, despite my attempts to defend them, it should turn out that both the quantifier and truthmaker views of ontological commitment are fundamentally mistaken, there is still reason to believe that ontological explanation must play the central role in ontological commitment I have claimed for it. Any adequate account of (the reductive sense of) ontological commitment will have to do at least the following two things. First, the ontological commitments of a theory must be entailed by the theory, but they can't include just any existential statement entailed by the theory (this is a lesson both of the problems with necessary entities and Jackson's problems with paraphrase as a tool for reduction). Any adequate account of ontological commitment must therefore find some principled way to specify which subset of the statements entailed by a theory gives the theory's ontological commitments. Second, and relatedly, any adequate account of ontological commitment must account in some way for the obsession of twentieth-century philosophy with paraphrase as a way into and out of ontological commitment. It

is possible that twentieth-century philosophers are just completely misguided in their focus on paraphrase, but it is far more likely that paraphrase is in some way importantly connected to ontological commitment. However, the problems pointed out by Jackson will plague any view which attempts to justify the use of paraphrase in this role: paraphrase doesn't have a direction (which means that there is no principled way to determine when paraphrase gives ontological commitment and when it takes it away), and paraphrased sentences do not differ with respect to their entailments. It is significant that his arguments involving paraphrase—the arguments which motivated my adoption of ontological explanation into the quantifier account—are directed not just at the quantifier account of ontological commitment but to a broader category of views (what he calls the "referential view") which takes a proposition's referential apparatus (which includes quantifiers, names, and definite descriptions) to be the determiners of ontological commitment.

Given these two constraints on any adequate theory of ontological commitment—the need to specify a relevant subset of propositions entailed by a theory, and the need to account for the twentieth century's obsession with paraphrase as a way out of and into ontological commitment—it is likely that ontological explanation plays the role I've claimed for it in such a view. Ontological explanation gives rather elegant ways to meet both constraints, by specifying the relevant subset of propositions entailed by the theory and accounting for the importance of paraphrase without falling prey to the difficulties facing paraphrase itself. I conclude, then, that even if my defense of a modified quantifier account, and my partial defense of the truthmaker account, should be judged as

having fallen short, there is still reason to accept my main thesis: the ontological commitments of a proposition are determined by features of its base proposition.

4. The Anti-Theory of Roberts and Wood

A recent book, *Intellectual Virtues*, by Robert Roberts and Jay Wood, contains an interesting excursus on the nature of philosophy, one which challenges my project in a couple of ways. Roberts and Wood say that "all philosophy consists in proposals about the relations among concepts, in proposed orderings of concepts, and the arguments for those orderings."[69] This claim is too strong because it is (ironically) overly reductive; when philosophers argue over the existence of God, for example, they are not just arguing over the relations between the concept of God and other concepts but over whether the concept of God is instantiated in the world. Roberts and Wood are right, though, to note that "in philosophy we ask why-questions that are usually not causal."[70] They call these "*conceptual* why questions, because answers to them show how one concept can be explained in terms of another, or 'derived' (at least partially) from another."[71] I agree that the asking and answering of these conceptual why-questions is a central activity of philosophers (though not the only significant activity)—in fact, I have already said that, because what Roberts and Wood call answers to conceptual why-questions, I call ontological explanations. I hesitate to use the language of conceptual analysis, as I said, because of its *a priori* connotations and misleading tendency to make us forget we are talking about the world around us rather than something which exists

[69] Robert C. Roberts and W. Jay Wood, *Intellectual Virtues: An Essay in Regulative Epistemology* (Oxford: Oxford University Press, 2007), 24.

[70] Ibid., 24

[71] Ibid., 25.

only in our minds, but I doubt Roberts and Wood see their project of conceptual analysis as purely *a priori* or as being about the contents of our minds rather than the world about us. Their examples of conceptual why-questions generally are or involve requests for ontological explanations. I conclude, then, that they are speaking about roughly the same thing I am: ontological explanation.

Because what Roberts and Wood have called answers to conceptual why-questions just are ontological explanations, their critique of the way philosophers go about giving these answers is directly relevant to my discussion. Their target is what they call the "monistic, reductive, hierarchical, or derivational style" of contemporary philosophy—a style they associate with the term "theory," which is why we might call their collected arguments their "anti-theory."[72] The anti-theory of Roberts and Wood amounts to three claims, two of which are rejections of characteristics I have assigned to ontological explanation. I'll argue that, while the claims are mistaken, they do help us better understand the value of identifying ontological explanations.

First, Roberts and Wood deny that a good answer to a conceptual why-question must give necessary and sufficient conditions for the concept being analyzed. In other words, they deny that, if p ontologically explains q, then p is metaphysically necessary and sufficient for q. The only semblance of an argument they give for this claim is a reference to Wittgenstein's work on family resemblances: in the case of many concepts, it just seems like there isn't a common set of characteristics which unites all the instances of that concept—and so it seems that there isn't a set of conditions both necessary and

[72] They don't want to quibble over what counts as a "theory" and neither do I — this is just a convenient label, not a precise claim that all theories are misguided. Ibid., 26.

sufficient for the instantiation of that concept.[73] An analysis of the concept, therefore, or an ontological explanation of the thing picked out by the concept, can't give necessary and sufficient conditions for it.

There are a number of other ways to account for the data supporting this Wittgensteinian conclusion, though, which don't call into question the necessity condition on ontological explanation. The first way is the phenomenon of vagueness.[74] Most of our concepts are vague in some way, which means that there are things or situations such that it is simply indeterminate whether our concept applies to them or not. That means that there are no perfectly *sharp* conditions which are both necessary and sufficient for the instantiation of the concept—there are always borderline cases, and those tempted by the Wittgensteinian position may be picking this up. The phenomenon of vagueness, however, doesn't pose a problem for the necessity condition on ontological explanation. The explanans just needs to be vague in all the same places as the explanandum—if *p* ontologically explains *q*, then *p*'s truth is vague in all the same situations that *q*'s truth is vague. This seems like just the right result. If one proposition's truth-conditions are sharper or more blurry than another's, then the former cannot ontologically explain the latter.

The second way to account for the Wittgensteinian data is by the non-univocity of words. If you are taking as your guide to a concept the use in language of the word which picks out that concept, there are a number of complexities which are difficult to face. Words get used in all sorts of non-univocal ways. It may be easy to distinguish purely equivocal uses of words, but there is a whole host of analogical ways words get

[73] Ibid., 19.

[74] I owe the rest of this paragraph to Jonathan Kvanvig in conversation.

used, and analogical uses are much harder to distinguish from univocal uses. A word is used analogically when it is extended from its primary use to a related use—as when we speak of a human being who is healthy and food which is healthy (to borrow an example from Aristotle and Aquinas). In the case of analogical uses of words, there isn't single thing which is picked out by the words, and so no common set of necessary and sufficient conditions. Instead, there is a causal (and perhaps some other) relationship between the two uses of words—"healthy" is predicated of food because it was originally predicated of human beings (or organisms generally). Because of the existence of this close causal relationship and the identity of the word used, it is easy to mistakenly believe that the diverse uses of the word pick out the same concept, even though they don't. The phenomenon of analogy, then, accounts for the Wittgensteinian data without challenging the necessity condition on ontological explanation. In order to identify the ontological explanation for an object or proposition, the proposition needs to be identified precisely and all ambiguity removed, including the ambiguity inherent in analogical uses of words. This can be very difficult to do.

The third way to account for the data is by noting the potential for straightforward incoherence. It is possible to really think that diverse things have a common nature, and form a concept which picks out those diverse things and excludes others, when they don't in fact have any such nature in common which distinguishes them from everything else. We would be clearly unable to find a common set of characteristics both necessary and sufficient to satisfy our concept. Suppose that Wittgenstein's favorite example, the concept of a game, is one such incoherent concept. In that case, there aren't any such things as games. However, there may be something very close to a game, some concept

which applies to nearly all but not all of the things to which we apply our incoherent concept of a game. In that case, we could identify this thing, the concept of which serves nearly the same function as the folk concept of a game, and explain *that*. This is Carnap's notion of explication.[75] In any case, this phenomenon poses no threat to the necessity condition on ontological explanation. Anything picked out by such an incoherent concept will have not ontological explanation.

The fourth and final way to account for the data is to notice that neither of the kinds of family-resemblance concepts identified by Wittgenstein automatically rules out the giving of necessary and sufficient conditions for it. One kind of family resemblance concept identifies a paradigm case and then picks out all of the things which are sufficiently similar to the paradigm case, but which won't necessarily have any particular subset of the characteristics of the paradigm case. This sort of concept clearly doesn't rule out the giving of necessary and sufficient conditions for it. There is no stricture against using the notion of "sufficient similarity" in an explanation—if necessary and sufficient conditions can be identified for the paradigm case, then the concept could be analyzed as "whatever is sufficiently similar to the paradigm case." The "sufficient" here might be vague, but as I noted above, this vagueness might be just right for an analysis of the concept, and in any case degrees of similarity could be specified. The second kind of family resemblance concept doesn't involve a paradigm case, but just picks out a bunch of things which have a certain number of characteristics off of a larger list, but don't have any particular subset of those characteristics universally in common. As with the paradigm case family resemblance concept, this sort of concept could be analyzed in

[75] Rudolf Carnap, *Logical Foundations of Probability* (Chicago: University of Chicago Press, 1951), 3-15.

terms of having a sufficient number of the characteristics of the larger list. So neither sort of family resemblance concept automatically rules out the giving of necessary and sufficient conditions for the things picked out by the concept.

All four of these ways of accounting for the Wittgensteinian data without giving up the necessity condition on ontological explanation are consistent with each other and complement one another. And giving up the necessity condition would be a serious mistake. If I try to say what something is, and what I say doesn't suffice for the existence of that something, it seems clear that I haven't yet said what it is; likewise, it seems equally clear that if I try to say what something is, and what I say isn't required for the existence of that something, I have failed to say what it is. The same goes, by extension, for the propositional form of ontological explanation. Roberts and Wood say that when they seek something like a "definition," they seek not to specify necessary and sufficient conditions but "aim…to make the concepts more definite in our minds."[76] I certainly admit that a lot of ground can be covered in understanding the nature of something without identifying its ontological explanation—my own exploration of ontological explanation itself in the first section of this chapter is an example. We can give (as I did) a series of necessary but insufficient conditions for something, or give some sufficient but unnecessary conditions, or make (as I did) claims about how it relates to other sorts of things in its vicinity, or make other kinds of claims about it, and in doing so "make more definite" the concept of the thing in our minds. And this may serve many of our purposes well enough. But we still haven't identified what the thing is—and surely knowing what a thing is, knowing its ontological explanation, contributes to our understanding in ways

[76] Roberts and Wood, *Intellectual Virtues*, 26.

that are not reducible to all these other strategies for "making it more definite" in our minds.

Second, Roberts and Wood deny that a good answer to a conceptual why-question must avoid circularity, which means that they reject the asymmetry condition on ontological explanation. Their reason for doing so is tied up with their aims for their own project:

> It seems to us that in fact this messy, non-hierarchical logic is actually the logic of the concepts that govern the intellectual life, and that attempts to regiment them into hierarchical orderings satisfying the strictures of typical philosophical theorizing result only in confusing and pedantic analyses that are ill fit to regulate anybody's epistemic life.[77]

Avoiding circularity, they think, is unnecessary for and even inhibits analysis which can serve to *regulate* life. Their project is to provide philosophical analysis which actually can help to make us better knowers, a project they see as a return to the practice of early modern epistemology. In other words, they are interested in philosophical analysis which can serve the *practical* goals of improvement of life. This is the key to understanding why they reject the asymmetry condition on ontological explanation. Oftentimes a broadly circular analysis can serve all the same practical ends that identifying the true, asymmetric ontological explanation does. Most of the time, what we need to navigate the world rightly is just awareness of correlations. Knowing that As are always Bs and Bs are always As is generally all we need if our goal is to figure out how to get or avoid As—if we are aware that all knowledge is virtuously-formed true belief and that all virtuously-formed true belief is knowledge, knowing which of the two is explanatorily prior doesn't add anything to help us seek and gain knowledge. I suspect, then, that

[77] Ibid., 26.

Roberts and Wood dismiss the asymmetry condition on ontological explanation because circular analysis may serve all the same practical ends as true asymmetric explanation, and Roberts and Wood want to reclaim a more practical orientation for philosophical analysis.

I grant the point. Circular analysis may be able to serve all the practical ends that asymmetric ontological explanation does. I do not grant that this is a reason to give up the asymmetry condition on ontological explanation, though. There *is* something we gain by identifying the true, asymmetric ontological explanation which we do not gain by circular analysis: a certain understanding of what really, at bottom, exists in the world, an understanding of the true and basic nature of the world. This understanding may not be especially practical, but I insist that it is still valuable, and a sort of understanding that philosophy has rightly pursued throughout its history. Roberts and Wood are free to give circular analyses, and I agree with them that philosophers should be more accepting of these edifying circular analyses than they perhaps are, but the search for genuine asymmetric ontological explanations should not be abandoned.

These first two claims do not exhaust their anti-theory. Their third claim, though, is a bit harder to get a handle on. They cast this third claim as a rejection of a rule they think most philosophers implicitly follow: "Rule 2: There must be one and only one ultimate answer to the string of why-questions: that is, one and only one answer about which further why-questions cannot be asked. (This answer provides the name of the theory.)"[78] This rule is a bit unclear; it may sound like it rules out infinite regresses or perhaps circularity, but Rule 1 (which they also reject) rules out circularity, and since

[78] Ibid., 25.

they make no mention of infinite regresses, I doubt that is what is on their minds. What they have in mind is the tendency of philosophers to get overly excited about reduction and want to reduce everything in a certain domain to only one kind of thing—to reduce all of ethics (and maybe epistemology too) to virtue (called "virtue ethics" or "virtue epistemology"), or to reduce all truths about time to "earlier than" and "later than" relations, also known as B-determinations (called "B-theory"), and so on. This is at least part of what they earlier called the "monistic" tendency of philosophers, and they see it as a bad thing.

It is difficult to exactly determine what this claim amounts to. One interpretation of the claim is this: perhaps they think that most philosophers accept some general demand for explanation—a claim that a certain class of propositions has an ontological explanation—which is in fact false. The problem with that is that there is no such demand which is generally accepted. I'll discuss demands for explanation in the next chapter, but I won't find any general demands which command widespread assent. The closest thing to a widely accepted general demand for explanation is Ockham's Razor, but the Razor is a fairly weak and fragile demand: it just says that we should believe a reductive explanation under conditions which are easily defeated by contrary considerations.[79] I'd be very surprised if Roberts and Wood wanted to reject this.

Another interpretation of their claim, though, is precisely to see them as rejecting Ockham's Razor, or at least as denying that Ockham's Razor should lead us to seek to identify true, asymmetric ontological explanations. Perhaps they think that philosophers as a class are simply too ambitious (or perhaps careless) in their attempts to identify

[79] It is hard to specify the conditions under which the Razor says we should believe a reductive explanation, but the point is that contrary considerations — like any reason to think that the reduction fails — can easily defeat the reason provided by the Razor to think that there is a reductive explanation.

ontological explanations and try to find reductive explanations of too many different kinds of propositions—that is, that they are too driven by Ockham's Razor—and that they should avoid even trying to find such explanations. The problem with this claim is that if there do exist ontological explanations, it would surely be something worth knowing, and we can't find out whether there are explanations without trying to identify them by attempting a reductive explanatory project and then evaluating it. There is every reason to try, even if it turns out that the reductive explanation fails, because we cannot know that it fails unless we try and then see the weaknesses. Unless, of course, Roberts and Wood are correct in their first two claims, that it is impossible to give necessary and sufficient conditions for or noncircular analyses of concepts. It turns out, then, that a denial of Ockham's Razor (we might call this *methodological* anti-theory) is supported by their denial that true, asymmetric ontological explanation is possible (their *metaphysical* anti-theory).[80] Once we have dismissed their metaphysical anti-theory, though, their methodological anti-theory is unsupported and there is no reason not to try to satisfy Ockham's Razor by finding reductive explanations.

There is a final interpretation of this third claim, though, a slightly toned-down version of methodological anti-theory, which may survive the failure of their metaphysical anti-theory. Suppose that I'm right so far, that it is not impossible for us to find true, asymmetric ontological explanations, and that Ockham's Razor provides a motivation for trying to do so. Still, Roberts and Wood could still claim that, *given our limited resources and the difficulty of the task*, our time is better spent pursuing other paths to achieving understanding—strategies like I mentioned above which can serve to

[80] Thanks to Adam Pelser (in conversation) for these labels and help organizing my thoughts on this topic.

"make more definite" the concept in question. I'm very sympathetic to this claim. It is hard to deny that Roberts and Wood in their own philosophizing have contributed in important ways to our understanding of the world, and that they have done so at least partly because of their methodological anti-theory. However, even this claim should not be so sweeping. It may be that, at least sometimes, it is worth spending our time trying to find ontological explanations, because (as I've argued against Roberts and Wood) such things do exist and do contribute to our understanding in ways that are not reducible to the other strategies they propose.

In short, the concerns of Roberts and Wood may be legitimate as cautionary notices: philosophers should perhaps be less obsessed with finding necessary and sufficient conditions, more open to circular analyses, and more careful in their reductive analyses (particularly when trying to reduce a number of different things to one sort of thing) than they have been. As a result, there is something right about their methodological (as opposed to their metaphysical) anti-theory: given our limited resources and the difficulty of identifying ontological explanations, we may be better served in our search for understanding by spending less time pursuing such explanations. Roberts and Wood go wrong, however, when they absolutize these cautionary notices into a sweeping dismissal of the search for genuine, asymmetric ontological explanations.

My examination of their anti-theoretical challenge just reinforces my claim that ontological explanation is distinctively important because of its connection to ontological commitment. My main contention has been that ontological explanation is tied to ontological commitment. Along the way, though, I've established a number of subsidiary conclusions that will be important later: the existence of some logical properties

possessed by ontological explanation, relationships between ontological explanation and related concepts (particularly paraphrase), a reconciliation between the two extant views of ontological commitment, and a connection between truthmakers and ontological explanation.

CHAPTER TWO

Constraints on and Demands for Ontological Explanation

1. Introduction

Ontological explanation is explanation *what*: explanations of what something is or what it is for something to be the case. This sort of explanation comes in two forms, objectual and propositional, though the objectual form reduces easily to the propositional form. Ontological explanations are objective relations between propositions, and the human activity of explaining (of giving ontological explanations) is really the activity of attempting to identify antecedently existing explanations. It is a central goal of the philosopher, and particularly of the metaphysician, to identify such explanations. Philosophers are forever seeking to explain what it is for something to be the case: for example, what it is for an action to be free, what it is for a being to be a person, what it is for a piece of art to be beautiful, and so on. A major reason that ontological explanation is so important is its connection to ontological commitment: the ontological commitment of a proposition is determined by its ultimate ontological explanation. So ontological explanation constrains Ockham's Razor—we can only discover the entities to which we are committed in virtue of believing as we do by discovering the ultimate ontological explanations (the base propositions) of the propositions we believe.

So much I have argued in the last chapter. These reflections stop far short of exhausting the interesting and important general facts about ontological explanation, though. Before we proceed to judge philosophical attempts to identify particular

ontological explanations, there are at least two important questions to answer. First, aside from the various logical properties of ontological explanation identified in the last chapter, are there any facts about ontological explanation which would constrain the sorts of propositions we might legitimately consider as candidates for ontological explanations? Second, are there any general classes of propositions which all have ontological explanations, such as would place a demand on us not to rest content in considering any proposition of that sort to be unexplained or primitive? If there are any general truths of these sorts—any general constraints on or demands for ontological explanations—they would be extremely important to know when engaged in the search for particular ontological explanations.

In this chapter, I will consider one possible constraint on, and three possible kinds of demands for, ontological explanation. The constraint I will consider, in section 2, is the question of whether infinite regresses of ontological explanation are legitimate or not. I will argue that, though such infinite regresses may not be impossible, they are nevertheless vicious in an important sense: they fail to sufficiently explain and so fail to answer any demand for explanation. It follows that *ungrounded* infinite regresses of ontological explanation are impossible.

The final two sections will be devoted to three general demands for ontological explanation. In section 3, I will consider an analogue for ontological explanation of the causal Principle of Sufficient Reason. I will show that, of all the arguments urged in favor of the causal PSR, only one also can be reasonably thought to support the ontological PSR, and even this one argument actually only supports the weaker Ockham's Razor. Moreover, I will argue that the modal fatalism problem is more deadly

for the ontological PSR than for the causal PSR, and so the ontological PSR should be rejected. I'll conclude this section by discussing what sort of demand for explanation can be generated from Ockham's Razor. In section 4, I will show that truthmaker theses—claims that certain classes of propositions must have truthmakers to be true—entail corresponding demands that such propositions have certain kinds of ontological explanations, and I will argue that there is a significant class of truths which must have truthmakers. Of the demands for explanation I consider, then, truthmaker theses are the only ones which have a significant chance of being true (aside from the fairly weak demand provided by Ockham's Razor).

These aren't the only candidates for general demands for ontological explanation we could consider. The other general demands that I can think of, though, are sweeping metaphysical claims which form the backbone of a worldview. Naturalism, for instance, is (or at least entails) a demand that all propositions involving non-physical properties be ontologically explained in terms of propositions involving only physical properties, while idealism is (or entails) a demand that all propositions involving non-mental properties be explained in terms of propositions involving only mental properties.[1] I can't hope to evaluate the adequacy of such worldviews in one chapter, which is why I restrict myself to the general demands for explanation which don't involve such worldviews.

The discussion in this chapter will be explicitly constructed to parallel the much more developed discussion about constraints on and demands for *causal* explanation, mostly conducted in connection with the cosmological argument for the existence of

[1] These are pretty rough characterizations of the explanatory demands entailed by these worldviews; there is certainly much room for discussion here.

God. I will look for (and sometimes find) analogues for ontological explanation of arguments pertaining to causal explanation.

2. The Constraint: Infinite Regresses

2.1 Introduction: Cameron's Challenge

Ross Cameron, in a recent paper, notes that we have a strong intuition against infinite chains of the sort involved in Bradley's Regress.[2] But Cameron issues a challenge: can an argument be given for this intuition, suitable for persuading those who do not accept that such infinite chains are unacceptable? The intuition that they are, after all, is not universally shared. He argues that the best we can do by way of support for the intuition is an appeal to a (fairly weak) concern for theoretical simplicity.[3] Daniel Nolan, in his recent taxonomy of kinds of vicious infinite regresses, says something similar; most regresses, he thinks, are objectionable only the basis of considerations of parsimony, and his list of regresses which are objectionable for other reasons does not include regresses of ontological explanations.[4]

Cameron's challenge doesn't precisely amount to a request for an argument for the viciousness of infinite regresses of *ontological explanation*. Though he briefly invokes the language of explanation in connection with Bradley's Regress, he ultimately

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[2] Bradley's Regress goes something like this: suppose that what it is for something to bear a property is for it to bear the property of exemplifying that property, so what it is for a to be F is for a to bear the relation of exemplification to F. It follows that what it is for a to exemplify F is for a to exemplify exemplifying F — and so on infinitely. Ross Cameron, "Turtles All the Way Down: Regress, Priority, and Fundamentality," *Philosophical Studies* 58 (2008), 1-14.

[3] It is weak in two ways: it is easily defeasible and it doesn't support the claim that infinite regresses are necessarily (as opposed to merely contingently) vicious. In holding this view, Cameron echoes Daniel Nolan's claim that many regresses we have such an intuitive aversion to are really objectionable only on the grounds of ontological extravagance.

[4] Or causal explanations either, for that matter. See Daniel Nolan, "What's Wrong with Infinite Regresses?" *Metaphilosophy* 32 (2001), 523-538.

interprets it as a regress not of ontological explanation but of ontological dependence—as a chain of dependence relations between objects or states of affairs, not a chain of explanation relations between propositions.[5] Also, he connects it with at least one other regress, the regress generated by the dependence of composite objects on their parts, which is clearly not a regress of ontological explanation.[6] I believe (and will argue in the next chapter) that he has misunderstood Bradley's Regress, and that it is in fact a regress of ontological explanation; and in any case Cameron's challenge applies equally to infinite regresses of ontological explanation as it does to infinite chains of ontological dependence. We have a similarly powerful intuitive aversion to them, and it is similarly difficult to generate an argument justifying the aversion.

I will attempt to meet this suitably modified version of Cameron's challenge. I will argue that infinite regresses of ontological explanation are vicious in the following sense: they fail, by themselves, to adequately or sufficiently explain. It doesn't follow that all infinite regresses of ontological explanation are impossible, just that all *ungrounded* infinite regresses—infinite series without an ultimate explanation—are impossible.[7] If a proposition has an explanation, then it has an ultimate explanation. I

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[5] Cameron, "Turtles All the Way Down," 1-5.

[6] He also invokes still another regress, the one involved in Leibniz's cosmological argument for the existence of God. I think Cameron also misinterprets this regress as one of ontological dependence. Not all of the contingently true propositions which Leibniz thinks need explanation have corresponding states of affairs or objects which exist and can be in a chain of dependence. The regress Leibniz invokes to fuel the cosmological argument is best interpreted as neither a regress of ontological explanation nor a regress of ontological dependence, but a regress of another sort of explanation, best characterized as a regress of "causal" explanation (not to be confused with a regress of actual causal relations between objects). See Alexander Pruss, "The Leibnizian Cosmological Argument," in William Lane Craig and J.P. Moreland (eds.), *Blackwell Companion to Natural Theology* (Oxford: Blackwell: 2009), 24-100. So it appears that Cameron has gathered a rather diverse group of regresses and is wrong to lump them all together as regresses of ontological dependence.

[7] My argument is therefore compatible with the existence of an infinite series of explanations which has an ultimate explanation for the whole series.

will give three arguments for this conclusion. One of the arguments is quite a bit more involved than the other two: in the next subsection (2.2) I will give that argument, followed in the next subsection (2.3) by a discussion of possible ways to blunt its force. In the final subsection (2.4), I'll give the other two arguments for the same conclusion.

2.2 The Argument from Explanatory Failure

The first argument for the viciousness of ungrounded infinite regresses of ontological explanation—call it the Argument from Explanatory Failure—has two stages. I'll begin with a counterexample to one possible basis for thinking that infinite regresses don't have anything more against them than considerations of theoretical simplicity: the Hume-Edwards principle. I'll then generalize from this counterexample and draw out what I take to be the moral of the example: that infinite regresses of explanation, on their own, fail to adequately or sufficiently explain.

Step 1: The Example. The Hume-Edwards principle is as follows:

(HE): If the existence of every member of a set is explained, the existence of that set is thereby explained.[8]

Here is a modified version to take into account the fact that propositions are the primary relata of explanation:

(HE)*: If all the members of a set of propositions are explained, then their conjunction is thereby explained.

This principle can obviously be applied to different sorts of explanation. Its original application is to the debate over the cosmological argument, and so its original target is

[8] Alexander R. Pruss, "The Hume-Edwards Principle and the Cosmological Argument," *International Journal for Philosophy of Religion* 43 (1998), 149.

causal explanation. It has an analogue, though, for ontological explanation. It is easy to see why this principle is plausible: if I've explained why the table is red and why the shirt is green, haven't I thereby explained the conjunction of those two propositions? If this principle is true, then infinite regresses of explanation aren't vicious, because each member of the regress has an explanation.

Alexander Pruss has a counterexample to the causal version of the Hume-Edwards principle. Consider the flight of a cannonball. Since time is infinitely divisible (dense), it is possible to causally explain each stage of the cannonball's flight in terms of a stage immediately preceding it, without ever mentioning the cannon's firing of the cannonball. Each stage of the cannonball's flight, then, has an infinitely long string of explanations that never go back to the cannon's firing of the cannonball. If it is true that an infinite regress of explanations is sufficient to explain a fact, then the cannonball's flight is self-explaining; each stage of the flight can be sufficiently explained without any reference to the cannon's firing of the cannonball. But clearly this is absurd—the various stages of the cannonball's flight clearly cannot be sufficiently explained without reference to the cannon's firing of the cannonball.[9] So the Hume-Edwards principle is false: the mere fact that every stage of the cannonball's flight has an explanation does not entail that the flight as a whole is adequately explained.

Analogues of Pruss's cannonball example can be formulated for ontological rather than causal explanations. Consider the following three cases. The first two require the assumption that space and its contents are infinitely divisible; the third does not.

[9] A parallel argument is found in William F. Vallicella, "Could the Universe Cause Itself to Exist?" *Philosophy* 75 (2000), 604-612.

Case 1: Consider the following proposition B1: *that the box is square*. If I am asked to explain what it is for the box to be square, I can give the following explanation: what it is for the box to be square is for the contents of the spatial area making up the top right quarter of the box and the contents of the spatial area making up the bottom right quarter of the box bear such-and-such spatial relations to the contents of the spatial area making up the left half of the box. Call this explaining proposition B2. Then, when asked to explain B2, I can give the proposition B3 as an explanation, in which I further subdivide the right half of the box and explain the whole box in terms of the relations of the subdivisions of the right half to each other and to the left half of the box. Since *ex hypothesi* space and its contents are infinitely divisible, I can give an infinite series of such explanations by continuing to subdivide the right half of the box *without ever subdividing the left half at all*. Therefore, if an infinite regress of explanations is sufficient to ontologically explain a fact, then the proposition B1, *that the box is square*, is sufficiently explained by my infinite series. But clearly this is absurd—a sufficient explanation of the box's being square would have to include subdivisions of the left half of the box as well as the right half of the box.

Case 2: Consider a variant on the previous case. The same proposition B1 needs explaining: *that the box is square*. If space and its contents are infinitely divisible, I can give an infinite regress of physical explanations of the box's being square employing statements of the contents of any given area of space and their spatial relations to the contents of other areas. But I still haven't sufficiently explained the box's being square, because I have not yet given a *metaphysical* explanation of the contents of the areas of space (the relata of the spatial relations). I still need to explain the existence and

properties of those relata with my favorite metaphysical theory—either as particulars instantiating universals, or as bundles of tropes, or as nominalist particulars bearing primitive resemblance relations to each other or being members of certain sets, and so on. Since a metaphysical explanation of this sort is necessary to sufficiently explain B1, the infinite regress of physical explanations is not sufficient to explain B1.

Case 3: Consider a more general case.[10] Suppose that it is possible for there to be ungrounded infinite regresses of ontological explanation. Then surely there is a world which has a regress $p_1, p_2, \ldots$ of ontological explanations, and also has some explainable true proposition q that is not explained by anything in *this* regress. Then form the regress $p_1 \,\&\, q, p_2 \,\&\, q, \ldots$. This seems to be a regress of ontological explanation, but plainly something has been left out—an explanation of q. So if there can be ungrounded infinite regresses of ontological explanation, then some of those ungrounded infinite regresses of explanation are plainly insufficient to explain the initial proposition.

Therefore, we have counterexamples to the version of the Hume-Edwards principle which applies to ontological explanation. The mere fact that each proposition in a series has an explanation doesn't entail that the series as a whole is adequately explained.

Step 2: Generalize. It is a jump from the mere falsity of the Hume-Edwards principle—the fact that *some* infinite regresses fail to adequately explain—to the claim that *all* infinite regresses fail to adequately explain. Pruss's strategy for generalizing from his cannonball case is not to argue that it shows that all infinite regresses of causal explanation fail to explain, but to make the more modest claim that his cannonball case is

[10] I owe this case to Alexander Pruss in correspondence.

relevantly similar to the regress of states of the universe which is at issue in the cosmological argument. He concludes that the case shows that at least the regress at issue in the cosmological argument fails to adequately explain and needs a stopping point in a necessary being.[11]

I'm interested in establishing a more general conclusion from the three cases involving ontological explanation: all infinite regresses of ontological explanation are insufficient to explain. This is, I believe, the moral of the examples, and we can recognize that moral by reflecting a bit about the examples. The regresses in these cases are not vicious because they posit the existence of an infinite series of true propositions. Nobody denies that each proposition in the series is in fact true. Nor are the regresses vicious because they posit genuine explanatory relations between each of the members of this infinite series. Each of the propositions in the series does in fact ontologically explain the proposition before it. The problem with the examples, then, most obviously seems to be that the infinite series on its own *fails to adequately or sufficiently explain* the proposition in question. *That the box is square* simply isn't adequately explained by the infinite series of propositions adduced as its explanation, just as any given stage of the cannonball's flight simply isn't adequately explained without reference to the cannon.

The example regresses are vicious, then, because they fail (on their own) to adequately or sufficiently explain. The natural explanation of the example regress's explanatory failure is that infinite series of ontological explanation *always* fail, by themselves, to adequately explain. We can therefore generalize, on the basis of an

[11] He also makes the more general claim that all infinite regresses of causal explanation fail to adequately explain, but his grounds for that claim stem from an entirely different argument connecting infinite regresses of explanation with circular explanation. I'll discuss the chances of finding an analogue of that argument in section 2.4. See Pruss, "The Hume-Edwards Principle," 154-157.

inference to the best explanation, from the clear failure to sufficiently explain of the example infinite regresses to the claim that *all* infinite regresses fail to sufficiently explain. (Thus the name: the Argument from Explanatory Failure.) Therefore, only a grounded series—a series (even an infinite one) with an ultimate explanation—can sufficiently explain. The series may contribute in some way to the proposition's explanation, but such explanatory contributions are inadequate in the absence of an ultimate explanation. If a proposition has an explanation, it has an ultimate explanation.

There are two considerations which support this particular interpretation or explanation of the explanatory failure of the example regresses. The first supporting consideration is connected to the role of context in identifying explanations. Generally speaking, the role that context plays with respect to identifying explanations is that it allows what really are, ultimately speaking, unsatisfactory or incomplete explanations to stand in for satisfactory or complete ones. For example, with respect to causal explanations, context allows us to cite merely partial explanations which can stand in for full explanations. If you ask me "Why is the table red?" and I say "because I painted it," I have given only part of the causal explanation of the table's being red; the full explanation involves quite a few more causal factors. Nevertheless, context specifies which part of the full explanation is relevant here (probably which part the person asking the question wants to know) and so allows the partial explanation to stand in for the full explanation. In the same way, with respect to ontological explanations (and perhaps causal explanations as well, though that isn't my primary concern), context specifies which *mediate* explanation is acceptable in a given situation. If I ask "what is it for a human to be angry?" and you answer "it is for a rational animal to be angry," you have

given me a merely mediate explanation (a merely partial reduction), which may or may not be acceptable depending on the context. If the context reveals that I want to know what humans are, then your explanation is satisfactory; if context reveals that I want to know what it is to be angry, or both what humans are and what it is to be angry, your explanation is not satisfactory. This gives us reason to think that context is operating in the same way when it specifies which *mediate* (ontological or causal) explanations are legitimate as it is when it specifies which *partial* (causal) explanations are legitimate. Mediate explanations, like partial explanations, are most likely incomplete, insufficient, or inadequate in some way, ultimately speaking. Context allows such insufficient or incomplete explanations to stand in for sufficient or complete explanations, but they remain from an ultimate (context-independent) point of view insufficient. The phenomenon of the influence of context in specifying which mediate explanations are legitimate, therefore, supports the moral I've drawn from the example: that infinite regresses of ontological explanation, on their own, fail to adequately explain—because such infinite regresses are made of nothing but mediate explanations, which on their own are inadequate explanations.

The second supporting consideration is a generalization from a type of infinite regress which Daniel Nolan claims is clearly vicious. Consider a "homuncular theory of vision:" what it is for X to see an object is for there to be a homunculus behind X's eye which sees that object and communicates the information to X. This is supposed to be a reductive analysis of what it is for X to see something, but it uses "sees" in the analysis, which leads to a regress: what it is for the homunculus to see something is for it to have another homunculus behind its eye which sees the thing, and so on forever. This is,

Nolan thinks, an obviously vicious regress, and the regress is vicious because it fails to do what it claims to do: give a reductive analysis of sight. Now, these sorts of failed-reduction regresses are a subset of regresses of ontological explanation. I agree that failed-reduction regresses are obviously vicious; but since it is hard to see any explanation for their viciousness which doesn't apply generally to all regresses of ontological explanation, their viciousness gives us reason to think that all regresses of ontological explanation are vicious. Why are these failed-reduction regresses so obviously vicious? One answer is that they fail to reduce when they should. But they *do* at least partially reduce; the homuncular regress reduces vision in general to the vision of a homunculus. And no ungrounded infinite regress *completes* a reduction of its terms to other terms, because there are always more reductions, more explanations. So all infinite regresses of ontological explanation achieve only partial, halfway reductions. If failed-reduction regresses (like the homuncular regress) are vicious because they fail to completely reduce, then so are all other regresses of ontological explanation because they similarly fail to completely reduce. Another answer is that failed-reduction regresses are vicious because the proposed reduction *demands* an immediate ungrounded infinite regress. Because vision is what is being explained, and it is used in its own explanation, there is no way to stop the infinite regress. If this is why failed-reduction regresses are vicious, though, then all ungrounded infinite regresses of ontological explanation are vicious—failed-reduction regresses are vicious precisely because they entail an ungrounded infinite regress. So if failed-reduction regresses are vicious, then it is probable that all ungrounded infinite regresses of ontological explanation are vicious, in

the absence of some alternate explanation of why the failed-reduction regresses are vicious.

The moral I've drawn from the examples is a bit different from the one which is sometimes drawn from the cannonball case for causal explanation. I've claimed that an ungrounded infinite regress of ontological explanations for a proposition *p* fails to sufficiently explain *p* itself. Sometimes, the cannonball case is taken to show instead that, though each proposition (including *p*) in the series is sufficiently explained by the proposition immediately prior to it, the series as a whole remains unexplained.[12] The question here is: what fails to be explained? Is it the proposition which begins the infinite series, or alternatively each of the propositions within the series? Or is it the series as a whole? I think that the correct conclusion to draw is that the individual propositions within the series remain incompletely explained, not that there is something extra in the series as a whole which remains unexplained, for three reasons. First, it simply isn't plausible in the case of ontological explanations to agglomerate them into a series and claim that there is something extra in the series as a whole which requires explanation. This is because, if *p* ontologically explains *q*, then *p* and *q* don't really pick out distinct states of affairs because *q* is reducible to *p*. Now, one could take this as a disanalogy between ontological and causal explanation (and my purposes would be served, since my claims are primarily about ontological explanation), but the next two reasons apply to causal just as easily as ontological explanation. Second, as I argued above, the phenomenon of context urges us to consider mediate explanations as relevantly similar to partial explanations—as fundamentally incomplete explanations which can stand in for

[12] For example, Pruss speaks this way (in "The Hume-Edwards Principle").

complete ones in certain circumstances. This phenomenon applies as much to causal explanations as to ontological explanations. If mediate explanations are incomplete, then the individual propositions in an ungrounded infinite series are incompletely explained because they are explained only by mediate explanations. Third, I agree with Hume and Edwards that there is something intuitive about agglomerating explanation as they do; I just don't see what more there is to explain in a conjunction than there is already in the conjuncts. Richard Gale's examples which are supposed to show that explanation isn't agglomerative in this way seem to me only to show that *incomplete* explanations—merely partial and merely mediate explanations—are not agglomerative, or at least don't agglomerate into a complete explanation. In fact, a version of the Hume-Edwards Principle seems true:

> *Correct Hume-Edwards Principle (CHE):* If all the members of a set of propositions are *completely* explained, then their conjunction is thereby (completely) explained.

In fact, the *original* Hume-Edwards principle[13] seems true so long as "explained" is taken in both its uses to indicate complete explanation—explanation not legitimately limited by contextual factors. Actually, even the original principle seems true if "explained" is taken in both its uses to indicate incomplete (proximate or partial) explanation (though I'm open to being persuaded otherwise on this). It is only when the principle is allowed to shift between complete explanation and limited, incomplete explanation that it licenses infinite ungrounded regresses of explanation and turns out false.

[13] At least the more precise propositional version of it, *(HE*)*.

There is something pretty unsatisfying about my discussion so far. I've said why the particular example regresses fail to sufficiently explain: because *all* infinite regresses on their own fail to sufficiently explain. I haven't said, though, why *this* is true: why all infinite regresses fail to completely explain or why merely mediate explanations are never fully complete explanations. The answer most likely has something importantly to do with the asymmetry of ontological explanation. Ontological explanation is asymmetrical because a proposition's explanation is somehow "closer" to the world than it is. If something like this is true, then it would explain why ungrounded infinite regresses of merely proximate explanations are unsatisfactory—they never actually get any closer to the world, which is in the very nature of explanation to do. However, in the absence of a theory as to the nature of the "closeness" condition on ontological explanation, this remains quite speculative.

Back to solid ground: if a proposition has an explanation, it has an ultimate explanation. Mediate explanations, like partial explanations, are only incomplete explanations which context allows to stand in for complete explanations. Infinite regresses of explanation are insufficient, on their own, to explain, and so ungrounded infinite regresses (regresses without an ultimate explanation) are impossible.

There is one objection to be met. I've made a jump a number of times throughout this argument, from the claim that ungrounded infinite regresses of ontological explanation fail to adequately explain to the claim that therefore there aren't any such ungrounded infinite regresses. Grant that infinite regresses of ontological explanation, on their own, fail to adequately explain; why think that all propositions which have an explanation have a sufficient explanation? Why can't a proposition have an inadequate

explanation and nothing more? I could claim that inadequate explanations aren't really explanations at all (like fake chairs aren't chairs), but that doesn't seem plausible at all in the case of mediate explanations. Mediate explanations are genuine explanations, just inadequate or insufficient on their own. My reply, instead, is twofold. First, general demands for explanation of the sort invoked in philosophical discussion—claims that certain propositions or certain classes of propositions have an explanation—generally aren't limited by context in the way needed to allow mediate explanations to stand in. So mediate explanations are not sufficient to meet any general demand for explanation, which entails that if a proposition has an explanation (in the sense this claim is normally made in philosophy), it has an ultimate explanation. Second, I think the metaphysical nature of explanation demands the existence of ultimate explanations. Ontological explanation, as I've said, probably involves getting "closer" to reality in some way or characterizing the world in some more direct way. That means that even a mediate explanation, to be an explanation, needs the presence of an ultimate explanation—else it isn't any "closer" to reality than the proposition it supposedly explains.

If you are unconvinced by my twofold reply, you should think that the Argument from Explanatory Failure only establishes that ungrounded infinite regresses of ontological explanation fail to adequately explain—not that they are thereby impossible. This lesser conclusion will suffice for many philosophical purposes, though; ungrounded infinite regresses of ontological explanation are still most unsatisfying in that they fail to adequately explain what they are supposed to explain. The two further arguments I'll give in section 2.4, though, do establish the stronger claim.

2.3 Resisting the Argument from Explanatory Failure

There is one strategy for avoiding the Argument from Explanatory Failure. Since the argument involves a generalization from three examples, and so is basically an inference to best explanation (of another sort than ontological explanation), the way to blunt it is to offer a different generalization or alternative explanation. To avoid the force of the argument, which is the conclusion that infinite regresses fail to sufficiently explain, the alternative explanation would have to specify why the particular regresses in the examples are so clearly vicious (fail to sufficiently explain) *without* ruling out the explanatory sufficiency of *all* ungrounded infinite regresses. In this section, I'll discuss the only strategy of that sort of which I am aware.

As it turns out, Peter Klein does precisely this sort of thing in reply an attack on his infinitism about epistemic justification which bears a certain similarity of structure to my argument. Klein's reply doesn't transfer directly to my argument (since epistemic justification and ontological explanation are rather different), but his reply does give a sort of model that all replies to my argument will need to follow. John Post's objection to Klein's infinitism is analogous to Pruss's cannonball case: if infinite regresses of reasons are sufficient to justify a belief, it is too easy to justify any belief. For any belief, an infinite string of reasons can be constructed support it: for a belief A, the following belief is sufficient to support it (because it deductively entails it): B and B⊃A. This second belief, once again, can be supported by a third belief: C and C⊃(B and B⊃A). This process can be repeated to infinity; each proposition in the chain is supported by the one before it because it is entailed by the one before it. The problem is that most substitution instances of this sort of chain are pretty obviously not justification-conferring, since you

can substitute just about any proposition for A, B, C and so on (so long as you don't repeat any). It follows that infinite regresses of reasons are *not* in general sufficient to confer epistemic justification.

Klein's reply is that it is not just any infinite series which is sufficient for epistemic justification, but only infinite series which satisfy certain criteria: each member of the infinite series must be both available to the agent and must be the sort of thing that would be accepted in the long run as a reason by the appropriate epistemic community (or some other criterion of what counts as a good reason).[14] These criteria rule out Post's example, because many of the propositions in Post's regresses cannot be available to the agent (because they are too complex) and wouldn't be accepted by an appropriate epistemic community as good reasons. I'm not going to weigh in on whether these criteria give a good account of justification. I just want to make the point that Klein is on the right track here. Klein's criteria do seem intuitively relevant to whether a reason is a *good* reason to hold a belief, and only as a side effect rule out the counterexamples to infinitism. The criteria seem to be plausible candidates for being qualities essential to a good or sufficient reason to hold a belief.

Any alternative to my explanation of the failures of the example regresses of ontological explanation to sufficiently explain will have to hew to this sort of model. The alternative will need to rule that the example regresses fail to sufficiently explain *without* ruling out the explanatory sufficiency of all ungrounded infinite regresses. What is more, if the alternative is to be a plausible one, the criteria it uses to differentiate vicious from non-vicious regresses will need to be intuitively relevant to the quality of the explanation

[14] Klein lists a couple of alternative characterizations of a "good reason," all of which serve to rule out Post's example. Peter Klein, "Infinitism is the Solution to the Regress Problem," in Matthias Steup and Ernest Sosa (eds.), *Contemporary Debates in Epistemology* (Malden, MA: Blackwell, 2005), 137.

provided by the regress. The only extant alternative to my explanation of the explanatory failures of the example regresses, I'll argue, fails this last test: the criterion it proposes to differentiate sufficient from insufficient infinite explanatory regresses just doesn't seem relevant to the quality of the explanation provided by the regress.

I'll build up to consideration of this alternative explanation by first considering analogue alternative explanations of the cannonball case for causal explanation. The first alternative explanation is this: an infinite regress of causal explanations is unsatisfactory on its own if there is in fact a further explanation grounding the regress, while a regress is satisfactory so long as there is no further explanation. So the cannonball regress is unsatisfactory just because there is in fact a further explanation available (the firing of the cannon); if there hadn't been a further explanation, the regress would have sufficed to explain the current state of the cannonball's flight. This alternative fails because its criterion for distinguishing vicious from non-vicious regresses doesn't seem relevant in the right way to the explanatory power of the explanations in the regress. Why would the mere absence of a further explanation magically make the explanatory series a *better* or *sufficient* explanation? It seems rather that it would simply make it true that the proposition in question simply doesn't have a sufficient explanation at all. We can illustrate this point by considering two possible worlds, one in which the flight of the cannonball comes about *ex nihilo* and one in which it is explained by the firing of a cannon. The very same infinite series of explanations is present in both; the only difference is that in one world there is a further explanation whereas in the other there isn't. It seems obvious that the *explanatory power* of the regress itself is no different

between the two worlds—it is just that in one world there exists an adequate explanation which doesn't exist in the other.

The second alternative explanation of the cannonball case, Graham Oppy's, is closely related to the first: an infinite regress of causal explanations is insufficient to explain just in case it is *possible* that there exists a further explanation; if it is impossible for there to be a further explanation, though, the regress *is* sufficient to explain.[15] This criterion seems to fail for exactly the same reason as the previous criterion. Why would the mere absence, even the necessary absence, of a further explanation for a series affect at all the explanatory quality of the series itself? The possible-worlds thought experiment is not available in this case to illustrate this, but what it illustrated seems to apply here as well: the mere absence or even necessary absence of a further explanation of a series just seems too extrinsic to the series, too unrelated to the series, to boost the series' explanatory power. The distinguishing criterion between infinite series which fail to sufficiently explain and those which do sufficiently explain needs to be intuitively relevant to the explanatory power of the series, and Oppy's criterion just isn't intuitively relevant in this way.

These two alternative explanations of the explanatory failure of the cannonball regress of causal explanations collapse into one alternative explanation of the explanatory failure of the example *ontological* explanatory regresses. Because ontological explanation is a necessary relation, if there isn't a further ontological explanation of a proposition, then it is necessary that there isn't a further ontological explanation. So the alternative explanation goes like this: an infinite regress of ontological explanations fails

[15] Graham Oppy, "Review of Timothy O'Connor, *Theism and Ultimate Explanation: The Necessary Shape of Contingency*," *Notre Dame Philosophical Reviews*, 2008 (6).

to sufficiently explain just in case there is in fact (and so necessarily is) a further explanation; an infinite regress succeeds in sufficiently explaining just in case there is not in fact (and so cannot be) a further explanation. Now, the reason I spent the last two paragraphs talking about causal explanation is that *this* view on ontological regresses fails for precisely the same reason the two views on causal regresses failed: the mere existence, even necessary existence, of a further ontological explanation for a series doesn't seem capable of removing the explanatory power of the series itself. The existence of the further explanation is too extrinsic to the series, too unrelated to the series, for it to magically turn the series into an inadequate explanation with its presence or into an adequate explanation with its absence.

Another way of making this same (or a similar) point is to note that this explanation of the explanatory failure of the example regresses is blatantly *ad hoc*: it just takes the only sorts of examples which could possibly show the insufficiency of infinite regresses to explain—examples where there exist infinite regresses which obviously don't explain because there is a further explanation which is obviously necessary—and rule them out by fiat.[16] Also, this explanation doesn't have the extra support provided by the two points I made in the last section.

I obviously haven't ruled out all possible alternative explanations to my own. Because my argument against the explanatory sufficiency of any infinite regresses is an inference to the best explanation, it remains vulnerable to alternative explanations. I've given a model of the form they must take: they have to rule that the example regresses are

[16] Oppy's alternative explanation isn't quite this bad, but since his view collapses into the badly ad hoc alternative explanation of the cannonball case's explanatory failure when they are applied to the ontological explanation cases, when his view is applied to ontological explanation it is still ad hoc in this way.

insufficient to explain without ruling that all infinite regresses are insufficient to explain, and the criterion they use to distinguish sufficient from insufficient regresses needs to be intuitively relevant for the explanatory power of the regresses themselves. Until one such plausible explanation is forthcoming, though, I conclude that the examples give us good reason to suppose that infinite regresses of ontological explanation are always, on their own, insufficient to explain. Therefore, if a proposition has an explanation, it has an ultimate explanation.

2.4 Arguments from Ontology and Circularity

The Argument from Explanatory Failure is an inference to the best explanation of the explanatory failure of some particular example regresses. In this section, I'll present two more arguments. The first appeals to facts about truthmakers and ontological commitment; call it the Argument from Ontology. The second is an attempt to apply another argument of Pruss's against ungrounded regresses of causal explanation to ontological explanation; call it the Argument from Circularity.

The Argument from Ontology. One of the arguments that Cameron discusses against infinite ungrounded chains of ontological *dependence* (not ontological explanation) is the idea that dependent entities are in some sense "less real" than the entities upon which they depend, and without a bottom, independent layer of reality none of the dependent entities would be real at all. Cameron dismisses this argument, and he may be right to dismiss it in the case of ontological dependence.[17] The intuition driving this argument, though, may have been built for ontological explanation rather than

[17] Cameron, "Turtles All the Way Down."

ontological dependence; it *is* possible to construct a good argument along these lines against ungrounded infinite regresses of ontological explanation.

The argument depends on the claim I established in the last chapter: the ontological commitment carried by a proposition is determined by features of that proposition's ultimate explanation (or, more precisely, its base proposition). Ontological explanation (unlike ontological dependence) is essentially reductive. This means that if a proposition doesn't *have* a base proposition, it also doesn't carry any ontological commitment. Therefore, none of the propositions in an ungrounded infinite regress of ontological explanations carries any ontological commitment at all. The regress continually reduces without end, and there is no base proposition. So, if a proposition has an ontological commitment, then it must not have an ungrounded infinite chain of ontological explanations.

The limitation of this argument is that it applies only to those propositions which have ontological commitments. There is a way to erase this limitation and extend the argument so that it applies to all propositions without exception, however. The following Additive Principle seems obviously true: a conjunction carries all the ontological commitments of its conjuncts. It follows from this principle that no proposition at all has an ungrounded infinite series of explanations. For suppose that some proposition *p* does have an ungrounded infinite series of explanations (and therefore carries no ontological commitment), and suppose that some other proposition *q* does carry an ontological commitment. The conjunctive proposition *p and q* will also have an ungrounded infinite series of explanations and so will not carry any ontological commitment—which violates the Additive Principle, since *p and q* therefore won't carry even the ontological

commitment that *q* carries. So long as there is one proposition with an ungrounded infinite regress of ontological explanations, the Additive Principle is violated by the conjunction of that proposition with any proposition which carries an ontological commitment. Since the Additive Principle is true, there are no ungrounded infinite regresses of ontological explanation.

The fan of ungrounded infinite regresses could try to avoid this argument by modifying the accounts of ontological commitment on which it is based. The modification, if it is to avoid the force of the argument, would have to go like this: the quantifier and truthmaker accounts I gave are fine for non-conjunctive propositions, but conjunctive propositions have their commitments by virtue of the commitments of their conjuncts, so the account of the ontological commitment of a conjunctive proposition would be different—a conjunctive proposition carries commitment by virtue of the quantifiers in the ultimate explanations of its *conjuncts*, not its own ultimate explanation. This attempted modification runs into problems with a certain type of proposition, though, which came up in the last chapter: a proposition (call it *r*) which itself contains no conjunctions but which is ontologically explained by a conjunctive proposition (call it *s*). For example, *r* is the proposition *that Dan is alone in the room*. This proposition has no conjunctions in it, but it is ontologically explained by a conjunctive proposition, something like the proposition *that Dan is in the room and nobody else is in the room*. The additive nature of *r*'s ontological explanation can't be captured by the proposed modification, since *r* itself has no conjuncts. This means we have to bring in the notion of an ultimate explanation *before* we start splitting the proposition into its conjuncts: a proposition *p* carries a commitment by virtue of the quantifiers in each of the conjuncts of

p's base proposition (or the minimal truthmakers for such conjuncts). This criterion still rules out ungrounded infinite regresses of ontological explanation, since we need to get to the base proposition before we can start splitting the proposition up into its conjuncts.

I conclude that the connection between ontological explanation and ontological commitment rules out the possibility of ungrounded infinite regresses of ontological explanation.

The Argument from Circularity. Pruss's cannonball case isn't the means by which he establishes that *no* ungrounded infinite regress of causal explanations sufficiently explains. (I've generalized more broadly from the cannonball case and the analogue ontological explanation cases than Pruss himself does.) He gives another argument which establishes that more general conclusion, which goes like this: first, no circular explanation is adequate; second, if there is any ungrounded infinite regress of explanations which is adequate to explain, then there is an adequate circular explanation; therefore, there is no ungrounded infinite regress of explanations which is adequate to explain.[18]

Pruss takes the first premise, which rules out the explanatory adequacy of circular explanations, to be obvious. The key is the support for the second premise. His argument for this premise depends on a principle of agglomeration (not to be confused with the Additive Principle used in the previous argument) for causal explanation: if *p* explains *r* and *q* explains *s*, then *p and q* explains *r and s*.[19] Given this principle, it is possible to construct a circular explanation out of every ungrounded infinite regress of

[18] Pruss, "The Hume-Edwards Principle."

[19] Pruss puts the principle in terms of things rather than propositions, but I don't think that substantively affects the argument.

explanations. Consider an infinite causal regress of chickens and eggs: the existence of each chicken is explained by the antecedent existence of an egg, and the existence of each egg is explained by the antecedent existence of a chicken. Using the principle of agglomeration, two (infinitely long) propositions (in Pruss's terms, two sets) can be constructed—one stating the existence of all the eggs, the other stating the existence of all the chickens—and these propositions explain one another.[20]

There are two possible ways to extend this argument from causal explanation to ontological explanation. The first is to find a directly analogous argument. Circular explanations are just as patently inadequate in the case of ontological explanation as they are in the case of causal explanations, perhaps even more so. If the same principle of agglomeration holds, then, the same argument applies. And the principle of agglomeration does seem to be true, even more obviously for ontological explanation than for causal. If what it is for *a human to exist* is for *a rational animal to exist*, and what it is for *S to know p* is for *S to virtuously believe p*, then what it is for *a human to exist and S to know p* is for *a rational animal to exist and S to virtuously believe p*. In fact, many of the propositions we explain are complex propositions of this sort, which can be broken down into their elements and built back up at will: what it is for *a human to know p* is for *a rational animal to virtuously believe p* if and only if, it seems, what it is for a *human to exist* is for *a rational animal to exist* and what it is for *somebody to know something* is for *somebody to virtuously believe that something*. So the principle of agglomeration seems true, and the argument establishes the impossibility of ungrounded infinite regresses of ontological explanation.

[20] See Pruss's appendix to "The Hume-Edwards Principle" for a rigorous set-theoretical statement of the argument.

The second way to extend Pruss's argument to ontological explanation is less direct. Instead of finding a directly analogous argument for ontological explanation, we can point to the similarities between ontological explanation and causal explanation. Both are kinds of explanation, both are relations between propositions, both are asymmetric, and both seem to play similar roles in increasing our understanding of our world. Though there are some disanalogies between the two, they nevertheless seem closely related. If infinite regresses of causal explanation always fail to sufficiently explain—as Pruss's circularity argument shows quite effectively—there is reason to think, on the basis of the general similarity between the two types of explanation, that infinite regresses of ontological explanation also always fail to sufficiently explain. This is an argument by analogy, and as such vulnerable to the pointing out of disanalogies between the two sorts of explanation. However, until somebody points out a disanalogy that seems relevant to the explanatory power of ungrounded infinite regresses, I think that this argument by analogy does give us good reason to conclude that infinite regresses of ontological explanation, on their own, fail to sufficiently explain.

Conclusion. Each of the three arguments—the Argument from Explanatory Failure, the Argument from Ontology, and the Argument from Circularity—establishes the conclusion that there are no ungrounded infinite regresses of ontological explanation. If a proposition has an ontological explanation, it has an ultimate ontological explanation. I've therefore met Cameron's challenge, or at least a version of Cameron's challenge, modified to apply to ontological explanation rather than ontological dependence. There are reasons to think that regresses of ontological explanation, by themselves, fail to adequately explain, and so ungrounded regresses are objectionable on grounds other than

considerations of theoretical simplicity. Daniel Nolan needs to expand his taxonomy to account for this: he needs to expand his category of non-reductive regresses (what I called failed-reduction regresses above) to include all ungrounded infinite regresses of ontological explanation.

As a side note, Nolan also needs to create a new category for ungrounded infinite regresses of *causal* explanation. He thinks there are basically four reasons that an infinite regress can be vicious. First, some regresses are vicious because they involve contradictions at their first level; second, regresses of reductive analysis are vicious because they fail to actually reduce their proposed analysandum (I've argued that this needs to be expanded to include all ungrounded regresses of ontological explanation); third, some infinite regresses are vicious because there is a known finite domain for the regress to exist in; and fourth, all other regresses are vicious only because parsimony considerations give us a default theoretical reason to avoid them.[21] The cannonball regress fits into none of these categories. It doesn't involve any contradictions, it isn't an analysis at all but a causal explanation, there isn't a known finite domain (quite the opposite—we believe time is infinitely divisible or dense), and parsimony considerations don't suffice to reject the infinite divisibility of time. This means that Nolan has missed a category. Since the Argument from Explanatory Failure and the Argument from Circularity apply equally to causal regresses as to ontological regresses, there is reason to suppose that the category he missed includes all ungrounded regresses of causal explanation. Such regresses are vicious because they fail to adequately explain the proposed explanandum. The viciousness of the regress doesn't lead us to deny the

[21] Nolan, "What's Wrong with Infinite Regresses?"

existence of the regress (we still do think there is an infinite number of temporal stages between the cannonball's firing and any stage of the cannonball's flight, unless we are Zenonian); instead, it leads us to deny that the regress sufficiently explains what it was supposed to explain. The fact that Nolan missed this category suggests also that Nolan miscategorizes a number of the specific regress arguments he uses as examples. For instance, the infinite regress of chickens and eggs (which Nolan categorizes as a known-finite-domain regress), the infinite regress of turtles holding up the earth, and some of the infinite regresses advanced in support of the cosmological argument (both of which Nolan categorizes as quantitative parsimony regresses) all should be categorized rather as infinite regresses of causal explanation. The regresses are vicious because they purport to explain something and fail to do so.[22]

This emendation of Nolan's taxonomy is only a bonus, though. My primary aim has been to show that infinite regresses of ontological explanation, on their own, fail to satisfactorily explain, and that ungrounded infinite regresses of ontological explanation are impossible. The extensive references to causal explanation throughout my discussion have been necessary and desirable because of the close relationship between causal and ontological explanation.

[22] Of course, the chicken-and-egg regress is also vicious because of a known finite domain, but that isn't the only thing wrong with it. Interestingly, the chicken-and-egg regress is also used in Pruss's argument from circularity. See Pruss, "The Hume-Edwards Principle."

3. The First and Second Demands: The Principle of Sufficient Reason and Ockham's Razor

3.1 The Principle of Sufficient Reason

It is important to know that ungrounded infinite regresses of ontological explanation are impossible—that chains of ontological explanations have endpoints or ultimate ontological explanations. It would perhaps be even more important to know which propositions have ontological explanations and which do not. We could take a big step toward this knowledge if we could show that there are particular kinds of propositions all of which have ontological explanations. In this section and the next I'll discuss a total of three possible general demands for explanation. In this section, I'll discuss two—an analogue for ontological explanation of the Principle of Sufficient Reason for causal explanation and Ockham's Razor.

In light of the many significant connections between ontological explanation and causal explanation, many of which were highlighted by my discussion of infinite regresses, it makes sense to start our investigation into general demands for ontological explanation by looking for parallel demands for causal explanation. The most prominent general demand for causal explanation is the Principle of Sufficient Reason (PSR). The form most often defended nowadays is restricted to contingent propositions:

(PSR): Necessarily, every contingent proposition has a (causal) explanation.

In recent years there have been a slew of ingenious defenses of the PSR.[23] The question before us is: is there a similarly defensible principle of sufficient reason for ontological explanation? The analogue principle would look like this:

[23] See especially Alexander Pruss, *The Principle of Sufficient Reason: A Reassessment* (New York: Cambridge University Press, 2006) and Robert C. Koons, "Epistemological Foundations for the

(OPSR): Necessarily, every contingent proposition has an (ontological) explanation.

I'll show that, while few of the arguments for the PSR have analogues which support the OPSR, there is one objection which is more obviously fatal to the OPSR than to the PSR. So the ontological analogue of the PSR is not true.

I'll start with the decisive objection. Perhaps the most serious objection to the PSR is Van Inwagen's modal fatalism argument. It makes the following necessity assumption: if a proposition *p* (causally) explains a proposition *q*, then *p* entails *q*. This assumption, in conjunction with the PSR and strictures against infinite regresses and circles of explanations, entails modal fatalism: every proposition is necessarily true or necessarily false. Pruss's way out of the modal fatalism problem is to reject the necessity assumption: one proposition can causally explain another, he thinks, without entailing it. He adduces two main cases in support: the sort of causal explanation involved in indeterministic causation and the sort of causal explanation involved in libertarian free will.

I don't intend to weigh in on whether Pruss's rejection of the necessity assumption is plausible in the case of causal explanation. My concern is the fact that the modal fatalism problem applies in exactly the same way to the OPSR. The necessity assumption, in conjunction with the OPSR and strictures against infinite regresses and circles of ontological explanation, entails that all propositions are necessarily true or necessarily false. That is because it would follow that every contingent proposition has an ontological explanation which is a necessary proposition. But if *p* ontologically

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Cosmological Argument," in Jonathan L. Kvanvig (ed), *Oxford Studies in Philosophy of Religion, Volume One* (Oxford: Oxford University Press, 2008), 105-133.

explains *q*, then *p* entails *q* (by the necessity assumption), andn anything entailed by a necessary proposition is itself necessary. So there would be no contingent propositions; they would all be necessary. The argument is more powerful against the OSPR than against the PSR because rejecting the necessity assumption is far less plausible in the case of ontological explanation than it is in the case of causal explanation. Pruss's examples of causal explanation without necessitation—free will and indeterministic causation—simply don't apply to ontological explanation. And it just seems obvious that ontological explanation does involve necessitation: if *what it is* for there to be a human is for there to be a rational animal, then the existence of a rational animal necessitates the existence of a human.

In light of the decisiveness of the modal fatalism objection, there doesn't seem much hope for the OPSR. Most of the arguments that have been advanced in favor of the PSR don't have analogues which apply to the OPSR. For instance, Koons' transcendental argument for the PSR doesn't seem to apply at all to the OPSR. Nor do most of Pruss's many arguments seem to apply. The OPSR doesn't seem self-evident, and it is hard even to see how to start to generate analogues of most of his other arguments.[24]

There is, however, one of Pruss's arguments for the PSR which looks like it might apply to the OPSR: the argument from our epistemic practice of inference to the best or only explanation. Pruss points out that, in our normal practice of inferring the best explanation for a phenomenon (at least for contingent states of affairs), we don't even consider as an epistemic possibility the simplest hypothesis: that there simply isn't an

[24] See Pruss, *The Principle of Sufficient Reason*.

explanation at all for the phenomenon. In other words, we assign a probability of zero to the possibility that the phenomenon could have occurred without a causal explanation for its occurrence. Our assumption here is equivalent to the PSR: for every event, we assume that it has some explanation. Pruss calls this the Sherlock Holmes Principle: "when you have eliminated the impossible, whatever remains, however improbable, must be the truth."[25]

Something like this argument applies to the OPSR as well. We use inferences to the best explanation to identify ontological explanations as well as causal ones. A major argument for universals is one such inference—propositions referring to universals, the argument goes, are the best ontological explanation for many (maybe all) propositions involving ordinary predications. However, it seems that the Sherlock Holmes principle fails with respect to ontological explanation in a way that it does not with respect to causal explanation. When we infer ontological explanations, we do infer the *best* explanation, but we don't always feel constrained to accept the *only* explanation. Unlike with causal explanations, we often consider no explanation at all to be superior to at least some possible explanations. This is what metaphysicians do when they make some philosophical terms or propositions primitive—they treat them as unexplainable. So there is a relevant difference between our practice of inferring the best causal explanation and our practice of inferring the best ontological explanation—no explanation at all is a viable option in the case of ontological explanations, where it isn't in the case of causal explanations. Therefore, the argument from inference to best explanation doesn't support the OPSR.

[25] Ibid., 283.

It does support *some* kind of demand for ontological explanation, though, albeit a fairly tentative one. I think our practice of inferring the best ontological explanation presupposes only something in the neighborhood of Ockham's Razor.

3.2 Ockham's Razor

Concerns for theoretical simplicity and parsimony—concerns which I'll lump together under the heading of Ockham's Razor—are sufficient to support our abductive practices with respect to ontological explanation. What is more, it justifies exactly the kind of tentativeness that we do in fact display when using abduction to identify ontological explanations. I conclude, then, that Ockham's Razor generates a kind of demand for ontological explanation, the strongest we can salvage from the failure of the OPSR.

Ockham's Razor does support at least some kind of demand for ontological explanation. It obviously supports ontologically explaining one kind of entity in terms of another kind of entity, because that reduces the number of entities to which we are committed. Likewise, it supports ontologically explaining propositions with existential quantifiers in terms of propositions without them—in other words, "explaining away" apparent ontological commitments. I think it also supports ontologically explaining other sorts of propositions as well, though. Surely a concern for theoretical simplicity can support ontologically explaining one proposition by another even if neither proposition posits entities, simply because identifying such an explanation connects the propositions we believe to each other and reduces them to each other. So a concern for theoretical simplicity should lead us to posit ontological explanations wherever we can.

The demand for ontological explanation that a concern for theoretical simplicity supports, though, is fragile in at least two interconnected ways. Both ways are tied up with the criteria we use to judge which explanation is the "best" explanation. These criteria include whether the explanation is theoretically unified with other true explanations, whether it is illuminating in various ways, and so on. First, the demand for an ontological explanation generated by Ockham's Razor is defeasible. Proposed explanations need to meet some minimum level of "goodness" (as defined by the criteria) before they are accepted; if there aren't any explanations available which are sufficiently good, it is reasonable to deny that there is any ontological explanation at all. Second, the "goodness" of proposed ontological explanations must be measured against their theoretical cost elsewhere, and they may be outweighed by contrary beliefs or even by the concern for theoretical simplicity as applied elsewhere. For instance, an ontological explanation that posits a new kind of entity obviously carries a penalty in terms of theoretical simplicity, which may or may not outweigh the benefits it brings in simplifying a theory, for instance.

It is a difficult matter to give rules spelling out the demands of theoretical simplicity or Ockham's Razor, and I will not try. I do conclude, though, that Ockham's Razor gives a sort of *prima facie* (albeit easily defeasible) demand for ontological explanation, and it does so for all kinds of propositions.

4. The Third Demand: Truthmaker Theses

4.1 Truthmaker Theses and Demands for Ontological Explanation

The last sort of general demand for ontological explanation to be considered is that contained in truthmaker theses—claims that the truth of certain classes of propositions requires the existence of entities which make them true. Now, the relations of truthmaking and of ontological explanation are different relations. For one thing, truthmaking is a relation between a proposition and an entity, while ontological explanation is a relation between a proposition and another proposition. For another, the two relations have different modal properties, which I'll explore in a minute. Nevertheless, as we'll see, any claim that a certain class of truths need truthmakers entails a corresponding claim that those same propositions have an ontological explanation (more precisely, a base proposition) of a certain sort.

My intent is to defend a truthmaker thesis that will generate a significant general demand for ontological explanation. I'll argue that all contingent propositions have a base proposition which satisfies a set of constraints involving existential quantification. This is quite imprecise; I'll specify the precise demand for explanation I'm defending as I develop the argument. In this first subsection (4.1), I'll show how truthmaker theses entail demands for ontological explanation and what sort of demands they entail. In the next subsection (4.2), I'll give my main argument for a truthmaker thesis and specify exactly what sort of demand for ontological explanation it supports. Finally, in subsection 4.3, I'll discuss the relationship between my argument and some other arguments in the literature.

I'll begin by repeating some of the presuppositions with respect to truthmakers that I outlined in the last chapter. First, by truthmaker I mean an *entity* which makes a proposition true. Second, if an entity is a truthmaker for a proposition, then that entity's existence necessitates the truth of the proposition. If the entity's existence is not metaphysically sufficient for the truth of the proposition, then there must be something more than it to make the proposition true. Third, contrary to some analyses in the literature, an entity's necessitating the truth of a proposition is not all there is to the truthmaking relation. There must be something more than this merely modal relation between the entity and the proposition for the entity to be a truthmaker for the proposition. I am attracted to some version of Merricks' account, according to which an entity is a truthmaker for a proposition just in case the proposition is "about" that entity and the entity entails the proposition's truth. I'm not committed to this account, though; I think the notion of a truthmaker is intuitively clear enough that we don't need an analysis of the notion to reason about it and make use of it in our metaphysical theorizing. Fourth, a *truthmaker thesis* is a claim of the form: necessarily, if a certain kind of proposition is true, then it has a truthmaker. Truthmaker maximalism—the claim that all truths necessarily have truthmakers—is the most famous truthmaker thesis, but many others are possible.

If a proposition requires a truthmaker to be true, then there is another proposition which states what, at minimum, must exist to make the former proposition to be true. In the last chapter, I called this the *statement of the minimum truthmaker*. If a proposition needs a truthmaker to be true, then the statement of the minimum truthmaker for that

proposition is that proposition's base proposition.[26] The first step toward seeing this is noticing the similarity in the relationship between a proposition and its statement of its minimum truthmaker and the relationship between a proposition and its base proposition. The statement of the minimum truthmaker for *p* is both necessary and sufficient for *p*. It is necessary for *p* because *p* necessitates its minimum truthmaker—that is involved in calling it the *minimum* truthmaker. It is sufficient for *p* because a truthmaker for *p* necessitates the truth of *p*. The statement of the proposition's minimum truthmaker, therefore, has the first property of an ontological explanation: it is necessary and sufficient for *p*. It has a second property, as well: it is itself a proposition, and so is a candidate to be the explanation of *p*. It has a third property: it is objective in the same sense that ontological explanation is objective, since it is the statement of *p*'s minimum truthmaker whether or not any human beings are around to notice it. Finally, it has the crucial property of asymmetry; or, more precisely, it is like the base proposition in that it is the stopping point. If the proposition *that F exists* is the statement of the minimum truthmaker for *p*, then the two propositions have the same truthmaker and even the same truthmaker commitments; if you tried to say what the truthmaker commitments are for the statement of the minimum truthmaker (*that F exists*), you would have to simply reiterate the same proposition—it is its own statement of the minimum truthmaker. So the statement of the minimum truthmaker is the stopping point, and is therefore a candidate for being *p*'s ultimate explanation.

So the statement of the minimum truthmaker for *p* has all the properties I've identified of the ultimate explanation of *p*. But, as I admitted before, I haven't given a

[26] If a proposition does not need a truthmaker to be true, then it will have a base proposition which is other than the statement of its minimum truthmaker. What follows contains repetition from the previous chapter.

complete analysis of ontological explanation, and so having all the properties I identified isn't sufficient for being the explanation. Why think that the statement of the minimum truthmaker for *p* is *p*'s ultimate ontological explanation? Here are two reasons. First, consider the nature of the statement of the minimum truthmaker for *p*. It has the same truthmaker as *p* and even the same truthmaker commitments as *p*. If Merricks is to be believed, they are "about" the very same parcel of reality, and so there is a sense in which they say the same thing about the world, despite being different propositions. What differentiates them? If they are distinct, the statement of the minimum truthmaker is somehow *closer* to the reality of the situation, and there is no way to get any closer than it does (since to state *its* minimum truthmaker would be to repeat it). This is exactly the situation of a base proposition. There is a sense in which a proposition's ultimate ontological explanation (its base proposition) picks out the same portion of reality as it does, but the explanation is somehow closer to the reality of the situation that it is. This provides good reason, I think, to suspect that the statement of a proposition's minimum truthmaker just is that proposition's base proposition. Second, consider some examples. If the minimum truthmaker of the proposition *that the table is red* is a table, a universal redness, and a particular instantial tie, isn't it true that *what it is* for the table to be red is for the table, the universal, and the tie to exist? If the minimum truthmaker for the proposition *that a human exists* is an animal, the property of rationality, and an instantial tie between the two, isn't it true that *what it is* for a human to exist is for an animal, the property of rationality, and an instantial tie between the two to exist? I conclude that there is good reason to suppose that, if a proposition requires a truthmaker to be true, the

statement of that proposition's minimum truthmaker is always that proposition's base proposition.

I've shown that any truthmaker thesis entails a corresponding demand for ontological explanation: if a proposition's truth requires a truthmaker, then that proposition has a base proposition in the form of the statement of its minimum truthmaker. We can say more about the kind of explanation demanded, though: what are the characteristics of statements of minimum truthmakers? First, a statement of a minimum truthmaker must be existentially quantified (or built up truth-functionally from existentially quantified statements), because it states that a certain thing or a certain sort of thing exists. Second, since the mere existence of the minimum truthmaker entails the truth of the proposition for which it is a truthmaker, the statement of the minimum truthmaker doesn't assign any nonessential properties to the thing or things it says exist. Such nonessential properties wouldn't be part of the minimum needed to make the proposition true, since the mere existence of the truthmaker is sufficient for make it true. The only thing that makes the proposition contingent is the existential quantifier. So if a proposition's truth requires a truthmaker, then that proposition has a base proposition which is existentially quantified and which ascribes only essential properties to the things it claims exist. Any truthmaker thesis, then, entails a demand for a specific kind of ontological explanation: any propositions whose truth requires truthmakers either are or are ontologically explained by propositions which are existentially quantified and ascribe only essential properties to the things whose existence they assert.

This reasoning extends past truthmaker theses. Any *falsemaker* thesis also entails a corresponding demand for ontological explanation. A falsemaker is just like a

truthmaker in every respect except that it makes a proposition false rather than making it true. Some have proposed that negative truths don't need truthmakers to be true but *do* need falsemakers to be false. If a proposition requires a falsemaker to be false, then it has a similar sort of ontological explanation: its ontological explanation is the *negation* of an existentially quantified statement assigning only essential properties to the things whose existence it asserts. The proposition really asserts that the falsemaker is absent—more precisely, its base proposition asserts that the falsemaker is absent. This claim about falsemakers is really a correlate of the claims I've been making about truthmakers. The statement of the minimum falsemaker for a proposition which needs a falsemaker to be false will have all the same properties with respect to that proposition as would the statement of a minimum truthmaker for a proposition which needs a truthmaker to be true. Also, examples give the same support for this claim about falsemakers as they did about truthmakers. Suppose that *what it is* for a table to be red is for there to exist a table, a universal redness and an instantial tie, and suppose that these form the minimum truthmaker for the proposition. The negation of the proposition—the proposition *that it is not the case that a table is red*—will have as this same group of entities as its minimum falsemaker, and its base proposition will be the proposition *that it is not the case that there exists a table, a universal redness, and an instantial tie*.

So truthmaker theses and falsemaker theses entail corresponding demands for ontological explanation. If a proposition's truth requires a truthmaker, then that proposition has a base proposition which is existentially quantified and ascribes only essential properties to the things whose existence it asserts; if a proposition's falsity requires a falsemaker, then that proposition has an ontological explanation which is a

negation of an existentially quantified statement which ascribes only essential properties to the things whose existence it asserts.

Note that all this is so far neutral with respect to the truthmaker account of ontological commitment. To support that view I would need to argue further that the right sort of truthmaker theses are in fact true. I will be arguing for a particular sort of truthmaker thesis in the next section, and as it turns out, it is precisely the truthmaker thesis needed to support my truthmaker account of ontological commitment. However, the truthmaker thesis is powerful and interesting all on its own, independent of the support it may give to the truthmaker account of ontological commitment.

4.2 Defending a Truthmaker Thesis

It is notoriously hard to give an argument for a truthmaker thesis. David Armstrong famously claims that the most extreme truthmaker thesis, truthmaker maximalism, seems just obvious to him and that he can't give any further argument for it. The most popular, and most promising, way to argue for a truthmaker thesis is to derive it from the generally shared intuition that truth is grounded in being. The details of such a derivation, though, are much contested. I will give one such derivation in this section and conclude that a significant demand for ontological explanation is the result. In the next section, I'll discuss the relationship between my version of the argument and other arguments which have appeared in the literature.

My argument has three premises:

(1) What is true (all truth) is determined by (grounded in) what exists. (Premise)

(2) If what is true is determined by (grounded in) what exists, then what is true supervenes on what entities exist. (Premise)

(3) If what is true supervenes on what entities exist, then a significant class of truths must have truthmakers to be true. (Premise)

(4) Therefore, a significant class of truths have truthmakers (from 1-3).

After I have defended each of the premises of the argument, I will make the conclusion more precise by specifying which class of truths have truthmakers and what sort of demand for ontological explanation results.

Defense of premise 1. The first premise is usually taken as a given in discussions over truthmaking. Not very many people want to deny it. It just seems obvious that being determines truth. What is true doesn't "float free" of what exists; what exists decides what is true. Perhaps more to the point, many more people accept this claim, on the basis of something like brute intuition, than accept a significant truthmaker thesis. The question is whether this idea that what is true is determined by what exists can yield a significant truthmaker thesis. The really controversial parts of my argument, then, are the second and third premises.

Defense of premise 2. It is commonly recognized that the fact that being necessarily determines truth entails some sort of supervenience principle: truth in some sense supervenes on being. There are two possible candidates for the supervenience principle involved, though. The stronger supervenience principle, proposed originally by John Bigelow, is that truth supervenes on what entities exist. This means that there can't be a difference in what is true without a difference in what exists—if two possible worlds differ with respect to what is true in them, then at least one thing exists in one which does not exist in the other. The weaker supervenience principle, at one time endorsed by

David Lewis, is that truth supervenes merely on *what things there are and how they are*. That is, if two possible worlds differ with respect to what is true in them, then either something exists in one that doesn't exist in the other or something has some property in one that it doesn't have in the other. The stronger supervenience principle entails the weaker but not vice versa.

My target in premise two is the view that the weaker supervenience principle suffices as an articulation of the claim that what exists determines what is true. That is, I insist that the claim that what exists determines what is true entails not merely the weaker supervenience principle but the stronger as well. My argument for premise two is as follows. If what is true supervenes merely on *what things there are and how they are*, and not also on what things exist, then there is no distinction between how things are and what is true. But if what exists determines what is true, then there *is* a distinction between how things are and what is true. So what is true supervenes not merely on how things are and what there is, but also just on what things exist.

The central idea in this argument is that those who allow only the weaker supervenience principle and not the stronger cannot allow for any real ontological difference between how things are and what is true. If "how things are" are not themselves entities, like tropes or universals, then what is the difference between how things are and what is true about those things? The natural candidates for "how things are" just are those propositions which are true. Let me put this a little more precisely: on Lewis's view, it appears that *how things are* is a matter of a subset of the propositions, namely atomic propositions attributing a property or a relation to one or more entities. So his weaker supervenience principle is the claim that all truth supervenes on a subset of

the truths: those truths saying what does or does not exist and those truths saying what properties or relations obtain. But in that case there is a class of propositions, the fundamental propositions which specify "how things are" (what fundamental properties or relations obtain) which are not determined to be true by anything distinct from themselves. But in that case such propositions do "float free" of being; such truths just *are* "how things are," their truth is not determined by "how things are."

The opponent of the stronger truth-on-being supervenience claim might be tempted at this point to retreat on premise 1 and deny that what is true is determined by what exists. He would have to supplement his denial of this apparently obvious truth, though, with some sort of explanation of why we would be misled into believing it—perhaps some trick of grammar misleads us into seeing truth and being as distinct things, one of which is determined by the other. I'm not hopeful, however.

Therefore, if what is true is determined by what exists, then what is true supervenes on what entities exist.

Defense of premise 3. It is a further jump from this supervenience claim to a truthmaker thesis, however, and so premise 3 is needed. My support for premise 3 is basically an inference to best explanation. Supervenience relations don't stand on their own or come out of nowhere; they need some sort of explanation of their existence. Why is one set of properties so tied to another that it is metaphysically necessary that the first cannot change without a change in the second? Supervenience relations need explanation in terms of some other metaphysically necessary tie between the supervenient and subvenient classes of properties. That is why the supervenience of the mental on the physical and the supervenience of the moral on the natural are such important facts to the

metaphysical naturalist. These supervenience relations call out for explanation, and one possible explanation is a reduction relation between the two classes of properties. There are plenty of other relations which could serve to explain supervenience relations, though; most any relation or combination of relations which would tie the supervenient properties to the subvenient base in a metaphysically necessary way may serve.

Any adequate explanation of the supervenience of what is true on what entities exist is almost certainly going to have to employ the truthmaking relation and claim that a significant class of propositions need truthmakers to be true. Consider the options. Necessary truths probably don't need to be tied to the world by the truthmaking relation in order to explain their supervenience on what exists—since they don't vary from world to world, they supervene on everything. Contingent truths, though, are much harder. How can contingent truths be tied to contingent existences in the way requires for supervenience? Truthmaking seems like the only really substantial tie between contingent truths and contingent existences which is sufficient to establish a supervenience relation between them.

So truthmaking will probably have to feature in any satisfactory explanation of the supervenience of truth on being. Now, in premise 3 as it stands, I haven't said what explanation exactly is satisfactory—which precise class of truths need truthmakers. I'd like to remedy that lack here. My explanation of the supervenience of truth on being involves three relations: truthmaking, truth-functionality, and ontological explanation. First, it may be tempting to just claim that all truths have truthmakers (truthmaker maximalism). Well, strictly speaking, the project of explaining the supervenience of truth on being doesn't justify claiming that necessary truths have truthmakers, because

their supervenience on being is already adequately explained by their nature as necessary truths. So we might restrict ourselves to claiming that all contingent truths have truthmakers. However, this runs into notorious problems for finding truthmakers for negative truths and universally quantified truths (which can be reduced to negative truths, so I won't treat them separately). Instead of trying to find plausible truthmakers for negative truths, I'll just restrict the claim further: all non-truth-functionally-complex truths have truthmakers.[27]

So we've tied non-truth-functionally-complex truths to being by means of the truthmaker relation and explained their supervenience on being. The project is to explain the supervenience of all truth on being, though, so we need more relations that merely truthmaking. The second relation I'll employ in my explanation, then, is truth-functionality. Many truths, complex truths, are built up from non-truth-functionally-complex truths by truth-functional connectives. These truths can be tied to being indirectly without positing truthmakers for them, by tying them to non-truth-functionally-complex truths (which must have truthmakers) with relations of truth-functionality. Most significantly, this handles the problem of negative truths. A negative proposition is true just in case the proposition of which it is the negation is false (lacks a truthmaker). This is, interestingly, the same thing as saying that negative truths, to be false, require a falsemaker. So negative truths are still determined by what exists, but in an indirect way: reality determines them to be true by failing to provide for them falsemakers, or equivalently by failing to provide the truths of which they are negations with truthmakers. Someone might think this weird; why are non-truth-functionally-complex (positive)

[27] I use "non-truth-functionally-complex" rather than "atomic" because I mean to include existentially quantified propositions.

truths tied directly to being by means of the truthmaking relation, while negative truths tied indirectly by means of a lack of falsemakers? This is really just an expression of the very same idea which makes finding truthmakers for negative truths so difficult. We tend to think of reality as fundamentally positive, which means we think that the "default" position for positive propositions is falsity and the "default" position for negative propositions is truth, and these truth-values require some existent thing to make them change. If this intuition is challenged here, then the resistance to finding truthmakers for negative truths should be given up as well and we can all just be truthmaker maximalists. I myself find the idea compelling, though.

The other truth-functional connectives deserve some comment. Propositions which are built up out of non-truth-functionally-complex (positive) truths by means of conjunction or disjunction themselves require truthmakers to be true. Propositions involving negation in any way, though, either negated non-truth-functionally-complex propositions or conjunctions or disjunctions including a negated proposition, do not require truthmakers to be true. Their relation to the truthmaking and falsemaking relations is more complex. It is best to say that they are related by relations of truth-functionality to non-truth-functionally-complex propositions, which are tied to the world by the relation of truthmaking.

So far my project resembles in some ways the Tractarian project of building up complex truths from atomic ones.[28] There is a problem, though: we haven't yet accounted for all propositions, and so we haven't explained the supervenience of what is true on what exists. That is because the propositions in natural languages just don't lend

[28] Of course, I am not committed to any of the things that Wittgenstein says about *meaning* or to his version of the correspondence theory of truth, and so I am not committed to most of the really controversial things he says.

themselves to a neat division into positive and negative propositions, or more to the point into non-truth-functionally-complex and truth-functionally complex propositions. Many propositions demand complex states of affairs in the world without themselves being complex. For example, consider again the proposition *that there is a human being alone in a room*. The structure of the proposition seems to posit the existence of a human being, a room, and a two-place relation between the human being and the room, and so the proposition's form is that of an atomic proposition. There isn't anything like a simple truthmaker for it, though, because the proposition demands an *absence* of anybody who isn't the human being in question from the room—so the proposition encodes a negative state of affairs as well as the positive one of the human's being in the room. So the proposition appears to be something like a complex proposition, a conjunction of (at least) one positive proposition and one negative proposition. But the proposition itself doesn't employ any truth-functional connectives. So the distinction between propositions which are truth-functionally complex and those which aren't seems problematic.[29]

Some in the early part of the twentieth century may have thought to solve this problem with an idealized, logically perfect language, a language whose structure perfectly mirrors the logical structure of the world. And some may have hoped that first-order logic was such a language. The problem with this solution is that it still leaves unexplained the obvious fact that statements in a natural language can be true as well, and so leaves our problem unsolved. My solution is different. I want to bring in a third relation in addition to truthmaking and truth-functionality: ontological explanation. Ontological explanation also ties the truth-values of propositions together, but in a

[29] Another example: *Jeff is the tallest man in Texas*.

different way than truth-functional connectives do. If all propositions which aren't themselves clearly non-truth-functionally-complex or built up from such propositions by truth-functional connectives have as their ultimate ontological explanation propositions which *are* non-truth-functionally-complex or built up from such propositions by truth-functional connectives, then the relation of ontological explanation accounts for all the problematic propositions and completes our explanation of the supervenience of truth on being. And I think it very plausible to suppose that all propositions have as their base propositions propositions which are either non-truth-functionally-complex or built up by truth-functional connectives from such propositions (or are themselves this sort of proposition, if they don't have an ontological explanation). This is what is right about search for the logically perfect language: ontological explanations get us in some way closer to the reality of the situation, and so base propositions should carve reality at its joints—in other words, base propositions should mirror the logical structure of reality in the way that some have wanted the logically perfect language to do.[30] So it is likely that all the propositions which can't be connected to non-truth-functionally-complex propositions by means of truth-functions have ultimate ontological explanations which *can*. Ontological explanation, therefore, is the third leg on the tripod which finally allows it to support an explanation of the supervenience of truth on being. All propositions fall into at least one of the following categories: (1) clearly non-truth-functionally-complex propositions, which need truthmakers to be true; (2) propositions built up from such

[30] I leave open the question as to whether first-order logic is structured correctly to be able to state those logically perfect ultimate explanations.

propositions by means of truth-functional connectives; or (3) propositions whose ultimate ontological explanations fall into (1) or (2).[31]

Notice that truthmaking serves as the anchor of the whole account. It is the only relation of the three which ties contingent propositions to non-propositional reality, while the other two relations serve to tie all the rest of the contingent truths to the ones which need truthmakers to be true. It is hard to imagine any other relation which could serve this explanatory role by tying contingent propositions to contingent non-propositional reality. Any sufficient explanation of the supervenience of truth on being, then, will need to demand that at least some truths have truthmakers. So, despite the fact that I have denied that all truths need truthmakers to be true, I have preserved the idea that the truth-value of each proposition is determined by being or true in virtue of what exists. Each proposition either has a truthmaker (and so has its truth-value determined by what exists) or has its truth-value determined indirectly by what exists through the necessary relations it bears (truth-functionality or ontological explanation) to propositions which do need truthmakers to be true.

The demand for ontological explanation. The argument I've just given contains a truthmaker thesis, the claim that all non-truth-functionally-complex contingent truths have propositions, and so entails a demand for ontological explanation. The explanation I just gave of the supervenience of truth on being utilized the relation of ontological explanation separately from the relation of truthmaking, though, so it actually generates a demand for ontological explanation which goes beyond the truthmaker thesis. Let's get

[31] A proposition can simultaneously be in category (3) and either (1) or (2), since a proposition can be clearly non-truth-functionally-complex and yet itself have an ontological explanation. Categories (1) and (2) are mutually exclusive.

clear on the precise demand for ontological explanation we've established. All propositions fall into the following categories:

(1) Non-truth-functionally-complex propositions, which must have a truthmaker.

(2) Propositions built up truth-functionally from such propositions.

(3) Propositions whose ultimate ontological explanations fall into (1) or (2).

In the last section, I showed that any proposition which must have a truthmaker to be true either is or has as its ultimate ontological explanation a proposition which is existentially quantified and which only ascribes essential properties to those entities whose existence it asserts. So the propositions in (1) all have such an ontological explanation. All the propositions in (2) are built up truth-functionally from propositions (the ones in category 1) which have this sort of ontological explanation. It follows from this that all the propositions in (2) either are or have as their ultimate ontological explanation a proposition which is built up truth-functionally from propositions which are existentially quantified and ascribe only essential properties to those entities whose existence they assert. Finally, since ontological explanation is transitive, all the propositions in (3) either are or have as their ultimate ontological explanation the sorts of ontological explanations demanded of the propositions in (1) and (2).

What does this really amount to? This means that all propositions either are or are ontologically explained by *existence claims*—claims which employ existential quantifications and don't make inessential predications—or by negations of existence claims, or by conjunctions or disjunctions of existence claims, and so on. This is of tremendous methodological importance for metaphysics in particular and for philosophy in general. All base propositions are existence claims. If we find a proposition that is not

an existence claim, we can be sure that it has an ultimate ontological explanation which *is*.

CHAPTER THREE

Explaining Properties: Bradley's Regress

1. Introduction

Practitioners of all the subdisciplines within philosophy seek to identify ontological explanations, but this search is of special importance to metaphysics. Because metaphysics is an investigation of the most basic features of reality, and it is in the base propositions that those basic features are reflected, metaphysics cannot but seek to discern what propositions have ontological explanations. It should not be surprising, therefore, that the notion of ontological explanation lies at the heart of important metaphysical debates and metaphysical puzzles. In this chapter and the next, I will examine two of those debates. The first concerns the metaphysics of properties and centers on Bradley's regress argument; the second concerns the metaphysics of time and centers on McTaggart's regress argument. In each case, understanding the role played by ontological explanation will help to streamline and clarify the debate.

The regress with Bradley's name on it is really far older than Bradley. The Third Man argument in Plato's *Parmenides* appears to be a version of the same regress, and since Plato the regress has been a major feature in the debates over properties and particularly over universals. Bradley's regress, I'll argue, is a regress of ontological explanations which is started up by demands to ontologically explain ordinary predicative propositions. What is really interesting about Bradley's regress, and what makes it a significant force in the contemporary discussion, is that it can take different forms

depending on the sort of demand for ontological explanation which is used to get the regress up and running. The threat posed by Bradley's regress is, therefore, multifaceted and constrains in a variety of ways the range of possible positions as to the nature of properties.

My aim is to identify some of those constraints. In the first half of the chapter, I will examine the nature of Bradley's regress and argue that it is in fact a regress of ontological explanations spurred by some sort of demand to ontologically explain ordinary predicative propositions. It follows from this that the regress is in fact vicious, and not merely for reasons of ontological extravagance. The many philosophers who have denied that Bradley's regress is vicious or who have thought it vicious for reasons of ontological extravagance are therefore mistaken, and I will explore some of their mistakes.

In the second half of the chapter I will examine some of the consequences of Bradley's regress for theories which accept the existence of universals—hereafter, "realist" theories. Bradley's regress poses the greatest threat to realists, because realists often accept, as their motivation for believing in universals, precisely the sort of demand for ontological explanation that gets the regress up and running. Many (perhaps most) contemporary realists motivate their position by appeal to a truthmaker thesis, which entails a demand for ontological explanation sufficient to threaten Bradley's regress. I will argue that, once realists who motivate their position by appeal to a truthmaker thesis do what is necessary to get the regress stopped, the three major realist positions collapse into one another and give trope theory a major dialectical advantage.

2. *Understanding the Regress*

2.1 The Nature of the Regress

Bradley's regress argument is designed as an attack on substance-attribute metaphysics—the commonsense view that there are things which have qualities and which stand in relations. Bradley's target is remarkably broad. To say, as some do, that his targets are relations or states of affairs or universals is to narrow his focus unduly; all three are merely subsets of the things he rules out.[1] Nevertheless, there is some truth to the idea that Bradley's regress targets realist positions about universals, relations, or states of affairs most particularly, as we will see a little later. In this subsection, I will give my interpretation of Bradley's argument, which will serve to clarify the options for responding to the argument.

The argument is relatively brief, so it is possible and helpful to reproduce it in full here:

> We find the world's contents grouped into things and their qualities. The substantive and adjective is a time-honoured distinction and arrangement of facts, with a view to understand them and to arrive at reality. I must briefly point out the failure of this method, if regarded as a serious attempt at theory.
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> We may take the familiar instance of a lump of sugar. This is a thing, and it has properties, adjectives which qualify it. It is, for example, white, and hard, and sweet. The sugar, we say, *is* all that; but what the *is* can really mean seems doubtful. A thing is not any one of its qualities, if you take that quality by itself; if 'sweet' were the same as 'simply sweet', the thing would clearly be not sweet. And, again, in so far as sugar is sweet it is not white or hard; for these properties are all distinct. Nor, again, can the thing be all its properties, if you take them each severally. Sugar is obviously not mere whiteness, mere hardness, and mere sweetness; for its reality lies somehow in its unity. But if, on the other hand, we inquire what there can be in the thing beside its several qualities, we are baffled once more. We can discover no real unity existing outside these qualities, or, again, existing within them.

[1] For a short list, see Francesco Orilia, "States of Affairs and Bradley's Regress: Armstrong Versus Fact Infinitism," unpublished paper, section 2.

But it is our emphasis, perhaps, on the aspect of unity which has caused this confusion. Sugar is, of course, not the mere plurality of its different adjectives; but why should it be more than its properties in relation? When 'white', 'hard', 'sweet', and the rest coexist in a certain way, that is surely the secret of the thing. The qualities are, and are in relation. But here, as before, when we leave phrases we wander among puzzles. 'Sweet', 'white', and 'hard' seem now the subjects about which we are saying something. We certainly do not predicate one of the other; for, if we attempt to identify them, they at once resist. They are in this wholly incompatible, and, so far, quite contrary. Apparently, then, a relation is to be asserted of each. One quality, *A*, is in relation with another quality, *B*. But what are we to understand here by *is*? We do not mean that 'in relation with *B*' *is A*, and yet we assert that *A is* 'in relation with *B*'. In the same way *C* is called 'before *D*', and *E* is spoken of as *being* 'to the right of *F*'. We say all this, but from the interpretation, then 'before *D*' *is C*, and 'to the right of *F*' *is E*, we recoil in horror. No, we should reply, the relation is not identical with the thing. It is only a sort of attribute which inheres or belongs. The word to use, when we are pressed, should not be *is*, but only *has*. But this reply comes to very little. The whole question is evidently the meaning of *has*; and, apart from metaphors not taken seriously, there appears really to be no answer. And we seem unable to clear ourselves from the old dilemma, If you predicate what is different, you ascribe to the subject what it is *not*; and if you predicate what is *not* different, you say nothing at all.

Driven forward, we must attempt to modify our statement. We must assert the relation now, not of one term, but of both. *A* and *B* are identical in such a point, and in such another point they differ; or, again, they are so situated in space or in time. And thus we avoid *is*, and keep to *are*. But, seriously, that does not look like the explanation of a difficulty; it looks more like trifling with phrases. For, if you mean that *A* and *B*, taken each severally, even 'have' this relation, you are asserting what is false. But if you mean that *A* and *B* in such a relation are so related, you appear to mean nothing. For here, as before, if the predicate makes no difference, it is idle; but, if it makes the subject something other than it is, it is false.

But let us attempt another exit from this bewildering circle. Let us abstain from making the relation an attribute of the related, and let us make it more or less independent. 'There is a relation *C*, in which *A* and *B* stand; and it appears with both of them.' But here again we have made no progress. The relation *C* has been admitted different from *A* and *B*, and no longer is predicated of them. Something, however, seems to be said of this relation *C*, and said, again, of *A* and *B*. And this something is not to be the ascription of one to the other. If so, it would appear to be another relation, *D*, in which *C*, on the one side, and, on the other side, *A* and *B*, stand. But such a makeshift leads at once to the infinite process. The new relation *D* can be predicated in no way of *C*, or of *A* and *B*; and hence we must have recourse to a fresh relation, *E*, which comes between *D* and whatever we had before. But this must lead to another, *F*; and so on, indefinitely. Thus the problem is not solved by taking relations as independently real. For, if so, the qualities and their relation fall entirely apart, and then we have said nothing. Or

> we have to make a new relation between the old relation and the terms; which, when it is made, does not help us. It either itself demands a new relation, and so on without end, or it leaves us where we were, entangled in difficulties.[2]

The key to the argument is right at the start of the second paragraph: "The sugar, we say, *is* all that; but what the *is* can really mean seems doubtful." This is the heart of the argument. It is a *demand for ontological explanation*.[3] It demands that all propositions which employ the *is* of predication—all ordinary predicative propositions—be ontologically explained. What is it for sugar *to be* sweet? More generally, what is it for a substance *to have* qualities, for an entity *to bear* properties?

Bradley's argument from there is really pretty simple: no matter what ontological explanation is given for propositions involving the *is* of predication, the explanation itself will involve the *is* of predication and so will itself call out for explanation. Whether 'sugar is sweet and hard' is explained as 'sweetness is in a certain relation with hardness' (paragraphs 2 and 3), or as 'sweetness and hardness are in a certain relation' (paragraphs 4 and 5), or (we might add) as 'sugar has (exemplifies) the property of sweetness and the property of hardness', the *is* of predication inevitably recurs and calls out for further explanation. It may be disguised in alternative wording, as 'are' or 'has' or (we might add) 'exemplifies,' but it is really always just the *is* of predication. Bradley cashes this accusation out variously as an infinite regress (paragraph 5), a circle (beginning of paragraph 5), "trifling with phrases" (paragraph 4), or as involving "no answer" to the original question (paragraph 3). He is presupposing that ungrounded infinite regresses

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[2] F.H. Bradley, *Appearance and Reality* (Oxford: Clarendon Press, Ninth Impression, 1930), 16-18. There are a few more paragraphs in chapter 2 which I have not reproduced, but I believe that the central thrust of the argument is adequately represented.

[3] He repeats the demand again in paragraph 3: "But what are we to understand here by *is*?... The word to use, when we are pressed, should not be *is*, but only *has*. But this reply comes to very little. The whole question is evidently the meaning of *has*..."

and circles of ontological explanation are practically just the same as no ontological explanation at all, which is effectively the claim I defended in the first half of the second chapter. Therefore, even though the famous relation-regress doesn't appear explicitly until the fifth paragraph, and appears to be just a supplementary argument against one of the ways out of the main argument, that appearance is misleading. The regress really appears earlier and throughout the argument, clothed as Bradley's charge that the attempted solutions involve a circle or no answer at all to the demand for explanation. The one ontological explanation which Bradley considers (in both paragraph 2 and paragraph 3) that could stop the regress, explaining the *is* of predication as the *is* of identity, is just blatantly false. Bradley concludes that there must not be any ordinary predicative truths in reality—since if there were any, they would need an ontological explanation, and there is no such ontological explanation that does not lead to an impossible infinite regress of ontological explanations.

The argument therefore has two central components: the demand for ontological explanation for predicative truths and the infinite regress of ontological explanations which ensues. There are three basic ways to avoid the force of the argument. First, deny the demand for ontological explanation. Second, accept the demand for ontological explanation but deny that it results in an infinite regress of ontological explanations—give an ontological explanation that satisfies the demand and stops the regress. Third, deny that the infinite regress of ontological explanations is vicious. I've already argued, in chapter 2, that ungrounded infinite regresses of ontological explanation are impossible, and I'll apply my reasoning to this regress in the next subsection. So, in fact, only the first two ways are genuine options.

The focus of the debate, then, should be on the demand for ontological explanation that generates the regress. This is where all the complexity comes in. Bradley himself is completely unclear as to why propositions involving the *is* of predication need ontological explanations—it apparently just seems obvious to him that they do. There could be any number of different sorts of demands for ontological explanation that could threaten his regress. This means (and this is key) that Bradley's regress can take different forms and have different solutions depending on which demand for ontological explanation is accepted. Whether and how the regress can be stopped depends crucially on the nature of the demand for ontological explanation that is being considered. It may be possible to deny some demands while having to accept others, and it may be possible with respect to one demand for ontological explanation to satisfy it without falling into regress but impossible with respect to another. This means that Bradley's regress can shape the debate over predication and properties in complex ways, by ruling out some views while simply constraining others.

As I said, there are many possible demands for ontological explanation which could threaten Bradley's regress. The question is whether they are well-motivated and whether they can be satisfied without entailing the regress. I'll list a few of the more prominent possibilities. First is the One over Many argument that is used to motivate belief in universals. When two objects share a quality we say that they are the *same* in some respect, that they bear the *same* property, or that they have something in common. It is tempting and natural to explain this sameness as numerical sameness, such that two things are the same in some respect just in case they really do have some entity in common, just in case they exemplify numerically the same property. These properties

would have to be repeatable or universal if the numerically same entity is shared or exemplified in common by different particulars. This argument threatens regress: if the argument applies to all properties that can be shared, then apparently it must apply to the having or exemplifying of a property, for different particulars can be truly said to exemplify some property. If we ontologically explain the proposition *that sugar is sweet* by the proposition *that sugar exemplifies the universal sweetness*, then we must explain this proposition in turn by the proposition *that sugar exemplifies the universal exemplification of the universal sweetness* or some such proposition—and so on down the line.

The second prominent demand for ontological explanation is a class of truthmaker theses. A truthmaker thesis is a claim that a certain class of propositions must have truthmakers to be true. I've argued in the previous two chapters that a truthmaker thesis entails a corresponding demand for ontological explanation. If each member of a class of propositions needs a truthmaker to be true, then each member of that class has a base proposition which is an *existence claim*—an existentially quantified statement which makes no inessential predications—or which is constructed truth-functionally from existence claims. I argued for a broad claim at the end of the last chapter, that every contingent proposition has a base proposition which is an existence claim or built up truth-functionally from existence claims.[4] Any truthmaker thesis which claims that all positive contingent predicative truths need truthmakers (or something in the vicinity) threatens a regress of ontological explanation. Suppose the proposition *that sugar is sweet* needs a truthmaker. It is not enough for there to exist a particular (sugar) and for

[4] Reminder: I didn't claim that every contingent proposition needs a truthmaker.

there to exist a universal property (sweetness), for they can both exist and sugar not be sweet. Sugar must exemplify sweetness. So there must exist something to make true this "exemplifies" part of the proposition. But it is not enough for there to exist a universal "exemplification", for that can exist alongside sugar and sweetness and still sugar may not exemplify sweetness. And so on.

Notice that the truthmaker regress is a bit different than the other regresses. It is a regress of ontological explanations. But it is also problematic for another reason: none of the propositions in the series satisfies the original demand. Each of the propositions in the One over Many-driven version of Bradley's regress satisfies the original demand, but itself is subject to that demand. None of the propositions in the truthmaker regress actually gives a truthmaker for the proposition. This hints as to how the regress can be stopped: if a truthmaker can be found, the regress can be stopped. I will explore this in the next section.

The third prominent demand is weaker: Ockham's Razor. If we can give a simplifying reductive explanation, we should. This may actually be the driving force behind the One over Many argument—we should reduce qualitative sameness to numerical sameness if there is no reason to avoid doing so, for reasons of theoretical simplicity. Ockham's Razor, however, is easily overridden. If explaining in any given case has significant theoretical costs—for example, giving rise to an impossible infinite regress—then the demand for explanation is defeated.

Which of these demands is Bradley's? It is not clear that any of them fit the bill better than any other, and there are other candidates. Bradley could be presupposing an analogue of the PSR for ontological explanation, the claim that all contingent truths have

ontological explanations. Or he could be presupposing that all mysterious truths be explained in terms of better-understood truths, and a demand of this sort could take various forms depending on how "mysterious" and "better understood" are cashed out. Most likely, he simply has an intuition that the class of ordinary predicative truths needs explaining and is presupposing no general demand in particular as the ground for that intuition. Because it is indeterminate which of these regress-threatening demands is Bradley's, any demand for ontological explanation that seems to threaten regress and which touches on predication in general should probably be counted as a version of Bradley's regress. That makes the identity conditions for Bradley's regress argument a bit vague—exactly how must the demand touch on predication?—but it probably should be somewhat vague whether certain arguments count as versions of Bradley's regress.

The argument, then, has two premises. First, all ordinary predicative propositions of a certain sort, if they can be true, have ontological explanations of a certain sort. Second, if these kinds of propositions have this sort of ontological explanation, an impossible infinite regress of ontological explanations ensues. So this sort of ordinary predicative proposition cannot be true. Notice that the first premise (and that part of the second which refers to the first) is indeterminate—the "of a certain sort" construction is a placeholder for a more precise demand for explanation—because the argument can take different forms depending on which demand for explanation is employed.

Thus ends my interpretation of the Bradley regress. It has a number of advantages over other statements of the argument, beside the fact that it fits Bradley's text well. First, my account of the argument is vastly more streamlined and simple than,

say, Vallicella's.[5] This makes understanding the force of the argument and engaging in debate over it far easier and potentially more edifying. Second, on the other hand, my interpretation of the argument also does justice to its complexity. On my account, the argument depends crucially on the nature of the demand for explanation that is operative within it, and there are many possible candidates for such a demand. It may be possible to reject some demands while accepting others. There may be demands for explanation that don't give rise to infinite regresses, *if* a certain kind of explanation is given. So the threat of regress may constrain what sorts of explanations can be given without ruling out demands for explanations entirely. That is what makes Bradley's regress such a complex force in the current debate rather than just a paradox with only a few solutions.

Third, my formulation of the argument does justice to the broad extent of Bradley's aim, which is to discredit all ordinary predicative truths, not just some particular metaphysical account of those truths like realist theories of universals. Some statements of Bradley's argument narrow its targets to universals, or relations (as opposed to qualities), or states of affairs conceived of as truthmakers of ordinary predicative truths.[6] Mine does not. Fourth, on the other hand, my formulation of the argument does justice also to the fact that the argument has particular force against narrower targets. There is a reason that Bradley's regress is often thought to be an argument against realist positions about universals or states of affairs: as part (or all) of their motivation for their belief in universals, realists often accept a demand for

[5] See, for example, William F. Vallicella, "Bradley's Regress and Relation-Instances," *The Modern Schoolman* 81 (2004), 159-183; and also his "Relations, Monism, and the Vindication of Bradley's Regress," *Dialectica* 56 (2002), 3-35.

[6] Both of Vallicella's reconstructions of the argument narrow the target in one of these ways, as do Orilia's (see notes 1 and 5).

ontological explanation which threatens Bradley's regress. Realists often have a special burden and fewer options in avoiding Bradley's regress, since there are often demands for ontological explanation which they cannot simply deny without undercutting the motivation for their position.

Fifth and finally, my account helps explain some of the dialectical difficulties that have afflicted discussion over Bradley's regress in the last century. The debate over Bradley's regress shares some of the characteristics of the debate over McTaggart's paradox. Various parties to the debate seem sometimes unable even to understand how another party's view has anything to do with solving the problem. It is likely that there is something which is central to the argument and which is controversial, but which is buried a layer deep in the discussion and so is presupposed by the various parties to the debate. My account explains this: the various parties to the debate often, like Bradley, fail to make explicit the demand for ontological explanation that is supposed to motivate the regress. And since they don't always presuppose the same inexplicit demand, they sometimes end up talking past each other.

As an illustration, Nicholas Wolterstorff claims that P.F. Strawson's attempt to stop Bradley's regress by appeal to a non-relational tie and Bertrand Russell's attempt to stop it by denying the existence of relations "seem irrelevant to" and "seem to provide us with no reply whatsoever to Bradley's actual argument."[7] This is likely a case where Wolterstorff is interpreting Bradley's argument with one demand for ontological explanation in mind while Strawson and Russell are interpreting it with a different

[7] Nicholas Wolterstorff, *On Universals: An Essay in Ontology* (Chicago: University of Chicago Press, 1970), 100.

demand in mind. Wolterstorff does make explicit the demand for explanation that he thinks is operating in Bradley's actual argument:

> Bradley's words strongly suggest the conclusion that his view is that the only claims he understands are identity and nonidentity claims, and existence and nonexistence claims. What he is apparently trying to do is to paraphrase affirmative relational sentences by using only affirmative and negative identity sentences, affirmative and negative existence sentences, and truth-functions of such.[8]

Wolterstorff claims that Strawson's non-relational tie and Russell's denial of relations do nothing to meet this demand for ontological explanation.[9] He may be right, but there may very well be another sort of regress-threatening demand that these solutions do succeed in meeting—even one that has just as good or nearly as good a claim to be the demand that Bradley is presupposing—and it may be this other demand that Strawson and Russell have in mind. For instance, I will argue that something like Strawson's non-relational tie (interpreted as a trope) can succeed in meeting the truthmaker demand for ontological explanation, and the truthmaker demand is one that many philosophers have thought to be operative in Bradley's regress. Russell's denial of relations, on the other hand, may be interpreted as a denial of the demand for ontological explanation that *he* has in mind when considering Bradley's regress argument, which is probably the claim that all relational truths must have ontological explanations which state the existence of the relation, perhaps coupled with the further claim that all ordinary predicative truths are ontologically explained as relational truths in terms of relations between particulars and

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[8] Ibid., 99.

[9] Wolterstorff calls it a demand for paraphrase. I am recasting it as a demand for ontological explanation, for the reasons I gave in chapter 1 that it is ontological explanation rather than paraphrase which is relevant for ontological commitment, though the two are closely related.

qualities.[10] If that is the explanatory demand that Russell takes to be operative in Bradley's argument, then Russell's reply does indeed stop the regress by denying the demand; and given Bradley's failure to be forthcoming about the precise demand for explanation that motivates his argument, it is hard to argue that Russell is just wrong about Bradley. (It is possible, of course, to argue that there are other, more interesting versions of Bradley's regress generated by different explanatory demands.) Whatever the ultimate outcome of this disagreement, my interpretation of the argument helps to account for the danger of talking past one another that is visible in the history of debate over this argument.

One recent treatment of Bradley's Regress, by Peter Shulte, agrees quite a bit with my interpretation of the argument. My identification of the regress as one of ontological explanation, though, leads me to differ in some important ways with his account. Our disagreement, therefore, highlights the central and distinctive feature of my interpretation: my claim that Bradley's regress is and must be a regress of ontological explanations.

First, Schulte identifies four of what he calls "Regress Generating Assumptions," or RGAs, which he thinks generate four distinct versions of Bradley's regress.[11] The first is the claim that predicates, like names, must denote entities in the world (which generates the "Semantic Regress"); the second is the claim that ordinary predications need explanations (the "Explanatory Regress"); the third is the claim that common characteristics require the existence of some thing possessed in common (the "One over

[10] This claim needs more exegetical backing than I can give here. For some support, see Wolterstorff's quotations of Russell in Wolterstoff, *On Universals*, 95-6.

[11] Peter Shulte, "How to Link Particulars to Universals: Four Versions of Bradley's Regress Refuted," in *Philosophia Naturalis* 44 (2007), 219-237.

Many Regress"); the fourth is the claim that every true proposition has a truthmaker (the "Truthmaker Regress"). Nothing is said about how these four RGAs are connected other than the fact that they generate regresses that appear similar, and nothing is said about exactly how these regresses are similar. My identification of the Bradley Regress gives an explanation of the connection between the four RGAs and the regresses they generate. All four are or entail demands for ontological explanation of predicative truths. I've already pointed out how the third and fourth RGAs, the Truthmaker argument and the One over Many argument, motivate demands for ontological explanation. Shulte's second RGA, the demand for explanation, is really just the form taken by the other demands, such that the other RGAs are really instances of the second. Finally, the first RGA, the semantic regress, is very close to the fourth RGA, the truthmaker demand for ontological explanation.

Second, though Shulte's RGAs are easily interpreted as demands for ontological explanation, he himself does not consistently do so. He casts his second RGA simply as a demand for explanation and does not differentiate between ontological explanation and other sorts of explanation. More importantly, the reasons he gives for thinking that the regresses are vicious reveal that he is not consistently thinking of them as regresses of ontological explanation. Though he notes that the truthmaker regress is vicious for the additional reason I noted above, and concedes that the explanatory regress may be vicious for other reasons, he claims that the semantic regress and the One over Many regress are vicious for reasons of ontological extravagance—they flunk the test imposed by Ockham's Razor. He concludes that these regresses are only problems for sparse realists and pose no problem for abundant realists, who are willing to accept ontologically

extravagant views of properties. In this general view, he is joined by Ross Cameron, who claims that Bradley's regress is only vicious for reasons of ontological extravagance, and that its costs in terms of simplicity may conceivably be overridden by other concerns.[12]

Shulte and Cameron can hold this position only if they do not regard Bradley's regress always to be a regress of ontological explanations. And, sure enough, Cameron explicitly understands the regress to be a regress of ontologically dependent states of affairs rather than as a regress of ontologically explanatory propositions. If Bradley's regress is a regress of ontological explanation, it cannot be vicious for reasons of ontological extravagance. Quite the opposite: ontological explanation is *reductive*. Series of ontological explanations carry no more ontological commitment than does their final member. In fact, if a proposition has an ungrounded infinite regress of ontological explanations, then it carries no ontological commitment at all—a fact to which I appealed in the Argument from Ontology in order to show the impossibility of such regresses. Regresses of ontological explanation are impossible for a different reason, and that reason cannot be overridden in the way that concerns for theoretical simplicity can.

There is good reason to interpret Bradley's regress in the way that I do rather than in the way that Cameron and sometimes Shulte do. In the first place, my interpretation fits best with Bradley's own way of getting the regress started, his simple statements that "The sugar, we say, *is* all that; but what the *is* can really mean seems doubtful," and "But what are we to understand here by *is*?... The word to use, when we are pressed, should not be *is*, but only *has*. But this reply comes to very little. The whole question is evidently the meaning of *has*..." He is evidently requesting that something mysterious,

[12] Ross Cameron, "Turtles All the Way Down."

the *is* of predication, be *explained*. This makes most sense as a request for explanation of the "what is it?" sort, *ontological* explanation. He is not asking about ontological structures in the world that support other ontological structures, states of affairs; he is asking for an explanation of a proposition or an element within a proposition.

In the second place, my interpretation accounts for the fact that the regress does not appear in Bradley's text until late and in a subsidiary position. Bradley more prominently claims that the various solutions that he considers fail because they give "no answer" to the original question (as to the meaning of the *is* of predication) or because they give rise to a vicious circle. If we understand the request to be a demand for ontological explanation, then we can understand why he makes these three different but apparently interchangeable accusations against the possible solutions to the puzzle. Circles and infinite regresses of ontological explanation are impossible because they fail to answer any demand for ontological explanation—there is a tight relation between those three with respect to ontological explanation. There is no such tight relation with respect to ontological dependence.

In the third place, moving beyond exegetical arguments, my interpretation understands the regress in such a way that the regress turns out to be definitely vicious or impossible. Bradley certainly meant to derive a vicious regress, not a harmless infinite series. Moreover, Bradley meant to establish a very counterintuitive conclusion, that there are no distinct objects that bear qualities and stand in relation, which means that his purposes wouldn't be served if he derived a regress that is vicious for reasons that can be overridden (as Cameron would have it). So, if there is an understanding of the regress on which it turns out clearly vicious or impossible, and which otherwise does justice to the

argument, then that is the reading we should take. Infinite series of objects in dependence relations does not do that, because there are serious questions about whether such series are actually impossible. We should therefore interpret the regress as one of ontological explanation.

In the fourth place, understanding the regress as one of ontological explanation fits best with the commonly acknowledged ways of generating the regress. Truthmaker theses and the One over Many argument are commonly recognized as motivations to believe in universals and as threatening Bradley's regress. Neither would threaten the Bradley regress were it a regress of objects or states of affairs standing in relations of ontological dependence; each only threatens a regress of ontological explanation. Consider first the One over Many argument. This argues that similarity should be accounted for by numerical sameness. This does not request two distinct objects or concrete states of affairs, one similarity fact and one numerical sameness fact, one of which depends on the other for its existence. It calls for a reductive analysis or ontological explanation of something mysterious (similarity) in terms of something better understood (numerical sameness), in order to get rid of the appearance of ontological commitment to the former. Consider second the truthmaker demand.[13] A truthmaker demand entails a corresponding demand for ontological explanation, as I've shown already. Thus, it threatens a regress of ontological explanation. It does not threaten a regress of ontologically dependent objects or states of affairs. Truthmaking is a relation between a *proposition* and an object or state of affairs. There cannot be a series of objects or states of affairs, each of which makes true the preceding member of the series,

[13] This part of the argument does not apply to Peter Shulte, because he thinks that the truthmaker regress is vicious for a different reason than the other regresses. I grant his point, but my argument still shows that all versions of Bradley's regress should be thought of as regresses of ontological explanation.

because objects or states of affairs are not the sorts of things that can be made true. Therefore, only if we understand Bradley's regress as a regress of ontological explanation can we make sense of the commonly accepted fact that the One over Many argument and truthmaker demands are motivations to believe in universals which also threaten Bradley's regress—the reason that Bradley's regress has been thought to threaten realists in particular. In fact, I'm unsure what sort of demand *could* threaten a regress of states of affairs or objects in ontological dependence relations. Why think that every ordinary state of affairs corresponding to true predicative propositions must stand in a relation of ontological dependence to another state of affairs? Every such demand I can think of is better interpreted as a demand for a reductive ontological explanation.

I conclude that, if a regress is not a regress of ontological explanation, then it is not Bradley's regress at all. The identity conditions of Bradley's regress argument are difficult to discern, because the regress can take different forms depending on the demand for ontological explanation that is accepted, and it is difficult (maybe impossible) to say what sorts of demands count as giving rise to a regress that can genuinely be called Bradley's Regress. Whichever demand is operative, though, it must be a demand for ontological explanation if the resultant regress is to lay claim to the title of Bradley's Regress.

2.2 The Viciousness of the Regress

A number of philosophers have apparently denied that Bradley's regress is impossible or vicious. This is really nothing more than appearance. No philosophers of whom I am aware have stared a regress of ontological explanation in the face and denied

that it is impossible.[14] Instead, they have interpreted Bradley's argument in such a way that the regress to which it gives rise is not a regress of ontological explanation at all. What they have actually done, then, is identify some regress other than Bradley's and deny that *it* is vicious. Their way of dealing with Bradley's actual regress, often implicit, does not involve denying the impossibility of the regress but always involves denying the operative demand for ontological explanation or meeting the demand with an explanation that stops the regress. I'll discuss just one such philosopher here as a representative sampling: Nicholas Wolterstorff.

Wolterstorff explicitly distinguishes his reply to a Bradley-like regress he gets from Plato via J.C. Ryle and Bradley's own regress argument. He denies that Ryle's Bradley-like regress is vicious, because he redescribes it:

> (1) This is circular
> would entail
> (2) This exemplifies circularity
> which in turn would entail
> (3) There is such a case as the exemplification of circularity by this, and such a relation as exemplification, and the former exemplifies the latter.
> …ad infinitum…
>
> What must be said first about this argument is that Ryle confuses exemplification with instantiation. He begins with something that exemplifies circularity. He then moves on to the case, exemplification of circularity by this. But this case does not *exemplify* the relation of exemplification. Rather, it *instantiates* it. It is a case of this relation. Step (3) should accordingly read:
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> (3a) There is such a case as the exemplification of circularity by this, and such a relation as exemplification, and the former instantiates the latter.[15]

Wolterstorff's discussion goes on for a while and gets somewhat complex, but this is the key move. He denies that the regress is a regress of exemplification—only the first step involves exemplification. The rest of them involve something else, something he calls

[14] Though Quentin Smith, whose views I will discuss in the next chapter in connection with McTaggart's regress argument, comes close.

[15] Wolterstorff, *On Universals*, 90-1.

instantiation. How are these different and why is this important? Wolterstorff is not explicit on this point. I think the heart of his move is that he denies that the series is a regress of ontological explanation. (2) ontologically explains (1), but (3a) does not ontologically explain (2). Instead, (3a) is merely entailed by (2). That allows Wolterstorff to identify the regress as harmless, since it is not a regress of ontological explanation

Wolterstorff admits that this is not Bradley's regress. His solution to Bradley's regress is simply to deny the demand for ontological explanation that he thinks is operative in the argument. He casts the demand as a demand for paraphrase, though it is better understood as a demand for ontological explanation. I already quoted above his interpretation of Bradley as claiming that all affirmative relational sentences must be paraphrased by using identity sentences, existence sentences, and truth-functions of such. His reply is this:

> What can one say to someone who holds that nothing is ever claimed in uttering affirmative relational sentences, but that one can see that sometimes something *is* claimed in uttering such sentences, and that sometimes what is claimed is true? What else can one say, except that the person who argues that nothing is claimed in uttering affirmative relational sentences conducts his argument by uttering such sentences?[16]

This reply amounts to an incredulous stare at the conclusion of Bradley's argument, that there are no ordinary predicative truths. The context indicates, though, that Wolterstorff means to deny the demand for paraphrase (or ontological explanation). Why, he asks, should we accept the demand to paraphrase (explain) away all our affirmative relational sentences? So Wolterstorff does not deny that Bradley's regress is impossible; he denies

[16] Ibid., 91.

the demand for explanation that he thinks is operative in generating the regress in the first place.

Similar things can be said with respect to other philosophers who have claimed that Bradley's regress is not vicious. I've already given arguments that Bradley's regress should be understood as a regress of ontological explanation, and I argued in chapter 2 that such regresses are vicious. Everyone who claims that Bradley's regress is not vicious must therefore either be interpreting the regress as a regress of a type other than Bradley's actual regress or be mistaken about its viciousness.

3. Starting and Stopping the Regress: Realist Theories and Truthmaker Theses

Bradley's regress argument has special application to realist theories, theories which accept the existence of universals, because to motivate their view proponents of such theories usually appeal to a demand for ontological explanation that threatens the regress. The most prominent motivation for realism about universals in the contemporary discussion is some sort of truthmaker thesis.[17] Universals are needed, the thought goes, to make true ordinary predicative propositions. In the remainder of the chapter I will defend the following claim: once realists who motivate their view by appeal to a truthmaker thesis do what is necessary to stop Bradley's regress (while maintaining a proper respect for Ockham's Razor), the three major realist views (substratum theory, bundle theory, and Loux's neo-Aristotelian natural kinds theory) collapse into one another and grant trope theory a major dialectical advantage. Moreover, the process of meeting the

[17] See, for example, David Armstrong, *A World of States of Affairs* (Cambridge: Cambridge University Press, 1997).

truthmaker challenge also yields the resources to solve the major problems facing bundle theory and substratum theory.

Why the focus on the demands for explanation derived from truthmaker theses? For one thing, I must choose some explanatory demands to focus on rather than others. I cannot hope to be exhaustive because of the sheer number of possible explanatory demands that could threaten Bradley's regress and the sheer number of prominent metaphysicians in the last century who have written about Bradley's regress. Each writer deserves a close reading just to discover what demand (or demands, if there isn't a unique one) presupposed by each writer in his or her interpretation of and reply to Bradley's argument. For another thing, truthmaker theses seem to be the major contemporary motivation for realism about universals. There are other motivations, some of which threaten a regress (the One over Many argument) and some of which may not (such as David Lewis's suggestions[18]), but truthmaker theses are currently most prominent. And, in any case, the only general demand for explanation that I have defended (in the last chapter) is a demand derived from a truthmaker thesis, and so it is natural that this demand is the one I treat here.

The truthmaker-derived demand for ontological explanation that I defended is quite a bit weaker than David Armstrong's truthmaker maximalism, but both are stronger than what is needed to generate Bradley's regress. Bradley's argument requires only the claim that ordinary, positive predicative truths require truthmakers—it need not take a stand about the traditional bugaboos for truthmaker theses, negative and universal truths.

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[18] David Lewis, "New Work for a Theory of Universals," *Australasian Journal of Philosophy* 61 (1983), 343-377. Schulte appeals to Jackson's argument as a non-regress-generating motivation for believing in universals. I am less optimistic than Schulte that this argument does not in fact threaten Bradley's regress.

I will assume in my discussion the version I defended, which is the claim that all base propositions either are existence claims (existentially quantified propositions which don't make inessential predications) or are built up truth-functionally from existence claims. All the argument really requires, though, is the weaker claim that all positive predicative propositions have base propositions of this sort.

3.1 Substratum Theory

The most prominent of the realist theories is substratum theory, according to which there are universals which are exemplified by a substratum. The universals explain the qualitative character of the thing while the substratum explains its particularity. It is common then to make a distinction between the thick particular and the thin particular: the thick particular is the substratum considered together with the universals it exemplifies, while the thin particular is the substratum abstracted from its exemplified universals.

It has long been recognized that Bradley's regress threatens substratum theory, and the truthmaker-motivated version certainly does. The mere existence of a substratum (call it *a*) and a universal property (call it *F*) is not sufficient to make it true that the substratum bears the property (that *a* is *F*). The universal could be existing in the Platonic heaven, or (if we take a more Aristotelian immanent-universals view) be exemplified by some other object without being exemplified by *a*. To make it true that *a* is *F*, the substratum must bear some specific relation to the universal, call it exemplification: *a* must exemplify *F*. But if exemplification is a relation like all the others, a universal property, then the mere existence of *a*, *F*, and *exemplification* is not sufficient to make it true that *a* is *F*, because both *F* and *exemplification* could exist and

be borne by other objects without being born by *a* in particular. And so we need a further relation tying *a* together with *exemplification* and *F*, but the very same problem will arise so long as this further relation is conceived as a universal.

One famous defense of substratum theory against Bradley's regress is to identify exemplification as a non-relational tie or nexus.[19] Denying exemplification the status of a relation, the thought goes, allows the regress to stop at exemplification. Exemplification somehow ties things together in a more fundamental way than relations do; alternatively, its relating ability is somehow intrinsic to it. As popular as this defense has been with many philosophers, an equal number seem to have found it totally baffling. How is this supposed to help stop the regress? The discussion is complicated by the fact that the proponents of this defense against the regress have not been clear about *which* demand for explanation it is answering, which is why it is unclear exactly *how* it answers that demand.

There is one understanding (perhaps revisionist) of the notion of a non-relational tie according to which it does in fact succeed in stopping the truthmaker-generated demand for explanation. If we understand the claim that exemplification is "non-relational" a bit more broadly, as a claim that the tie is altogether different from relations *or* qualities, we can understand it as a claim that it is not a universal at all but a particular (or, more precisely, that there are many exemplifications, which are particulars). This move *does* provide the resources to stop the truthmaker-generated version of Bradley's regress, because the regress depended on understanding the exemplification relation as a universal. If exemplification is a particular, then we are free to claim that its mere

[19] For the most famous example of this strategy, see P.F. Strawson, *Individuals: An Essay in Descriptive Metaphysics* (New York: Routledge, 1959).

existence is sufficient to tie the substratum to its property. Then the existence of *a*, *F*, and *exemplification*$_a$ (the subscript is there to distinguish this exemplification particular from all the others) is sufficient to make true the proposition *that* a *is* F.

So making exemplification a particular rather than a universal succeeds in stopping the truthmaker-generated version of Bradley's regress. (I'll call a particular exemplification relation a "tie".) It also requires some revisions to basic substratum theory, however. And these revisions blur the lines between substratum theory and its competitors, bundle theory and Loux's neo-Aristotelian theory. The revisions are two. First, there must be a distinct tie for every contingent property, or at least distinct ties for contingent properties which are not necessarily tied to each other. (One tie may suffice for groups of properties which necessitate each other.) That is because, for the tie to do its work in answering the truthmaker demand, the mere existence of the tie plus the mere existence of the substratum and the property must suffice metaphysically for the substratum's exemplification of the property. So if a substratum can exemplify one property while not exemplifying another which it nevertheless could exemplify, there must be one tie which exists for the first property and a distinct tie (which does not exist but could) for the second.

Second, from the perspective of a demand for truthmakers, there is no need to posit a tie between the substratum and its essential properties at all. The substratum is metaphysically sufficient to tie its essential properties together. Since they are *essential* properties, it is necessary that if the substratum exists then it exemplifies those properties. The substratum and the particular tie between the substratum and its essential properties are doing the same job—because each is a particular, each is sufficient to individuate the

object, and each is sufficient to tie the essential properties to the object. Ockham's Razor suggests that we collapse the two and reconceive the one as doing both jobs—the job of individuation and the job of tying essential properties together in the object.

Once these revisions are made, substratum theory begins to look very much like a version of bundle theory *and* a version of Loux's neo-Aristotelian natural kinds theory. On the one hand, since the substratum has been reconceived as itself a sort of tie, it seems natural to say that particulars are a sort of "bundle" of universals, a group of universals tied together. On the other hand, this modification to substratum theory embraces the two-level conception of qualities that seems distinctive of Loux's view. First there are the object's essential qualities, which are united by the substratum itself, and which include all of the qualities which define the object's natural kind, and second there are the accidental (contingently exemplified) qualities which are added onto the natural kind by further particular ties.

This isn't enough to show that all three theories collapse into one another, since there are versions of the other theories that are distinct from this one. I will argue, however, that the threat of the truthmaker-generated version of Bradley's regress forces modifications to the other two theories that *does* result in a complete collapse into one another (again, if a healthy respect for Ockham's Razor is maintained at the same time).

One thing remains to be said about this modified substratum theory. Exemplification has been reconceived as a particular, but it still seems appropriate to continue to describe it as a relation or a quality. Each particular tie seems relevantly similar to other particular ties, such that we can describe them as "ties," and this seems true even of the reconceived substrata. It seems, then, that substratum theory has allowed

into its ontology a particular (non-repeatable) quality or relation—and that it had to do so in order to meet the truthmaker demand. A non-repeatable quality, though, is a trope. It appears, then, that substratum theory must admit the existence of at least one sort of trope. Trope theory therefore gains the dialectical edge, and I will argue that the other two major realist theories must grant it that same edge.

This modified version of substratum theory not only meets the challenge posed by the truthmaker-driven version of Bradley's regress; it also provides the resources for a reply to the most significant objection (next to Bradley's) to substratum theory. The focus of criticism of substratum theory has long been the idea that the substratum is *bare*—since an object's having properties is explained by the universals, it appears that the substratum itself doesn't have properties. Some of the most historically prominent worries about bare substrata have been epistemological, stemming from Locke: how could we ever be acquainted with one and have a concept of it? Since the epistemological objection is tied to currently unpopular empiricist views about concept acquisition, it has generally been superseded by more metaphysical objections to the notion of a bare substratum. The metaphysical objection is this: it seems that, by saying that the exemplifier of properties is a bare substratum (a substratum bare of properties), the substratum theorist is saying that the exemplifier of properties exemplifies no properties. This is a contradiction.

Loux's reply is to note that the substratum theorist doesn't quite say this. He thinks the substratum theorist says, instead, that substrata exemplify no properties *essentially*, that its relationship to its properties is always contingent, and that is what it means for the substratum to be bare. He then levels a further objection to substratum

theory: there is no such thing as an entity without essential properties—it at least bears trivial essential properties like *being self-identical* and *being colored if green*.

The version of substratum theory I have outlined not only does not claim that the substrata do not have essential properties, but is in fact *committed* to the substratum having essential properties. The substratum is *essentially* such that it ties the essential properties of the object (the thick particular) together, and it must be so if the truthmaker challenge is to be met. How then can this version of substratum theory meet the charge of formal inconsistency? It needs only to deny that the substratum is *bare* in the most extreme and literal sense. Sure, it has no universals as constituents, but its own existence is sufficient to make true that it bears certain properties (like the trivial ones), without any need to posit universals as truthmakers for those property-ascriptions. There are two ways in which the substratum bears properties, then. There are some properties it bears in virtue of being tied together to universals (either by its own nature or by a contingently existing further exemplification relation) and some properties it bears on its own, without any universals to explain them.

Loux's reason for not considering this reply—and his reason for not considering the reply I make in the next section on behalf of bundle theory against the PII objection—is his assumption that both substratum theory and bundle theory are committed to explaining *every* property, no matter how trivial, as a universal. I will consider Loux's arguments more in section 3.3, but now I want to point out that the truthmaker motivation does not require this assumption. If truthmaker considerations are the reason for positing the existence of universals, not every property-ascription requires the existence of an exemplified universal. The best way to see this is by considering one of David

Armstrong's criteria for ontological commitment.[20] If A supervenes on B, says Armstrong, then A is an "ontological free lunch"—we need not posit anything beside B to account for A. Now, Armstong's criterion fails as a perfectly general claim. If God is a necessary being, then God's existence supervenes on the truth of 2+2=4, but God's existence is not thereby an ontological free lunch once the truth of 2+2=4 is grounded. However, there is something right about Armstrong's criterion: if the *only* reason you have for postulating some entity is that it is a truthmaker for a proposition, then you have no reason not to think that that entity reduces to another entity on whose existence its existence supervenes. So, in the case of substrata, its essential properties supervene on its existence, and so there is no need to posit some further entity (a universal) to ground propositions ascribing those properties to the substratum. This could be taken as an argument against even the universals which the substratum ties together essentially, but if some of those properties can be exemplified by other objects contingently, then we will probably want to accept the existence of a universal.[21]

3.2 Bundle Theory

The second realist theory is bundle theory, according to which particular objects are just bundles of universals. A bundle of universals is not just any group of existing universals (or else there would be a concrete object for every set of universals), but is constituted by a group of *co-instantiated* universals.[22] The necessity of co-instantiation

[20] Armstrong, *A World of States of Affairs*, 45.

[21] The discerning reader may notice that this argument could be taken farther, as a reason to eliminate universals entirely. I will take it that far in section 3.4 when I argue that trope theory gains a major dialectical advantage over realism about universals.

[22] For an argument for this, see James Van Cleve, "Three Versions of the Bundle Theory," *Philosophical Studies* 47 (1985): 95-107. What I call co-instantiation has alternatively been called "compresence," "togetherness," "consubstantiation," or "combination."

for bundle theory gives rise to Bradley's regress in the same way that the necessity of exemplification for substratum theory did. Consider a lump of sugar (*a*) which is sweet (*S*) and white (*W*). The mere existence of the universals *sweetness* and *whiteness* is not sufficient to make it true that *a* is *S* and *W*. The universals could exist uninstantiated in the Platonic heaven or be separately instantiated in other objects. This is why *co-instantiation* is needed: for *a* to be *S* and *W*, *S* and *W* must be co-instantiated. But if *co-instantiation* is a universal, then the mere existence of *S*, *W*, and *co-instantiation* is not sufficient to make it true that *S* and *W* are co-instantiated, because they could all exist solely in the Platonic heaven or be instantiated in separate objects. Whether *co-instantiation* counts as part of the bundle or not, there must be something else tying it to *S* and *W*. But if this further tie (whether you call it a further co-instantiation or a sort of exemplification) is a universal, the very same problem recurs, and an infinite regress is embarked upon.

The bundle theorist who accepts a truthmaker demand must embrace the very same solution that the substratum theorist did: make co-instantiation a particular rather than a universal. If co-instantiation is a particular, then we are free to claim that its mere existence is sufficient to tie the universals together into a bundle.

Once this move is made, bundle theory collapses into the modified version of substratum theory I outlined in the last section. Two sorts of ties are required for each bundle: one that ties all the object's essential properties together, and a number of distinct ties for each modally independent accidental property. The tie responsible for uniting the essential properties of the object serves both to individuate the object (because it is a particular) and to tie the essential properties of the object together. It therefore seems

appropriate both to call it a substratum and to call it a relation of co-instantiation. The ties responsible for uniting the object's inessential properties to the bundle of essential properties are importantly different from the substratum/co-instatiation tie, and so the two-level feature of neo-Aristotelian substance theory is present. Bundle theory therefore collapses into the modified version of substratum theory and that combined theory seems also to be a version of neo-Aristotelian substance theory. We have only to argue that the neo-Aristotelian view must embrace this version in order to establish my thesis, that the three versions of realism (when motivated by a truthmaker thesis) collapse into one another. It still seems right to describe this as a sort of bundle theory, though, because it still conceives of the substratum as a sort of tie, like a co-instantiation, and so it still seems appropriate on this view to say that objects are just bundles of universals.

One significant advantage to this modified sort of bundle theory is that it (depending on how you look at it) either solves the major objection to bundle theory or renders it superfluous: the argument from the Principle of the Identity of Indiscernibles (PII). I'll trace the debate and argue that the modified bundle theory offers a new solution to the debate. The Principle of the Identity of Indiscernibles says:

> (PII): Necessarily, if two objects share all the same qualities (exemplify the same universals), then they are numerically identical.

The PII objection to the bundle theory goes like this: the bundle theory is committed to the truth of PII, since if particulars just are bundles of universals, then the identity of the universals in the bundle entails the identity of the bundle. PII, though, is false. So bundle theory is false.[23]

[23] For a nice statement of this argument, see Van Cleve, "Three Versions of Bundle Theory."

The most famous argument against PII is Max Black's counterexample universe:[24] a universe that consists only of two qualitatively identical spheres at some distance from one another.[25] Any property that the two spheres do not share must be a property that presupposes particularity (is "impure") and so cannot be the source of particularity. This is supposed to show that distinct indiscernibles are possible and so PII is false, and many have found this convincing.

Responses to the PII objection fall into two basic families: those which try to defend the PII against Black's world, and those which try to sever the connection between bundle theory and the PII.

The first sort of response is by far the most common. Albert Casullo argues that Black's description of his universe has not proved that it is in fact possible; granting that conceivability is a guide to possibility, we still have no good idea of "conceivability" in cases where perception is not involved, as it cannot be in Black's universe. So merely describing the universe has not shown it to be conceivable and therefore possible.[26] John Hawthorne has another response, arguing that bundles of universals are multiply locatable just as universals themselves are, and so Black's world actually has *one* sphere at a non-zero distance from itself. To say otherwise, Hawthorne thinks, is to beg the question against the bundle theorist. This has set off a flurry of discussion.[27]

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[24] Though Robert Adams traces this type of criticism back to Kant. Robert Merrihew Adams, "Primitive Thisness and Primitive Identity," *The Journal of Philosophy* 76 (1979), 13.

[25] Max Black, "The Identity of Indiscernibles." *Mind* 93 (1952): 527-541.

[26] Albert Casullo, "A Fourth Version of the Bundle Theory," *Philosophical Studies* 54 (1988): 125-139.

[27] John O'Leary-Hawthorne, "The Bundle Theory of Substance and the Identity of Indiscernibles," *Analysis* 55: 191-196. Vallicella and Rodriguez-Pereyra have a couple of good arguments against Hawthorne: William F. Vallicella, "Bundles and Indiscernibility: A Reply to O'Leary-Hawthorne." *Analysis* 57 (1997): 91-94; Gonzalo Rodriguez-Pereyra, "The Bundle Theory is Compatible with Distinct but Indiscernible Particulars," *Analysis* 64 (2004): 72-81. Zimmerman and Hughes continue the

A third response, again by Casullo, really almost straddles the two categories of responses. He distinguishes two versions of the PII and argues that the bundle theory is only committed to the weaker version. His move is to argue that bundle theory is not committed to the necessary truth of the PII, but only to its being contingently true. Thus, since Black's world is not the actual world, it is no objection to the contingent version of PII.[28] Some have found a merely contingent PII unsatisfactory for the purposes of bundle theory,[29] while others have argued that the PII is not even contingently true.[30]

The second sort of response is far less common; as far as I know, only two papers have advanced it, one recent and one older.[31] Their strategy is to deny altogether that the bundle theory is committed to the PII, and they do so by challenging the principle that underlies the inference from bundle theory to the PII. (Rodriguez-Pereyra, following Loux, calls it the principle of constituent identity; Hochberg calls it the axiom of difference.) This principle is just the claim that different objects must differ in a part—you can't have two distinct objects with all the same parts. Hochberg and Rodriguez-Pereyra deny this principle and defend non-mereological sort of summing on which two distinct objects can have all the same parts (universals).

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conversation: Dean Zimmerman, "Distinct Indiscernibles and the Bundle Theory." *Mind* 106 (1997): 305-309; Christopher Hughes, "Bundle Theory from A to B," *Mind* 108 (1999): 149-156.

[28] Albert Casullo, "A Fourth Version of Bundle Theory," and "The Contingent Identity of Particulars and Universals." *Mind*: 93 (1984): 527-541.

[29] Rodriguez-Pereyra, "The Bundle Theory is Compatible with Distinct but Indiscernible Particulars."

[30] Stephen French, "Why the Principle of the Identity of Indiscernibles is not Contingently True Either," *Synthese* 78 (1989): 141-166.

[31] Rodriguez-Pereyra, "The Bundle Theory is Compatible with Distinct but Indiscernible Particulars," and Herbert Hochberg, "Universals, Particulars, and Predication," *The Review of Metaphysics* 73 (1965): 87-102.

The modified version of bundle theory I outlined, the version that is necessary to meet the challenge posed by a truthmaker-motivated version of Bradley's regress, contains the resources for a new reply to the PII argument. This reply is of the second sort (challenging the connection between bundle theory and the PII), but it challenges this connection differently than do Hochberg and Rodriguez-Pereyra, independently of debate over the principle of constituent identity. The reply is simple: bundle theory already has a non-universal individuator in the form of the particular co-instantiation had uniquely by each bundle. It needs this individuator to meet the challenge of Bradley's regress, and the presence of this individuator means that it is possible to have distinct bundles (objects) with all the same universals, because there is a part of the bundle which is not a universal and so not shared with the other bundle. This version of bundle theory is therefore not committed to the PII, even if the principle of constituent identity is true.

One objection presents itself. Does this really save the bundle theory from the PII-based objection, or does it just kill bundle theory altogether by admitting into the identity of a bundle something other than universals? I admit that this option involves rejecting pure bundle theory, according to which *nothing but* universals are parts of the bundle and matter for the identity of the bundle. I insist, though, that pure bundle theory is doomed quite independently of the PII objection by the threat posed by Bradley's regress. If bundle theorists thought they could build particularity solely out of universality, while accepting the demand for truthmakers, they were sorely mistaken. If bundle theory is doomed, at least Bradley's regress renders the PII objection superfluous.

I also do not accept the conclusion that bundle theory is doomed, though. The version of bundle theory which I outlined and which gave rise to this distinctive solution

to the PII problem still seems to fall within the range of views appropriately termed "bundle theory." The bundle theory just says that particulars are bundles of universals. The version of the view I have outlined just takes that *bundling* factor very seriously and refuses to identify it as a universal. Moreover, though I admit that this version of bundle theory is identical to some versions of substratum theory, it is not identical to just any version of substratum theory. Importantly, it reconceives the substratum as itself a sort of tie (co-instantiation) and so does with one entity what traditional substratum theory often had to do with two (the substratum and a particular tie of exemplification).

This version of bundle theory—also a version of substratum theory and neo-Aristotelian substance theory—therefore resists the truthmaker-driven version of Bradley's regress and escapes the challenge posed by the apparent falsity of the PII.

3.3 Loux's Neo-Aristotelian Natural Kind Theory

The debate among realists about universals has long been dominated by the substratum theory and the bundle theory. Recently, Michael Loux has proposed what he takes to be an alternative to those theories, a view inspired by Aristotle and focused on what Loux calls "substance kinds." I will argue that, once the view is specified in such a way that it can meet the truthmaker demand, it is fundamentally the same view as the modified versions of substratum theory and bundle theory outlined in the previous sections. I will conclude by arguing that Loux reasons for preferring his view to substratum and bundle theory are mistaken.

The basic view is this. There is a special kind of universal which is automatically individuated when instantiated—*kind* universals like *human being* or *dog*. Kind-universals are a subset of sortal universals, universals which allow us to distinguish and

count their instances, but there are some sortal universals which are not kind-universals because they are exemplified only contingently. Kind-universals are always exemplified essentially. An object is just an instantiation of a kind—"a substance-kind provides us with the concept of a fully-fledged concrete object; and its instantiation is by itself sufficient to ensure the existence of a substantial particular."[32] Other sorts of universals—we might call them, collectively, *accidents*—are then exemplified by the instantiated kind.[33]

If this theory is to meet the truthmaker challenge, two modifications must be made (or, if not modifications, at least clarifications). First, the status of the *instantiation* of the kind-universal must be clarified. There must be an entity corresponding to this instantiation, and this entity must be a particular, not a universal. This is because Loux has already identified kinds as universals, and the mere existence of the universal clearly does not suffice metaphysically for its instantiation in a particular object—the universal may exist in the Platonic heaven, or it may be instantiated by some other object. If there is to be a truthmaker for propositions like *there is a human* or *there are four humans*, there must exist particular instantiations of the universal *human* as well as the universal itself. Each instantiation is metaphysically sufficient for the existence of an object exemplifying the kind. Second, there must exist a similar sort of particular exemplification for each accident-universal (or group of modally independent accident-universals) which is metaphysically sufficient to tie the universal to the substance-kind.

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[32] Michael J. Loux, "Beyond Substrata and Bundles: A Prolegomenon to a Substance Ontology," in *Contemporary Readings in the Foundations of Metaphysics* (Oxford: Blackwell, 1998), 243.

[33] Since the theory is not completely developed, Loux doesn't rule whether there are essential properties not included in the kind-universal. If there are, then there is a third category of universal beside kind-universals and accidents. Presumably, the instantiation of the kind is sufficient to instantiate these other essential properties as well.

The resultant view is identical to the modified versions of substratum and bundle theory I outlined above, perhaps with a subsidiary question of whether the essential properties are just one universal (a kind-universal) or a group of distinct universals corresponding to each property. I take this to be a secondary question, and I think it possible to read substratum theory and bundle theory broadly enough to be able to accommodate either answer to this question.

If this neo-Aristotelian substance-kind theory is just a version of bundle theory and of substratum theory, why does Loux consider it to be an important alternative to them? In fact, he claims that his view rejects some of the basic assumptions underlying the entire substratum/bundle debate. He claims two things, which are related. First, he claims that his substance-kind theory abandons the constituent ontology of substratum and bundle theories, where objects are individuated and defined by their parts. He thinks this is why bundle theory cannot escape the PII objection and why substratum theory cannot escape the anti-essentialism objection—both are committed, he thinks, to constructing objects out of sums of objects which don't bear necessary ties to one another. Second, he claims that his view makes substance kinds to be "irreducibly fundamental," and that is the key to avoiding constituent ontology. Since his view refused to explain substance-kinds in terms of their parts, he avoids the problems afflicting the other views, since that allows him to say that the exemplification of a natural kind is "by itself sufficient"[34] to ensure the existence of distinct, particular entities. As he says, "to allow substance kinds to play the proposed role in our

[34] This phrase appears in Loux, "Beyond Substrata and Bundles" on both 242 and 243.

ontological characterization of substances is to reject the reductivist/constructivist framework that structures the debate between bundle theorist and substratum theorist."[35]

I'll reply to these two points in reverse order. First, Loux doesn't succeed as well as he thinks he does in rejecting the "reductivist/constructivist" project of the substratum and bundle theorists, at least not if he wants his theory to meet the truthmaker challenge. He is forced to explain the existence of a concrete object as the *instantiation* of a kind-universal, and he is further forced to explain the instantiation of a kind-universal as the existence of some particular entity in addition to the universal which is sufficient to tie the universal into a particular object. So his project is reductive—he has taken a substance and explained it in terms of two more basic entities, a kind-universal and an instantiation of that universal.

Second, his rejection of substratum and bundle theory on the basis of their commitment to constituent ontology is too quick. The key move I made with respect to both theories—the one that enabled them both to meet the truthmaker-driven version of Bradley's regress and to meet the objections that Loux takes to be fatal (the PII objection to bundle theory and the anti-essentialist objection to substratum theory)—was to think of the substratum/co-instantiation as a particular which is metaphysically sufficient to tie the essential properties together into an object. Loux seems to think that this move is impermissible for either theory because they are committed to constituent ontology: the idea that ordinary particular objects are *wholes* built up of universals and substrata which are their parts. But constituent ontology isn't enough to rule out the key move. What is?

[35] Ibid., 243-244.

Loux's key assumption is this: he assumes that substratum theory and bundle theory are both committed to the claim that *every* property, no matter how trivial, is such that it is explained by the existence of a universal. This assumption is behind his argument that substrata cannot bear any essential properties, because (he says) the only way for a substratum to bear a property essentially would be for it to have a universal as a constituent part.[36] This assumption is also behind his argument that bundle theory is committed to the PII, because (he assumes) the "bundling" factor (co-instantiation) cannot be a particular with essential properties which is metaphysically sufficient to tie the universals together, but must be a universal itself.[37] Loux is right that, if this assumption is correct, substratum theory falls to the anti-essentialism objection and bundle theory falls to the PII objection.

However, three points are relevant, the last two of which undercut Loux's arguments. First, if his assumption is correct, then both theories *also* fall to Bradley's regress, because they are no longer free to make the necessary moves to halt the regress (which in both cases involved positing a particular the existence of which is sufficient on its own for the object to bear a certain essential property). Second, it seems that Loux's own view does not fare any better than the other two theories if that assumption is accepted, and contrary to some of his comments, it doesn't seem that this assumption is built into the description of those other views. So my point remains: once realism does what is necessary to meet the truthmaker-driven version of Bradley's regress, the other objections fall away and the three views collapse into each other. Third, all three theories are free to reject the assumption. The truthmaker motivation for realism certainly doesn't

[36] Ibid., 240.

[37] Ibid., 234.

support the assumption, and (again) it isn't built into any of the theories. Where does the assumption come from? I think it comes from another regress-threatening motivation for believing in universals: the One over Many argument. It may be that Loux's arguments just show that the One over Many argument generates an unanswerable version of Bradley's regress as well as rendering substratum and bundle theories unable to avoid the anti-essentialism and PII objections, respectively. My concern, however, is with truthmaker-motivated versions of realism, and in any case if there are other motivations for realism, realists need not be committed to the One over Many argument.

So the assumption can be rejected, which means that constituent ontology can be preserved in the face of the objections; and even if the assumption isn't rejected, since Bradley's regress thereby proves fatal, my thesis remains: once the realists do what is necessary to meet the truthmaker-driven version of Bradley's regress, the three positions collapse into one another and the avoid the major extant objections. There is another reason to think that Loux is misled when he identifies constituent ontology as the culprit. Suppose for the sake of argument that substratum theory and bundle theory had to abandon constituent ontology and decline to identify the universals and substrata/co-instantiations as parts of the object, perhaps because of worries about paradoxes for composition. The two theories could still survive and still recognizably be versions of substratum and bundle theory. They could still hold that *what it is* for there to be an ordinary object is for there to be a bundle of co-instantiated universals or for there to be a substratum essentially exemplifying a group of universals; they would just need to deny that the universals are *parts* of the ordinary substance. In other words, the two theories could be *reductive* (explain substances in terms of more fundamental entities) without

accepting constituent ontology. Loux's own theory, I've already argued, has to be reductive in that same way, at least if it is to meet the truthmaker demand. And Loux's theory really isn't any more or less attached to constituent ontology than bundle theory is or substratum theory is; there are recognizable versions of each which are committed to constituent ontology and recognizable versions which are not. Constituent ontology isn't the problem, then; it is the assumption that bundle theory and substratum theory are committed to explaining every property by a universal.

I conclude that Loux's neo-Aristotelian substance-kind theory collapses into the modified versions of substratum and bundle theory I have outlined, once it is specified so that it can handle the truthmaker demand. Loux's reasons for privileging his theory over substratum and bundle theory do not apply to the versions I have advanced, and in fact they have all the same options that his theory does with respect to reduction and to constituent ontology. The major options for realists, then, turn out to collapse into one another if they are motivated by an appeal to truthmaker theses and a respect for Ockham's Razor.

3.4 States of Affairs and Trope Theory

I've claimed that each of the three major realist theories *must* have recourse to particular ties in order to meet the truthmaker challenge. One objection looms. There is another option for the realist to identify as the truthmaker for ordinary predicative truths: states of affairs like *the table's being red* or *Dick's loving Jane*. The term "state of affairs" has been used in a couple of different ways, only one of which (David Armstrong's) allows states of affairs to serve as truthmakers for ordinary predicative truths, and it is in this sense that I will be using the term. Alvin Plantinga used the term

to pick out fine-grained, abstract entities which stand in a one-to-one relationship to propositions and *exist* whether or not they *obtain* (whether or not their corresponding proposition is true).[38] David Armstrong's states of affairs, by contrast, obtain if and only if they exist, and they can be considerably coarser grained than propositions. Some of Amstrong's states of affairs may be abstract entities, but not all of them are. States of affairs, in this sense, are particulars and can serve as truthmakers for ordinary predicative propositions. Since Armstrong is a realist about universals, universals are *parts* of the states of affairs along with individual objects, but a state of affairs is not reducible to the individuals and universals which constitute its parts.

States of affairs, as Armstrong conceives of them, are subject to at least two problems. First, as has been widely noted, states of affairs don't seem to fit with any sensible notion of the part/whole relationship. Neither mereological summing nor ordinary summing seems to account for the unification of the parts of the state of affairs into the whole. Armstrong must reject mereological summing as an account of the part/whole relationship because he is committed to distinct states of affairs having all the same parts. He must also reject ordinary summing as an account of the part/whole relationship for states of affairs because, in ordinary summing, the parts are unified into a whole when they bear some special (contingent) relation to each other—but he can admit no such relation, because then he would need to find a different truthmaker for that relation which could simply replace the state of affairs as the truthmaker for ordinary predicative truths.[39]

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[38] Alvin Plantinga, *The Nature of Necessity*.

[39] This argument is from Schulte, "Four Versions of Bradley's Regress."

Second, Armstrong's view has the strange consequence, on my account of ontological commitment, that ordinary predicative truths do not carry an ontological commitment to universals or to individuals. Ordinary predicative truths are explained in terms of (made true by) states of affairs, but the existence of states of affairs is *not* ontologically explained as (made true by) truths involving the existence of individuals and the existence of universals. That is because states of affairs are irreducible entities—they have parts, but they are not reducible to those parts nor (on Armstrong's account) reducible to those parts bearing a certain relation to each other. That means that ordinary predicative propositions carry a commitment to states of affairs but not to individuals or universals. This is at least a very strange version of realism, and it seems clearly wrong—surely I am committed to the existence of Jeff and Georgia when I assert *that Jeff loves Georgia*, and if the realist is correct, I should also be committed to the existence of a universal *loving*.

The two problems are not unrelated: their solution is the same. Simply identify the relation in which the individuals and universals must stand in order to form a whole and reduce states of affairs to individuals standing in that relation to universals. Both problems are solved. That is exactly what I have done with the realist position I have been defending. (The relation, to serve as a truthmaker, must be a particular, and we need distinct particular ties for essential properties and for modally independent groups of accidental properties.) So states of affairs are not a serious alternative to the view I have argued that realists must accept in order to meet the truthmaker challenge.

One point remains to be made. The version of realism I have argued the realist must embrace if the truthmaker-driven version of Bradley's regress is to be stopped

concedes a major dialectical advantage to trope theory. That is because it must itself admit tropes into its ontology—the reconceived substratum/co-instantiation, along with the particular contingent exemplification ties, look like non-repeatable qualities or relations and so fit the definition of a trope. Tropes, though, can perform the function of truthmakers on their own, without universals at all, at least if the tropes are essentially non-transferrable (can't possibly exist while instantiated by a different individual). After all, as I argued above, both the substrata/co-instantiation ties and the contingent exemplification ties must be able to have essential properties without universals to explain them, and each universal must have one of these ties essentially tying them to the object in order to be exemplified by an object, so why not eliminate the universals altogether? The truthmaker demand requires tropes and tropes are sufficient for the truthmaker demand. Universals are in danger of becoming superfluous, and realism is at a disadvantage in the debate with trope theory.

The only way for realists to overcome trope theory's advantage here is to find some other motivation than truthmaker demands for positing universals, some theoretical work that universals can perform and tropes cannot. Some such motivations, like the one over many argument, threaten Bradley's regress (and a version that may be harder to stop than the truthmaker-driven version); others (like those pointed out by David Lewis) may not.

CHAPTER FOUR

Explaining Time and Change: McTaggart's Paradox

1. Introduction

1.1 Chapter Introduction

McTaggart's Paradox has been a major focus, perhaps *the* major focus, of discussion about the nature of time for a century. There still isn't anything like a consensus as to the lessons to be learned from it. In fact, the disagreement over the argument is so radical as to be striking even in the disagreement-prone world of philosophy. D.H. Mellor, in his 1998 book, asserts that the success of McTaggart's argument (at least the section against A-theory) is "beyond all reasonable doubt" and finds himself compelled to chalk up disagreement over this to a willful blindness.[1] Dean Zimmerman, writing in 2005, reiterates with approval C.D. Broad's earlier claim that the argument is a "philosophical howler."[2] Mellor and Zimmerman are both eminent philosophers of time, aware of all of the arguments in the literature up to their time, writing in the last decade or so of a century-long discussion of this argument—and still they can disagree to such an extent that one considers the argument not only sound but obviously so, and the other considers it not only fallacious but a "howler." How is this possible?

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[1] Actually, what he says is that A-theorists have "managed to inoculate themselves against it." This sounds like willful blindness to me, but perhaps he means something a bit weaker. Still, it is a very strong claim. D.H. Mellor, *Real Time II* (London: Routledge, 1998), 72-75.

[2] Dean W. Zimmerman, "The A-theory of Time, The B-theory of Time, and 'Taking Tense Seriously.'" *Dialectica* 59 (2005), 401-457.

This only seems possible if there is some deeper issue lurking just beneath the surface of the debate, and if commitments regarding this issue are both controversial and sufficiently fundamental to render the controversial positions "just obvious" to the various parties to the debate. That issue is ontological explanation. Progress can be made in the discussion of McTaggart's Paradox if we bring the issue of ontological explanation closer to the surface of the debate. That is my aim in this chapter.

McTaggart's Paradox goes something like this. There are propositions expressed by sentences employing A-determinations (past, present, future) and tense (which seems to build in A-determinations). If we try to explain these A-propositions in terms of non-tensed propositions, we get a contradiction; so we can only explain them in terms of other tensed propositions. If we accept a demand that A-propositions need ontological explaining, though, we then get an infinite regress. The only ways out of this argument are, first, to deny that all A-propositions need an explanation; second, to accept the demand for explanation but affirm that A-propositions can be reduced; third, to deny that the regress is vicious; fourth, to accept McTaggart's conclusion that there are no true A-propositions. The contemporary discussion of the argument, however, has generally taken this as an argument against the thesis that A-propositions cannot be reduced to B-propositions.

At the heart of McTaggart's Paradox lies the issue of ontological explanation—a demand that certain kinds of propositions (A-propositions) have ontological explanations. Because of this, McTaggart's Paradox unifies many of the major arguments in the debate between A-theory and B-theory. The A/B debate is an issue of reduction and therefore (if my account of ontological commitment is correct) ontological explanation. If they were

to accept my account of ontological commitment, B-theorists should think that propositions expressed by sentences employing A-determinations can be reduced to propositions employing B-determinations; A-theorists should disagree.[3] The dialectic of the debate, then, is this: the B-theorist tries to come up with reasons to think that A-propositions must be ontologically explained, while the A-theorist tries to come up with reasons to think that A-propositions need not and cannot be ontologically explained, at least not by propositions which don't themselves employ tense or A-determinations.

Many of the major arguments in the debate over A- and B-theory can be helpfully understood as attempts either (on the B-side) to generate demands for ontological explanation sufficient to get McTaggart's regress started or (on the A-side) to deny that any such demand could be true. McTaggart's Paradox therefore lies at the heart of the A/B debate. In the three following sections, I will discuss the three major ways to motivate a demand for ontological explanation which can start the regress: the "flow" argument due to Williams and Smart, the appeal to truthmaker theses, and Ockham's Razor.

The famous Williams-Smart "flow" argument, usually listed as a separate argument against A-theory, just *is* McTaggart's Paradox combined with a clever way to use metaphor to motivate a demand for ontological explanation. Since nobody has understood the argument in this way, nobody has given a really satisfying treatment of it. I'll treat this argument in section 2 and argue that it does not undermine A-theory.

McTaggart's own way of motivating the demand for explanation, which William Lane Craig has argued applies to eternalist (and perhaps growing-block) A-theory, is

[3] I will discuss at various points in the chapter the dialectic of the debate when my account of ontological commitment is not accepted. My framework is still helpful, I think.

fundamentally the same (I'll argue) as the prominent grounding objection to presentism. Both are really just applications of a truthmaker thesis, which I've argued entails a corresponding demand for ontological explanation. I'll treat this argument is section 3 and argue that it is fatal to eternalist A-theory, though presentism may survive it.

Even if both of these demands for explanation fail, the B-theorist has a dialectical advantage because of Ockham's Razor, which serves as a third demand for ontological explanation. The A-theorist needs to present some positive reason to resist the reduction of A-propositions to B-propositions. There are two main ways of doing that, the translation argument and the phenomenological argument, which I'll discuss in section 4. I'll argue that neither is decisive. In particular, the debate over the translation argument exhibits confusion (on both sides) about ontological commitment, a confusion that my treatment in the first chapter can clear up. I'll argue that translation isn't required for avoiding ontological commitment, and so the fact that B-theorists can't translate A-sentences into B-theoretic language doesn't mean A-propositions can't be reduced to B-propositions. B-theory therefore would seem to win by default, because of considerations of theoretical simplicity. However, I will also argue that certain versions of presentism are just as reductive and so just as Razor-friendly as B-theory. So B-theory and presentism come out even.

Before I launch into this main discussion of strategies for motivating or denying demands for explanation, I need to first discuss an attempt to play both sides: an attempt to accept a demand for explanation that gets the regress started while denying that the explanation need be reductive. The only way to do that is to deny that the regress is vicious, and Quentin Smith does just that. I'll treat Smith's position later in this section

after I have given a more thorough analysis of McTaggart's argument. I will argue that Smith, like those who think Bradley's Regress virtuous, is subject to confusions over what makes a regress vicious.

1.2 McTaggart's Argument

McTaggart's target in his famous regress argument is nothing less than time itself. Time, he argues, is unreal. Like Bradley's equally famous regress argument, though, McTaggart's argument has come to be thought of as useful only for establishing a narrower claim, the falsity of a particular view of time: A-theory. A-theory is the view that there are features of reality corresponding to A-determinations (past, present, future) which are not reducible, in particular to features corresponding to B-determinations (before and after). According to my account of ontological commitment, A-theory amounts to the claim that there are true propositions employing A-determinations (past, present, future) or tense (was, is now, will be) which are base propositions. In this subsection, I'll treat mainly the portion of his argument which is most famous and which bears on A-theory, and I will lay out the options for a reply to it. At the end of the subsection, I'll discuss how McTaggart extends this argument against truths employing A-determinations into an argument against the reality of time as a whole.

The argument runs like this. Take a group of statements employing tense, statements about the future, the present, and the past:

(a) The ball is red all over.

(b) The ball was green all over.

(c) The ball will be blue all over.

The three properties (red all over, green all over, and blue all over) are incompatible properties, and so clearly the tense is significant because it is what avoids contradiction. How are we to ontologically explain these tensed statements? McTaggart thinks they must have ontological explanations in terms of states of affairs bearing properties like presentness. The explanations will take the following forms:

(a') The ball's being red all over is present.

(b') The ball's being green all over is past.

(c') The ball's being blue all over is future.[4]

It may be tempting to think that these three statements are compatible even if the copulas are taken to be tenseless. This isn't the whole story, though. Each of the three propositions entails some other propositions that show that the copulas have to be tensed in order to avoid contradiction. (c'), for example—that the ball's being blue all over is future—entails that the ball's being blue all over will be present. In other words, since A-theory is also committed to the fact of change, it is committed to the truth of some other statements in addition to these three:

(a") The ball's being red all over is present, was future and will be past.

(b") The ball's being green all over is past, was present and was future.

(c") The ball's being blue all over is future, will be present and will be past.

Since presentness, futurity, and pastness are also incompatible properties (given that the ball has an incompatible color property at some of those times), and each state of affairs has all three, the copulas that connect the states of affairs with those properties must also be tensed. Therefore, if we are committed to explaining tense by the bearing of A-series

[4] To make the argument more precise, we would need to use more specific A-properties than past and future, like the property "three days past" and so forth. Since this would complicate the argument rather drastically, though, without adding anything of real significance, I won't try it.

temporal properties by states of affairs, we need to explain the propositions expressed in (a'), (b'), and (c') with another set of propositions which explaining the tensing. But this other set will also have to employ tenses, and so will require an explanation of its own. And so on to infinity.

The argument can be run without reference to states of affairs or events bearing temporal properties. It can also be run simply with propositions, which means that a simple denial of events cannot avoid the regress:

(d) The ball is red all over.

(e) The ball was green all over.

(f) The ball will be blue all over.

If we can require that all such tensed propositions be explained in terms of the truth of tenseless propositions, we can get the following (where the tenseless copula is represented by (is)):

(d') *The ball (is) red all over* is true.

(e') *The ball (is) green all over* was true.

(f') *The ball (is) blue all over* will be true.

The regress is even more obvious here; since the three propositions are incompatible if true at the same time, their truth must itself be tensed. Thus ends my statement of the argument. It is also possible to run the argument with neither states of affairs bearing A-properties nor with propositions but with objects bearing properties in a tensed way—so one's ontology of the bearers of temporal properties seems not to be relevant to the argument.

The argument has two important components: the demand for ontological explanation and the resultant regress of explanations. There are correspondingly three ways to avoid the force of the argument. First, deny the demand for ontological explanation. Second, accept a demand for explanation but give an explanation that stops the regress. Third, deny that the regress is vicious. As with Bradley's regress, the third option is not viable because this is a regress of ontological explanation, and I will discuss (and dismiss) in the next subsection the one attempt to deny the viciousness of the regress. For the most part, A-theorists deny the demand for ontological explanation, while B-theorists accept the demand and argue that there are B-theoretical explanations available for the propositions that need explaining. However, the way the regress is stopped will depend crucially on the nature of the demand for ontological explanation, and it may turn out that there are some explanatory demands that A-theorists can accept and meet.

The focus of the debate, therefore, should be on the demand for ontological explanation that gets the regress started. This is the weak point of McTaggart's original argument. He is not explicit about why he thinks that tensed propositions require explaining. This isn't a new observation; Broad noticed long ago that this was the major flaw, and many have repeated his observation.[5] There is a gap between

(a) The ball is red all over.

and its supposed explanation:

(a') The ball's being red all over is present.

[5] C.D. Broad, *Examination of McTaggart's Philosophy* (Cambridge: Cambridge University Press, 1938), 309-313. The relevant section is reprinted in Michael Loux, ed., *Metaphysics: Contemporary Readings* (New York: Routledge, 2001), under the title "Ostensible Temporality."

Why do we need to explain (a) as (a')? Why not just deny the demand for explanation altogether, and assert that (a) is explanatorily basic? If we did that, we could still affirm the truth of (a'); we would just think that it is a consequence rather than an explanation of (a). For McTaggart's paradox to work, we need some way to motivate the demand that tensed facts be explained in terms of states of affairs bearing A-properties, or (in the propositional version of the argument) that the truth of tensed propositions be explained in terms of the truth of tenseless propositions.

McTaggart's explicit way of motivating the demand for explanation is flawed because it presupposes the demand it is supposed to motivate. His strategy is this: there arises a contradiction on each level of explanation, he thinks, which requires us to move to the next level in order to resolve the contradiction. The contradiction is between one event's tenselessly bearing each of the incompatible A-properties. If we explain each tensed fact as an event tenselessly bearing an A-property, we will get a contradiction because that same event will have to bear the other (incompatible) A-properties as well. (The ball's being red is present, but it also will be past and was future; if we try to remove the tense from the bearing of presentness, pastness, and futurity, we will have a contradiction.) The only way to avoid the contradiction is to tense the bearing of the A-properties. But then those will have to be explained as events tenselessly bearing A-properties as well, and so on. The obvious problem with this attempt to motivate the demand for explanation is that it presupposes that very demand. The contradiction arises at every level—*except* the first, the level where the tensed facts haven't yet been explained in terms of tenseless events bearing A-properties (or in terms of the truth of tenseless propositions). Since there isn't any contradiction at that first level, there is no

motivation for the demand for explanation. It is only once you have accepted the demand for explanation that any contradiction will arise to force a regress.

There are other candidates for the regress-generating demand for ontological explanation, though, and it is on these that the discussion should be focused. Often these are not made explicit in the debate and as a result there is much talking past one another on the part of theorists about time. I will discuss what I take to be the three major demands for ontological explanation that threaten McTaggart's regress: one generated by the metaphor of temporal motion, one generated by truthmaker theses (which will turn out to be McTaggart's own implicit way of motivating his regress), and Ockham's Razor.

I have claimed that the only options for getting out of McTaggart's argument are to deny the demand for explanation or give an explanation that stops the regress, and I have said that the B-theorist must give a regress-stopping reductive explanation of the propositions expressed by A-statements in terms of B-propositions. One objection presents itself: cannot the B-theorist accept this part of McTaggart's argument and deny that there are any true propositions expressed by A-sentences? In other words, can't the B-theorist be an eliminativist about A-facts and claim that there are no truths about the past, present, or future? They cannot, because if all A-sentences are false then time and change have been eliminated. Suppose there are no truths about the past, present, or future, no true sentences employing tense. It is false (or nonsense) that I will die, false that I was born, false that I am now writing this or that I have written this or that I will write this. It is false that the origin of the earth is past, false even that anything is in the past, and false that I have any future at all (much less a future in professional philosophy). Surely it would follow that nothing changes, that time itself and change are

unreal. So eliminating tensed truths (as opposed to reducing them) is not an option for anyone who wants to affirm the reality of time, as the B-theorist does. The B-theorist is therefore committed to giving reductive explanations of true A-propositions.

My argument here is related to, but not identical with, McTaggart's way of extending his argument against A-determinations into an argument against the reality of time. McTaggart argues that A-determinations are essential to time. The way in which he claims that they are essential, though, is stronger than that way in which I have claimed that they are essential. I merely said that if all A-sentences are *false* (the A-determinations eliminated), then time and change have been eliminated. McTaggart argues that if A-determinations are even *reduced*, then time and change must be eliminated. That is, he makes the strong claim (much stronger than mine) that the A-series must be *fundamental* in any account of time and that therefore there are no good B-theoretic reductions of A-determinations.[6]

I will put off considering McTaggart's argument for this claim until section 4. There I will consider three arguments that A-determinations are irreducible to B-determinations, including McTaggart's own argument. Those arguments can be thought of as arguments in favor of A-theory against B-theoretic reduction of A-determinations. But they can also be thought of as arguments against the reality of time, *if* they are combined with McTaggart's regress argument that has a motivated regress-generating demand for explanation. I will argue than none of the three arguments are successful and that B-theory (and, by extension, time itself) comes out untouched.

[6] More precisely, he makes no distinction between reduction and elimination, and his arguments should be interpreted as making the stronger claim, given that he is arguing that time is unreal.

1.3 The Viciousness of the Regress

Quentin Smith has denied that McTaggart's regress is vicious.[7] He thinks it belongs in the category of non-vicious regresses like the truth regress. It is a bit hard to say exactly where Smith goes wrong, because it is hard to get a handle on his precise view of the nature of the regress—he says some apparently incompatible things about it. My argument against his view is therefore a dilemma. If the regress that Smith identifies as McTaggart's is a regress of ontological explanations, then it is impossible (and therefore vicious). If the regress is not a regress of ontological explanations, then it is not McTaggart's regress at all. McTaggart's regress is an impossible infinite regress of ontological explanations; the only question is whether the regress can be motivated and whether it can be stopped.

On the one hand, Smith says some things that seem to suggest that he is seeing the regress as a regress of ontological explanation. He regularly identifies the regress as a regress of *analysis*: each step in the regress is an analysis of the preceding step. He asserts that the *analysandum* must be necessary and sufficient for the *analysans* and uses that in some of his arguments. Analysis is very close to ontological explanation; some use the terms to mean the same thing. Smith also motivates the regress in a way that would fit with the regress being one of ontological explanation. He argues, against those who would simply deny that the demand for analysis that starts the regress, that the tensed copula must refer to something in the world, something which suffices for the truth of the tensed statement. This looks an awful lot like a demand for a truthmaker, which I will argue in section 3 does threaten McTaggart's regress and ultimately proves

[7] Quentin Smith, "The Infinite Regress of Temporal Attributions," *Southern Journal of Philosophy* 24 (1986): 383-396.

fatal to eternalist A-theory of the sort to which Smith ascribes. Truthmaker demands give rise to McTaggart's Paradox because they entail demands for ontological explanation.

On the other hand, Smith seems to think that the only reason the regress could be vicious is for parsimony considerations. He tries to mitigate the ontological cost of the regress in a couple of ways: by claiming that there need not be an infinite series of moments and an infinite series of inherences of presentness in those moments, but only one moment (or perhaps none at all) and an infinite series of inherences; and by claiming that there is really only one property and an infinite series of inherences of the property. If the regress is one of ontological explanation, though, it cannot be vicious for considerations of parsimony, since it would have no ontological commitments at all. Also, Smith puts the regress in a category of harmless regresses generated by what he calls "reflexive properties," in which he includes identity, individuality, oneness, and truistic properties like "is a horse or a non-horse."[8] These properties, and the regresses they generate, are actually a bit confusing and need clarifying, but the relevant point for our purposes is that the infinite series generated by these regresses are not explanatory regresses at all. Of course, neither do they threaten a loss of ontological parsimony, so this way of conceiving the regress is in tension with all of the above ways that Smith seems to be thinking of the regress.

Smith therefore seems to be thinking of McTaggart's regress in incompatible ways. Smith faces a dilemma. If the regress he is considering is a regress of ontological explanation, then it is impossible (and not vicious for reasons of ontological parsimony). If the regress is not a regress of ontological explanation, then it is not McTaggart's

[8] Ibid., 394-395.

regress at all. The first horn of the dilemma is established by my arguments in the first half of the second chapter. My burden here is to establish the second horn: McTaggart's regress is essentially a regress of ontological explanation.

The first piece of evidence in favor of this claim is that McTaggart himself consistently refers to the regress as one of explanation. He thinks of each step in the regress as an explanation of the previous step. In the four pages in which he presents the regress argument, the term "explanation" appears, by my count, 17 times, and the concept appears another four times clothed as the term "account."[9] Clearly, the sort of explanation that is relevant is ontological explanation, not causal explanation or some other sort, since each step purports to be an analysis of the preceding step. Smith's description of the regress as one of analysis seems to indicate that he understands this, but he seems not to understand the implications of thinking of the regress as one of ontological explanation.

The second piece of evidence in favor of this claim is that McTaggart, like Bradley, formulates his argument interchangeably as the accusation that the A-series gives rise to a vicious infinite regress, that it gives rise to a vicious circle, and that it simply does not answer the original question.[10] If the regress is one of ontological explanation, then McTaggart is right to associate these three flaws together. Other kinds of regresses may not be able to account for this association. McTaggart, unlike Bradley, considers the possibility of simply denying the demand for explanation and refusing to admit that the original question needs answering at all. His reply is to give the inadequate motivation I canvassed above, one which presupposes the demand it is

[9] J.E. McTaggart, "The Unreality of Time," *Mind*, 17 (1908): 468-471.

[10] Ibid., 468, 469, and 470, respectively.

supposed to motivate—and the rest of this chapter is an exploration of the replies that McTaggart could have given and perhaps did implicitly give. This difference between McTaggart and Bradley just reinforces the claim that the regress is one of ontological explanation, because this is precisely the weak point of the argument if the regress is one of ontological explanation.

The third piece of evidence in favor of this claim is derived from the principles of charitable interpretation. McTaggart certainly meant to derive a regress that was clearly vicious. If there is an interpretation of the regress that accounts for its viciousness, and that interpretation fares equally well in other respects, then that is the interpretation we should accept. The interpretation of the regress as one of ontological explanation satisfies this consideration. Interpreting the regress as one of ontological dependence does not as easily satisfy this consideration, since there are questions as to whether such regresses are vicious. Interpreting the regress as any sort of regress that is objectionable merely for considerations of parsimony does not satisfy the consideration, nor does interpreting the regress as a harmless regress like the truth regress or one of Smith's example regresses. And the interpretation of the regress as one of ontological explanation fits with everything else that McTaggart says.

The fourth piece of evidence is an extension of this last comment. Interpreting the regress as one of ontological explanation provides tremendous explanatory power (a different kind of explanation than ontological explanation), with respect to both McTaggart's own views and the subsequent course of the debate. My account of McTaggart's argument unifies many of the arguments in the debate between A-theory and B-theory. It accounts for the connection between the "flow" argument of Williams

and Smart and McTaggart's argument, a connection that Williams recognized but many subsequent philosophers have not (I'll explore this in section 2). It accounts for the connection between McTaggart's regress and the grounding objection to presentism, since an early form of the grounding objection appears in McTaggart's original paper and is part of his argument. It accounts for the fact that the argument apparently applies with more force against eternalist A-theory than it does against presentism. It accounts for the importance of some of the assumptions that McTaggart makes in the course of his argument, assumptions that reveal his actual implicit motivation for the regress (I'll explore all of this in section 3). Finally, it accounts for the connection between the translation argument against B-theory and the A-theorist's attempt to avoid the force of McTaggart's paradox (I'll explore this in section 4). In short, my understanding of the argument allows for a unified understanding of much of the debate over A-theory and B-theory.

I conclude that McTaggart's regress is an impossible regress of ontological explanation. Smith is wrong to deny that it is vicious. The only options in objecting to McTaggart's argument are to deny the demand for explanation that gets the regress started or to give an explanation that stops the regress.

2. The First Demand: Time's Motion

2.1 Introduction

When discussing the major arguments against the A-theory of time, philosophers have tended to list McTaggart's famous paradox separately from D.C. Williams' and J.J.C. Smart's argument for the absurdity of the "moving" or "flowing" present. For

example, Ned Markosian calls them "different" arguments,[11] and Josh Parsons claims they are unconnected.[12] There is initially reason to think that they may be more closely connected than these philosophers believe, though. Both arguments have as their target the notion of the objective, changing present, and both purport to derive from it a vicious infinite regress of timelines. Also, Williams seemed to think that he was identifying essentially the same incoherence with the objective present that McTaggart did.[13]

In fact, the Williams-Smart argument just is McTaggart's paradox coupled with a device for remedying the key defect in the original argument, the lack of a justification for the demand for explanation that gets the regress up and running. Because nobody has interpreted the Williams-Smart argument in this way, nobody has quite understood the force of the argument and nobody has given a really satisfying reply to it. My goal is to bring to the surface the (buried) issues which lie at the center of the argument. In the second subsection, I'll say how it is that the Williams-Smart argument sets out to remedy the defect in McTaggart's argument. After doing so, I'll discuss Markosian's criticisms of their argument and say why they don't get at the heart of the issue. In the third and fourth subsections, I will discuss the two responses to the argument available to the A-theorist, and conclude that both are viable responses, but that the best option for the A-theorist is to combine the two. Along the way, I'll address concerns over whether A-theory can be stated in a way that both adequately represents change and distinguishes it

[11] Ned Markosian, "How Fast Does Time Pass?" *Philosophy and Phenomenological Research* 53 (1993), 829. He also considers them separate arguments in his "Time," *The Stanford Encyclopedia of Philosophy* (Spring 2011 Edition), ed. by Edward N. Zalta, URL: <http://plato.stanford.edu/archives/spr2011/entries/time/>.

[12] Josh Parsons, "A-theory for B-theorists," *The Philosophical Quarterly* 52 (2002), 11.

[13] D.C. Williams, "The Myth of Passage," *The Journal of Philosophy* 48 (1951), 462.

from B-theory. Finally, in the fifth subsection, I will discuss an instructive and illuminating mistake made by Josh Parsons in his reply to the Williams-Smart argument.

2.2 The Williams-Smart Argument from the Metaphor of Motion

Much, perhaps most, of the time A-theory is stated as a thesis having to do with the motion or passage of time: that there is a moving present, that time flows, that time actually is passing us by, that we are traveling through time, that time is dynamic, or that time marches—the illustrations multiply.[14] All have as their core the idea of motion: what is distinctive about the A-theory of time, according to this way of thinking, is that it claims that time genuinely moves, as opposed to the B-theory's "static" view of time as a set of unchanging before- and after-relations.

Williams and Smart see in these (fundamentally metaphorical) formulations of A-theory an avenue for attack. They are, whether they realize it or not, finding in the metaphor of the moving present a way to motivate the demand for explanation that is needed to get McTaggart's regress up and running. I'll quote what I take to be the key passages from each:

> The obvious and notorious fault of the idea, as we have now localized it, is this. Motion is already defined and explained in the dimensional manifold as consisting of the presence of the same individual in different places at different times….The tragedy then of the extra idea of passage or absolute becoming, as a philosophical principle, is that it incomprehensibly doubles its world by re-introducing terms like 'moving' and 'becoming' in a sense which both requires and forbids interpretation in the preceding ways. For as soon as we say that time or the present or we move in the odd extra way which the doctrine of passage requires, we have no recourse but to suppose that this movement in turn takes time of a special sort: $time_1$ moves at a certain rate in $time_2$, perhaps one $second_1$ per one $second_2$, perhaps slower, perhaps faster. Or, conversely, the moving

[14] For a better list, see D.C. Williams, "The Myth of Passage," 460-462. The motion of time metaphor appears in a footnote in McTaggart's original paper presenting his argument against the reality of time, but McTaggart does not use it to motivate his regress in the way that I am arguing that Williams and Smart do. McTaggart, "The Unreality of Time," 470.

> present slides over so many seconds of $time_1$ in so many seconds of $time_2$. The history of the new moving present, in $time_2$, then composes a new and higher time dimension again, which cries to be vitalized by a new level of passage, and so on forever.[15]
>
> If time is a flowing river we must think of events taking time to float down this stream, and if we say 'time has flown faster to-day that it flew yesterday' we are saying that the stream flowed a greater distance to-day than it did in the same time yesterday. That is, we are postulating a second time-scale with respect to which the flow of events along the first time-dimension is measured….Just as we thought of the first time-dimension as a stream, we will want to think of the second time-dimension as a stream also; now the speed of flow of the second stream is a rate of change with respect to a third time-dimension, and so we can go on indefinitely postulating fresh streams without being any better satisfied.[16]

Reconstructed to explicitly motivate a demand for explanation sufficient to get McTaggart's paradox started, the argument goes like this. A thing's motion, in its literal sense, is ontologically *explained* as the presence of the thing in different places at different times—that is just what it is for something to move. Being in different places at the same time is multilocation, not motion. The metaphorical motion of the present moment, or of things through the present moment, must therefore have an analogous ontological explanation (this is the key move). Motion through time can't be ontologically explained, though, as the converse of motion through space (as being at different times in different places), because that just makes motion through time equivalent to motion through space, and things can move through time without moving through space. It must therefore be ontologically explained as *being at different times at different times*. This requires the existence of a second timeline along which the thing moves. But then motion along this timeline would require exactly the same ontological explanation, which requires the existence of a third timeline, and so on. All talk of the

[15] D.C. Williams, "The Myth of Passage," 463-464.

[16] J.J.C. Smart "The River of Time." *Mind* 58 (1949), 484.

"rate of flow" is just a particularly vivid way to bring out that motion requires this sort of explanation.

The regress is just a version of McTaggart's paradox. It takes a tensed statement:

(g) The ball is$_1$ green, was not$_1$ green, and will be$_1$ not green.

and, adding the A-theorist's own gloss of this as a kind of "motion" from "was not green" to "is green" and back to "will not be green," demands that the motion be *explained* as change relative to a change in time. (This yields an increased number of statements, not all of which will I list.) So what it is for (g) to be true is for the following to be true:

(h) The ball's being green is$_2$ present$_1$, was$_2$ not present$_1$, and will be$_2$ not present$_1$. The ball's not being green is$_2$ future$_1$ and past$_1$, etc.

This, too, is glossed as a kind of motion (since time involves motion, according to the A-theorist), and yields the same demand for explanation in terms of another timeline:

(i) The ball's being green presently$_1$ is$_3$ present$_2$, was$_3$ not present$_2$, and will be$_3$ not present$_2$. The ball's not being green futurely$_1$ is$_3$ present$_2$, etc.

It is difficult to enumerate and keep straight all the various consequences, and the task quickly grows tiresome. (To complicate things further, the precise statements in the regress will differ depending on what we conceive of as the subject of motion: events moving backwards through time, or things moving forwards through time, or time itself or the present doing the moving. These possible variations will not substantively affect the argument, though.) The point is that this regress is clearly the same explanatory regress as in McTaggart's paradox, except that it is perhaps more explicit that each explanatory step involves a separate timeline. And this regress is motivated by the

demand for explanation derived from the metaphorical extension of the concept of motion applied to time. It therefore plugs the hole in McTaggart's original argument.

Before I discuss the A-theorist's options in replying to this argument, I'd like to clear up three issues which may serve as distractions from the central significance of the argument, which is the use of the metaphor of motion to generate a demand for explanation sufficient to get McTaggart's regress up and running. The first distraction is a misleading way in which Williams states his argument. The second is a pair of arguments Smart uses to supplement his infinite regress argument. The third is Markosian's criticism of the argument, directed primarily at Smart.

First, Williams seems to suggest in a few places that he isn't arguing for the absurdity of the concept of the moving present, but instead offering a B-theoretical alternative to the A-theoretical interpretation of time's motion: "we can readily define a corresponding 'motion in time.' It comes out as nothing more dramatic than an exact equivalent: 'motion in time' consists of being at different times in different places."[17] This would turn the argument from an argument from a vicious infinite regress to an inference to best explanation. The problem with this is that objects can move through time without moving through space—an object which isn't currently moving can still be advancing through time. So Williams' apparent alternative explanation just isn't a good explanation. I take this to indicate that Williams isn't offering an alternative explanation at all, and that he just misspoke in the few places where he seems to suggest that he is. He is not offering an alternative explanation of time's motion; he is arguing for the

[17] D.C. Williams, "The Myth of Passage," 462-3.

absurdity of the very concept of time's motion, and doing so on the basis of its giving rise to a vicious infinite regress.

Second, Smart purports to derive two absurdities other than the infinite regress from the concept of the movement of time. These absurdities are secondary issues. It is the regress that is the major threat to the thesis of the moving present. One absurdity is that, once we have gone the first step on the regress of explaining time's motion and posited a second timeline, all our temporal attributions become systematically ambiguous—it is ambiguous whether they apply to the first or the second timeline. The second absurdity is that, when asked what the rate of time's flow is, we have no idea how to answer it—we don't know what sort of units of measurement to use to state the rate, and we can't even conceive of any such units. The first thing to note is that neither of these absurdities would arise if the demand for explanation was denied at the first level and the temptation to posit a second timeline resisted. So any solution to the regress problem, any rationale for denying that the metaphor forces the demand for explanation that gets the regress going, will also be a solution to both of these other problems. The second thing to note is that each of these absurdities may be solvable independently of solving the regress problem. It may well be possible to make sense of rate of flow talk without positing a second timeline. (I'll discuss this in a moment in connection with Markosian's critique of Smart's argument). It may also be possible to dissolve the ambiguity in our temporal attributions simply by making our language rigorous, perhaps by employing subscripts of the sort I used in stating the regress above. Since any solution to the regress problem also solves these other two problems, while these other

two problems may have solutions which are not solutions to the regress problem, the regress problem is fundamental.

Third, Markosian offers a solution to the Williams-Smart "rate of flow" argument which misses the argument's most fundamental force. He rightly points out that it is possible to make sense of the rate of flow talk without positing a second timeline. Rate talk involves comparison between two changes, and it is possible to give the rate of a change in terms of another change which is other than the pure passage of time. To use Markosian's example, it is perfectly coherent to say that "during the 1989 NFL season, Joe Montana's passing totals increased at the rate of 21 completions per game."[18] What is more, it is possible to simply reverse the two changes compared and still have a coherent rate: "the games progressed at the rate of one game per 21 completions by Montana."[19] It follows from this that it is possible to give the rate of the flow of time in terms of all sorts of regular changes happening in the world: just as I may walk at a rate of five miles per hour, hours may pass at the rate of one hour per every five miles I walk. So rates can be given, and rate-talk can be coherent, without the positing of a second timeline. I think Markosian is right about all of this—but this doesn't mean he has solved the deepest problem raised by the Williams-Smart argument. All this means is that Williams' way of stating the argument, as a demand for explanation based on the metaphor of motion, is more fundamental than Smart's demand for an answer to the rate of flow question.[20] Markosian's way of making sense of rate-talk does not address the argument that time's

[18] Markosian, "How Fast Does Time Pass?" 842.

[19] Ibid., 842.

[20] Smart can be read as implicitly making the argument from the metaphor of motion — at the very beginning of the above quote, directly before going into the rate of flow issue, Smart says "If time is a flowing river we must think of events taking time to float down this stream…" Smart, "The River of Time," 484. This encodes, I think, the argument that Williams makes explicit.

motion requires the explanation that gets the regress going. He has just found a way to divorce rate-talk from explanation entirely.

Markosian offers two other closely related solutions to the Williams-Smart argument, which get a bit closer to revealing what the A-theorist's actual options are. The A-theorist could, thinks Markosian, simply state the rate of time's flow with reference to itself: time flows (necessarily) at the rate of one hour per hour, one minute per minute, and so on. Or the A-theorist could deny the need to give a rate of flow for time at all, asserting instead that time's flow is the fundamental change to which all other changes are compared. I think that both of these solutions amount to denying the need for an explanation of time's motion, and if they are applied to Williams' fundamental argument from the metaphor of motion, they would just be a denial that the metaphor of motion has the consequence that time's flow must be explained as a difference in time across a difference in time. However, as it stands, this "solution" doesn't really tell us why Williams' argument isn't convincing. To be sure, the A-theorist needs to deny that the use of the metaphor of motion applied to time has the objectionable consequence that Williams thinks it does, but the A-theorist also needs to say *why* Williams' argument doesn't show that it does. So Markosian's solutions to the Williams-Smart argument are incomplete.

With these distractions out of the way, we can proceed to the A-theorist's options for avoiding the Williams-Smart argument. The A-theorist must find a way to deny the demand for ontological explanation that this argument generates. There are two ways to do this: retain the metaphor and deny that it has the objectionable consequence, or try to state the distinctive A-theoretical thesis without any use of the metaphor of motion at all.

I'll argue that both are viable options, but that the best option for the A-theorist is to combine the two.

2.3 The First Solution: Retaining the Metaphor

The first option for the A-theorist in replying to the argument is to retain the use of the metaphor in stating A-theory while denying that the metaphor indeed has the objectionable consequence that Williams and Smart think it does. The Williams-Smart argument operates in two steps. First, it analyzes the literal concept of motion (finding a consequence of the literal concept) and then extends that analysis to the metaphorical extension of the concept of motion to time (arguing that there must be a metaphorical analogue of that consequence). Second, it argues that the metaphorical analogue of the consequence is an objectionable one. This pattern of reasoning depends on a certain picture of metaphor: there must exist both literal concepts and metaphorical concepts, and there must be a certain parallel structure between the literal concepts and their metaphorical extensions. That is, the structure of the metaphorical concept (its various conceptual consequences) must "mirror" in some way the structure of the literal concept. This is what allows reasoning from the fact that the literal concept of motion has a certain conceptual consequence to the conclusion that the metaphorical concept of time's motion must have an analogue of that consequence. Now, I myself am sympathetic to this picture of metaphor—that is, I think that there are genuinely metaphorical concepts which are isomorphic to literal ones, and that statements employing metaphorical concepts can be true—but I will later address the significance, for the argument, of rejecting this picture.

There are two ways to avoid the argument and preserve the metaphor, corresponding to the two steps of the argument. The denial of the second step would be to accept that there is a metaphorical analogue of the literal conceptual constraint on motion (that motion is explained as being in different places at different times) but argue that it isn't what Williams thinks it is (that time's motion is explained as being at different times at different times), but instead is something that isn't objectionable. I'm not too optimistic about finding another candidate for the metaphorical conceptual constraint which is analogous to the literal conceptual constraint, though, so I'll pursue the other kind of reply. The denial of the first step would be to simply deny that there is any metaphorical analogue of this particular consequence of the literal concept of motion. This sort of reply to the argument needs to say something about how conceptual analysis for metaphorical concepts works and how metaphorical concepts relate to their literal analogues. The relationship between a literal concept (and the inferences licensed by that concept) and its metaphorical extensions (and the corresponding metaphorically extended inferences) is a tricky one. I can't hope to say everything there is to say about metaphorical concepts, and I don't want to take too many sides in the debates surrounding metaphor, but what I can say is sufficient to defuse the Williams-Smart argument.

Can a metaphor be apt—that is, be a genuinely metaphorical concept—without carrying with it metaphorical analogues of every consequence of the literal concept? For a concept to be a metaphorical extension of another (literal) concept, it surely must carry at least *some* metaphorical analogues of the consequences of the literal concept. If it doesn't carry any metaphorical analogues of the literal conceptual consequences, then the

metaphorical concept wouldn't be a metaphor at all, since it wouldn't be related in the right way (sufficiently isomorphic) to its supposed literal analogue concept. It is also obviously true that the metaphorical concept need not have all the consequences that the literal concept does: that is just what it is for the concept to be metaphorical and a distinct concept from the literal one.

So a metaphorical concept does not have all of the consequences of its literal analogue (which is just to say it is a different concept that the literal one), but it does have at least some metaphorical *analogues* of the consequences of the literal concept. Does it need to have metaphorical analogues of *all* of the consequences of the literal concept? I think not. Consider the following familiar metaphor: the mind as a container. My thoughts and ideas are "in my mind", while your thoughts and ideas are not "in my mind." The literal concept of container has the following consequence: things within a container are always at some spatial distance from one another. They can be far apart, or close together, or a middling distance apart, but there must always be some relation of distance between them. The metaphorical concept of a container applied to the mind, however, has no such consequence, not even a metaphorical analogue of the consequence. Sometimes there can be a metaphorical sort of distance between the contents of my ideas—a thought of a cup, for example, is "closer" to a thought of a mug than it is to a thought of a house. Moving from thought to thought requires a "bigger jump" in some cases than in others. But this isn't always true. With some thoughts or ideas it just doesn't make sense to talk about the distance between them. Is my thought of the tree outside my window farther away from my thoughts of the philosophy of counterfactuals than are my thoughts of my father? Are they equally close? Does it even

make sense to ask those questions? I think that this shows that the "mind as container" metaphor doesn't entail that there is always some distance between the things in the container (ideas and thoughts), which means that there is a consequence of the literal concept of container which doesn't have a metaphorical analogue. Consider also a related metaphor, the metaphor of ideas as material objects. I can "give" ideas to someone else, "take them" from books, and so on.[21] When I give a material object to someone, I no longer have that material object—this is a conceptual constraint on the concept of a material object. There is no such conceptual constraint on the metaphorical concept of ideas as objects. I can give an idea to someone else and still keep the idea for myself, and I am not even tempted to think otherwise.

A metaphorical concept, therefore, though it must have metaphorical analogues of some consequences of the literal concept, need not have an analogue of every such consequence. I don't know how to determine how many and which literal consequences must have metaphorical analogues, or even if such a determination could be made at all. One way to cast doubt on the claim that the metaphorical concept of temporal motion *must* have the objectionable consequence that gets McTaggart's regress running, however, is to find some significant consequences of the metaphorical concept other than the objectionable one which *do* have literal analogues. These significant consequences would be candidates for the core of the metaphorical concept, and since their existence would be sufficient to establish a genuinely metaphorical extension of the literal concept of motion, it would be hard to argue that the objectionable consequence must be included

[21] See Mark Johnson and George Lakoff, *Metaphors We Live By* (Chicago: University of Chicago Press, 1980).

in that core. I think such non-objectionable significant consequences can be found for the metaphorical concept of time's motion. Consider the following set of inferences:

(1) Literal: If an object C moved from point A to point B, then C was at point A and *then* was at point B.

Metaphorical: If the ball moved from being blue three days ago to being green yesterday, then the ball was blue and *then* was green.

(2) Literal: If an object C moved from point A and is now at point B, then C's properties are different now than they were. It is in a different place. It is closer to some things and farther away from others.

Metaphorical: If the present time moved, its properties are different. It has different contents (is in a different place), and it is closer to some events and farther away from others. If events or objects moved through time, their properties are different. They are in a different place than they were, and they are closer to or farther away from the present.[22]

These inferences are basically the very same inferences that Williams finds objectionable, minus one key element: the claim that the inferences *explain* motion, that *what it is* for something to move is for it to be in one place at one time and another place at another. It is one thing to say that the inferences stated in (1) above hold, and quite another to say that those inferences explain what it is for an object to move—this is a different conceptual consequence. And the mere fact that they hold is sufficient to establish the metaphor, sufficient to render the concept of time's motion isomorphic in the right way to

[22] I'm trying to remain neutral as to whether it is time that moves or things/events which move through time.

the concept of ordinary motion. This means that the A-theorist who holds on to the metaphor is free to deny that the inferences explain temporal motion and insist that they are instead merely consequences of temporal motion. Or, to speak more precisely, it is hard to argue that these inferences holding is *not* sufficient to establish the metaphor, in light of the fact that metaphorical concepts don't always have analogues of every consequence of the literal concept. Therefore, the Williams-Smart argument fails to establish that temporal motion must be explained as being at different times at different times. It fails to supply the demand for explanation that is needed to get McTaggart's paradox started.

I'll look at three potential objections to this line of response to the Williams-Smart argument. The first two have to do with metaphor, while the third has to do with the much-discussed recent problem of distinguishing clearly between A- and B-theories of time. The first possible objection comes from those who are sympathetic with Donald Davidson's theory of metaphor, according to which metaphorical statements are never actually true—they are always literal falsehoods which serve to "call forth" certain associations in the mind of the reader or hearer. According to this view, there aren't really any metaphorical concepts, just useful but false applications of literal concepts. If Davidson is right, then the A-theorist shouldn't use the metaphor of time's motion to state A-theory, since A-theory would then be false simply by virtue of employing metaphor.[23] The second possible objection is like unto the first, but toned down

[23] There may also be other views of metaphor which entail the rejection of the picture of metaphor presupposed by the Williams-Smart argument (the notion that there are genuine metaphorical concepts and that metaphorical concepts are isomorphic to their literal analogues in such a way that it is possible to reason from conceptual constrains on the one to the existence of analogous conceptual constraints on the other). Some of these views will be friendlier to the truth of metaphorical statements than is Davidson. If such a view is true, my claim (that the Williams-Smart argument fails to cause trouble for A-theory) is only reinforced.

considerably. There is a widespread sensibility in the philosophical community that there is something inadequate about metaphor. Even if metaphorical statements can be true, many seem to think that there is something objectionable about irreducibly metaphorical views or philosophical positions. Perhaps the thought is that metaphor interferes with clarity or precision or some such value, and so philosophical positions should be amenable to statement in literal language. Smart, for example, talks as if the inescapability of the metaphor of time's motion itself constitutes an objection to the position tied to the metaphor.[24] We ought to have literal statements of some of our views, he thinks. (It is unclear which views require this—perhaps our "philosophically important" ones.) So, according to this line of thought, the fundamental statement of A-theory ought to be a literal one, and the metaphor of time's motion is inadequate.

I'm unsympathetic to both of these objections. Davidson's view departs radically from common sense by attributing widespread error to ordinary ways of thinking and speaking. I'm inclined to insist that when I say of a hot and sweaty man that "he is a cold person" due to his utter lack of care and consideration for other human beings, I am speaking truly. I'm also unsympathetic with the view that there is something undesirable about irreducibly metaphorical views. I do not see much reason to share these scruples about metaphor. For one thing, I am not so optimistic about the project of reducing metaphorical views to literal ones—whatever the fate of their precise views of metaphor and the philosophical views they have built onto their theory of metaphor, George Lakoff and Mark Johnson have made a pretty good case that at least some of our important ways

[24] Smart, "The River of Time," 484.

of looking at the world involve irreducibly metaphorical concepts.[25] For another thing, I am also not so pessimistic about the clarity and precision of metaphorical language as compared to literal language. Certainly, sometimes metaphors can be vague and unclear—but, of course, literal language is often vague and unclear as well, and it doesn't seem true that metaphorical language is always and necessarily unacceptably vague and unclear. Sometimes the use of metaphor can achieve clarity and precision beyond anything possible by the use of literal language with respect to a particular domain.[26]

This is not the place, however, to engage in a full-blown attack on Davidsonian views of metaphor and defense of irreducibly metaphorical belief. Setting this aside, then, it serves my purpose well enough to note that neither of these objections revives the Williams-Smart argument itself. The Williams-Smart argument depends on the metaphor being potentially true and carrying an objectionable consequence. Someone who rejects the idea of time's motion on the basis of these two objections won't be rejecting it on the basis of McTaggart's paradox at all, or even McTaggart's paradox plus a point about metaphor; they'll be rejecting it solely because of a point about metaphor. My argument in this section, therefore, suffices as a reply to the Williams-Smart argument. It may not suffice as a reply to all objections to the metaphor of the moving present, but that isn't my aim. (The next section, however, devoted to stating A-theory without the metaphor of time's motion, will suffice as a reply to these two objections.) This reply goes for any view which rejects the picture of metaphor which underlies the Williams-Smart

[25] Johnson and Lakoff, *Metaphors We Live By*.

[26] Some philosophers may think that true propositions employing metaphorical concepts might cause trouble for the correspondence theory of truth. But that would only cause trouble if there was no actual isomorphism between things in the world for literal and metaphorical concepts to capture — and why think that?

argument—the picture which says that there are genuinely metaphorical concepts which have a structure isomorphic to their literal counterparts. If this picture is rejected, then either the metaphor of time's motion remains untouched, or the metaphor is rejected for reasons other than the Williams-Smart argument itself.

The third objection is due to Clifford Williams.[27] According to Clifford Williams, B-theorists need to accept the idea of the passage or motion of time: that time passes or flows, he thinks, is a conceptual constraint on theorizing about time. Whether or not he is right that passage is part of the concept of time, my explication of the metaphorical concept of time's motion that A-theory can and should employ (with inferences like (1) and (2) above) confirms Clifford Williams' clam that there is nothing in the concept that is incompatible with B-theory. Even the claim that the present moves is compatible with B-theoretic indexical accounts of presentness. Again, it suffices for my purposes to note that this, once again, is not a revival of the D.C. Williams-Smart strategy for motivating McTaggart's paradox. In fact, it is a rejection of the Williams-Smart argument, since it claims that both A- and B-theory can and should employ the metaphor of time's motion or passage. It therefore depends on the metaphor of motion *not* having the objectionable consequence that starts up the regress.

This third objection however, combines with the second objection to strongly suggest that the A-theorist should combine the metaphor of time's motion with a literal statement of A-theory. The A-theorist needs this literal statement to distinguish A-theory from B-theory, and could use this literal statement to satisfy those who are unhappy with irreducibly metaphorical philosophical views.

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[27] Clifford Williams, "The Metaphysics of A- and B-Time." *The Philosophical Quarterly* 46 (2003), 371-381.

2.4 The Second Solution: Discarding the Metaphor

The second way to avoid the Williams-Smart argument is to discard the metaphor altogether and state the A-theoretic position literally. There are two problems which are directly relevant for any attempt to state A-theory literally. The first, a common issue raised in the literature, is the objection that A-theory cannot be stated in a way that distinguishes it from B-theory.[28] The second is a worry that A-theory may not be able to represent change, which might be inspired by Josh Parsons' claim that A-theory isn't committed to passage or change. If A-theory isn't committed to the passage of time or the changing present, how could it even represent it if it were to commit to it? I'll discuss Parsons' claim in the next section, but I'll address this derivative worry in this section.

The literal statement of A-theory should be a negative one: A-theory claims that there are features of the world which correspond to A-determinations and tense (so far, everybody who thinks that there are true A-sentences agrees), and adds that these features are *not* reducible to other features of the world—they are metaphysically primitive or rock-bottom. This basic claim can be combined with my account of ontological commitment to yield a more precise claim: the distinctive A-theoretic claim is that tensed propositions—propositions about what *was,* what *is*, and what *will be*—are not explainable in terms of non-tensed propositions, and that there are true tensed propositions.[29]

This formulation solves, I think, the first problem, the variety of difficulties that plague the project of distinguishing A-theory from B-theory. Some of the ways of stating

[28] Clifford Williams, "The Metaphysics of A- and B-time," and Dean Zimmerman, "The A-theory of Time, the B-theory of Time, and 'Taking Tense Seriously'".

[29] To distinguish A-theory from an error theory like McTaggart's, it is necessary to add this claim that there are true tensed sentences. Thanks to Alexander Pruss for pointing this out to me.

A-theory—for example, as the thesis that events have non-relational properties of pastness, presentness, and futurity, or the thesis that only present events exist—don't distinguish A-theory as such from B-theory, just particular A-theories from B-theory. More significantly, it has been argued by Clifford Williams that any positive statement of A-theory, even these two, can be understood by the B-theorist in a way not incompatible with B-theory.[30] My negative statement of A-theory, simply in virtue of being negative, avoids these problems. And it preserves the basic idea of A-theory: changing truths cannot be explained in terms of propositions which don't change their truth-value, and so change (tense) is metaphysically fundamental. This isn't quite the same as saying that the A-theory accepts the changing present while B-theory doesn't. B-theory accepts that there are true sentences which change their truth-value, but explains the truths which those sentences express in terms of truths which don't change—it says that the unchanging truths explain or make true the truths expressed by sentences whose truth-values change. This is not to say that the B-theorist thinks that the truths expressed by sentences whose truth-values change can be explained by truths which don't *involve* change. B-relations involve change because they entail it, and perhaps even involve time's motion because they entail it. They themselves don't change, though. A-sentences do change their truth-values. Now, I am not necessarily agreeing with Clifford Williams that all positive ways of stating A-theory fail to distinguish it from B-theory; I am simply claiming that my negative way of stating A-theory is sufficient (rather than necessary) for doing so.

[30] Clifford Williams, "The Metaphysics of A- and B-time."

There is one objection in the vicinity which still may cause me trouble, due to Dean Zimmerman.[31] According to Zimmerman, the B-theorist can "take tense seriously"—regard tensed statements as untranslatable into non-tensed statements—and remain a B-theorist, uncommitted to seeing tense as reflecting anything metaphysically fundamental about the world.[32] This is the difference between the "old" and "new" B-theories of time.[33] Zimmerman's problem arises because A-theory can be (and has been) combined with various criteria for ontological commitment to yield distinctive versions of its central claim. Whatever account of ontological commitment it is paired with, however, A-theory claims that there are features of the world corresponding to tense or A-determinations which are metaphysically fundamental, not reducible. If translation is the way out of ontological commitment, then A-theory amounts to the claim that true A-sentences are not translatable into sentences not employing tense. If, as I have argued, it is not translation but ontological explanation which is the way out of ontological commitment, then A-theory amounts to the claim that tense or A-determinations are present in base propositions. In this case, A-theory is not merely the claim that tense cannot be translated away; it is the distinct claim that it cannot be *explained* away. Other accounts of ontological commitment will yield different versions of A-theory's central claim. So long as the claims of A-theory are compared against the claims of B-theory relative to the same standard for ontological commitment, A-theory should remain clearly

[31] Zimmerman, "The A-theory of Time, the B-theory of Time, and 'Taking Tense Seriously'," 406-413.

[32] Zimmerman takes it for granted that presentism can be stated positively in such a way as to be clearly distinguishable from B-theory.

[33] The "old" B-theory tried to translate A-facts into B-facts; the "new" B-theory settles for finding B-facts sufficient to make true A-facts without finding translations, and claims that this is sufficient to avoid ontological commitment to distinctively A-theoretic metaphysics.

distinct from B-theory. It is then a further question how to distinguish the various versions of A-theory: presentism, growing block, and full-blown eternalist A-theory.

One qualification is needed. Since the A/B debate evolved organically, the lines between what gets called A-theory and what gets called B-theory can sometimes blur. There are versions of eternalist A-theory which claim not to differ from B-theory with respect to what the theory says exists (with respect to their ontological commitments). For example, there could be a kind of nominalist A-theory which claims that the B-theory is right about what exists, but then claims that the properties (which are not entities, according to the nominalist) of pastness, presentness, and futurity are monadic and so do not reduce to the B-relations of before and after. If this sort of theory counts as an A-theory, then my claim is false that the line can be drawn between A- and B-theory according to what each theory says there is. Here is what I think is going on here. There are two incompatible ways to draw the line between A- and B-theory. On the one hand, there is the way I have done it: claim that A- and B-theory differ with respect to what entities exist in reality. This way of drawing the line can then be specified in multiple ways, depending on which theory of ontological commitment is accepted. On the other hand, these more specific ways of drawing the line between A- and B-theory can be used even after they are divorced from a theory of ontological commitment. That is how you can get a way of drawing the line between A- and B-theory without requiring that the two theories differ about what entities exist. For example, consider the nominalist version of eternalist A-theory I just mentioned. This nominalist A-theorist takes one general picture of ontological commitment, one which one thing must be reducible to another thing in order to avoid commitment to that thing, and the corresponding specification of A-theory

as the view that there are things corresponding to A-determinations which are not reducible to things corresponding to B-determinations. They then divorce this specification of A-theory from ontological commitment—they deny that the irreducibility of monadic A-properties to B-properties means that they are ontologically committed to the existence of A-properties (due to their nominalism). They continue to use this specification to draw the line between A- and B-theory, though, thus divorcing the A/B debate from the debate over what exists in the world. How should we react to this move? It just means that there are two incompatible ways to draw the line between A- and B-theory. The one I have laid out is the primary way, though; the other is derived from it. In my further discussion, I will continue to draw the line as I have, but I will make sure to discuss those views which are considered versions of eternalist A-theory which do not fit my category system so neatly.

The negative formulation of A-theory also solves the second problem, the worry that A-theory may not be able to represent change. Change is built into tense, and making tense primitive makes change primitive. If I say that right now the ball is green but that it will be blue, my claim entails that the ball will change from green to blue. Consider an example like one that has already been used:

(3) The ball was green three days ago, and was not green yesterday

entails

(4) The ball changed from green to blue.

Change is therefore built into tense, and so making tense primitive (ontologically basic) is sufficient to represent change metaphysically.

So the worry that A-theory can't represent change is mistaken, because it doesn't realize that change is built into tense (will be, was, is). This does highlight the limitation of the literal formulation of A-theory, though: it can't really be too explicit about change, since it has to rely on the notion of change being built into the primitive terms for tense. The downside of discarding the metaphor, therefore, is that it really hamstrings the A-theorist's ability to say anything positive about the changing present, or about change generally. The A-theorist must rest content with just saying that "B will be" or "B was" are not explainable and hope that the tensed copulas "will be" and "was" convey enough of a sense of change all by themselves. I'm optimistic, as I've said, that they do in fact convey such a sense, but it would be nice for the A-theorist to be able to say something more positive. The metaphor of motion allows this. The best solution, for those who accepted my defense of the metaphor against McTaggart's paradox in the last section but don't like using metaphors to state philosophical positions, is to make the metaphor a less fundamental statement of the A-theoretic position, but still use it. The A-theorist can say that tense is ontologically irreducible, and add to it that the present moves or that objects move through the present, and claim that the latter statement is actually a consequence and elucidation of the former. In that case, it is the literal statement which is fundamental and controls the metaphorical statement, but the metaphor is still useful as an elucidation of the primitive content of the literal statement.[34]

In sum, both responses available to the A-theorist to the Williams-Smart argument—retaining the metaphor of motion in the statement of A-theory but denying that it has the objectionable consequence and finding a literal statement of A-theory—are

[34] Of course, this option won't be available for those convinced by Davidson's view of metaphor. They should instead toss the metaphor entirely and rest content with the literal statement of A-theory by itself.

viable options. For reasons not directly related to the Williams-Smart argument itself, though, the best option for the A-theorist is to combine both options, and use the metaphor of motion to supplement a negative literal thesis as the statement of A-theory.

2.5 Critique of Parsons

In a relatively recent essay, Josh Parsons advances a couple of views which are incompatible with the claims I've made so far. First, he denies that the defect in McTaggart's paradox is what I've identified, the lack of a motivated demand for explanation; instead, he thinks the defect is that there is an alternative explanation available which doesn't start up the regress and which remains A-theoretic (doesn't reduce tense away). Second, he thinks that the Williams-Smart argument against time's "passage" is unrelated to McTaggart's paradox, because on his view A-theory isn't committed to passage at all and so any argument against passage is not also an argument (as McTaggart's paradox is) against A-theory.[35]

The heart of both of these points is Parsons' alternative semantics for tensed statements. This semantics is mistaken. Parsons proposes that the A-theorist analyze tense in terms of counterfactual statements:

> X will be Y iff there is some future time t_f such that were it t_f, X would be Y.
> X is-now Y iff there is some present time t_n such that were it t_n, X would be Y.
> X was Y iff there is some past time t_p such that were it t_p, X would be Y.[36]

Parsons claims that he wants to remain neutral as to whether time passes such that times change their A-determinations, which would mean that he would have to remain neutral as to whether the copula "is" in the above counterfactuals is a tensed or tenseless copula.

[35] Notice that this is just the opposite of Clifford Williams' view that both A-theory and B-theory are committed to passage.

[36] Parsons, "A-theory for B-theorists," 10.

That option isn't really available to him, though. If the copula is a tensed one, then the counterfactual must be explained in terms of a further counterfactual, and so on forever—McTaggart's regress isn't stopped. So Parsons is committed to saying that the copula is a tenseless one if his semantics is to stop McTaggart's regress. This entails, though, that times never in fact change their A-determinations—truths about whether a time is present, past or future are themselves timeless. Parsons' A-theory, then, is actually committed to denying that time passes (not neutral), but he thinks it is still an A-theory because it denies that A-determinations are reducible to B-relations. So both of Parsons' claims that would be trouble for me if true—that A-theory can meet the demand for explanation and still stop the regress, and that the Williams-Smart attack on passage is distinct from this demand—are true only if A-theory can countenance this denial that what is past, present, and future ever changes.

Parsons is therefore committed to denying that what "is-now" true ever changes and affirming that what is presently the case is eternally presently the case. This is quite simply absurd. It is a truism that the present changes. True A-sentences build in or entail change. B-theorists have to account for the changing of the present without giving that change metaphysical privilege—probably by giving something like an indexical analysis of presentness. To be fair, Parsons feels this pull, and argues that A-theorists, too, should recognize some "indexical element" in tense.[37] If Parsons wants a full-blown indexical analysis of presentness, though, I don't see how he preserves A-theory at all, since that does seem to reduce the propositions expressed by A-sentences to B-propositions. He hasn't developed his proposal enough to tell how he can affirm just a *partial* "indexical

[37] Ibid., 14-15.

element" in A-determinations that could allow him to preserve both A-theory and his counterfactual semantics for A-facts while still affirming that what is present changes.

I conclude that Parsons' proposed semantics for tensed facts fails to preserve any plausible version of A-theory. It is this semantics that misled him both as to the defect in McTaggart's paradox and as to the connection between McTaggart's paradox and the Williams-Smart argument against temporal passage or flow. As I've argued, the defect in McTaggart's paradox is that it fails to motivate a demand for explanation sufficient to get the regress up and running. The Williams-Smart argument is a way to remedy that defect by supplying a demand for explanation generated by considering consequences of the metaphor of time's motion. The A-theorist has two viable options for replying to the argument—keeping the metaphor and denying that it has the objectionable consequence, or discarding the metaphor in favor of a literal statement of A-theory—but, for reasons not directly related to the Williams-Smart argument, is best advised to combine the two replies.

3. The Second Demand: Truthmakers and the Grounding Objection

3.1 Introduction

The primary way to motivate the demand for ontological explanation that threatens Bradley's regress is by appeal to truthmaker theses and the demands for ontological explanation that they entail. The same is true of McTaggart's regress, though this has perhaps not been as commonly recognized. Truthmaker theses are the most important source for the explanatory demand operative in McTaggart's argument, and they lie at the very heart of the debate over the nature of time.

McTaggart's somewhat inexplicit way of motivating a demand for ontological explanation is grounded in his acceptance of eternalist A-theory, and *this* acceptance in turn is grounded in the acceptance of a demand for truthmakers (which has usually been the primary motivation for eternalist A-theory). This acceptance of a truthmaker thesis, the primary motivation for eternalist A-theory, just is the grounding objection to presentism: the claim that presentism cannot provide a ground (read: truthmaker) for truths about the future and the past. The famous grounding objection, then, can be understood (just like the "flow" argument) as a way of plugging the hole in McTaggart's paradox by motivating the demand for ontological explanation that it needs to get started.

My claim in this section is twofold. First, the demand for truthmakers generates a regress that proves fatal to eternalist A-theory.[38] Second, presentism may be able to give an explanation that meets the truthmaker demand for explanation and stops the regress, but the unavoidability of the demand rules out the very popular form of presentism that denies that truths about the future and the past need a ground at all.

I will not be exploring every one of the different truthmaker theses from which a regress-threatening demand for ontological explanation could be derived. Instead, I will presuppose the truthmaker thesis and explanatory demand for which I argued in the second half of the second chapter. That demand is sweeping enough to do justice to any version of the grounding objection while restrained enough to be eminently defensible. In other words, it is well-suited to do justice to the argument.

[38] It is also fatal to the growing-block theory of time.

I argued there that all positive contingent base propositions needed truthmakers to be true, but the explanatory demand for which I argued is somewhat broader. I argued that all contingent propositions fall into one of the following categories:

(4) Non-truth-functionally-complex propositions, which must have a truthmaker.

(5) Propositions built up truth-functionally from non-truth-functionally-complex propositions.

(6) Propositions whose ultimate ontological explanations fall into (1) or (2).

It follows from this that all contingent propositions either are or are ontologically explained by *existence claims*—claims which employ existential quantifications and don't make inessential predications—or by propositions built up truth-functionally from existence claims. This, then, is the challenge that needs to be met by any theory of time and which threatens McTaggart's regress: are there such explanations available for each theory of time?

3.2 Eternalist A-theory

Eternalist A-theory is the view that there exist on the one hand future and past objects, events, or states of affairs, which bear before- and after-relations, and that there is on the other hand something in reality which corresponds to or grounds truths about the present, past, and future which is not reducible to those eternally existent states of affairs. The view is sometimes described as the "moving spotlight" view, where the present is conceived as a spotlight moving along an eternally existent timeline.[39] The motivation for the A-theoretic component of the view is the ordinary A-theoretic conviction that A-propositions cannot be reduced to B-propositions (more broadly, that the features of

[39] To employ a version of the metaphor of temporal motion which I defended in the last section.

reality corresponding to A-determinations are not reducible to those features corresponding to B-determinations); the motivation for the eternalist component of the view is often the acceptance of a truthmaker thesis and the conviction that the truthmaker thesis cannot be satisfied unless future and past states of affairs exist. In other words, eternalist A-theorists find the grounding objection to presentism, and the truthmaker thesis that motivates it, convincing. They accept that past and future states of affairs (or objects or events) are required as truthmakers for truths about the past and the future.

Eternalist A-theory, however, because it already accepts a truthmaker thesis (and corresponding demand for ontological explanation) as its motivation, cannot escape McTaggart's regress. Eternalist A-theory already accepts the tenseless existence of all past, present, and future states. At the same time, it claims that those very things can sometimes be present and sometimes not. How is this possible?

The very natural thing to say is that presentness is a property that is had by states of affairs (or events or objects), or, similarly, that presentness is a relation had between these states of affairs and some thing we might term The Present.[40] This would mean that all tensed propositions are ontologically explained in terms of states of affairs (objects, events) bearing properties or relations. But this constitutes an acceptance of the demand for ontological explanation that gets McTaggart's Paradox started. Suppose all present-tensed propositions are ontologically explained in terms of other propositions ascribing presentness to a state of affairs; the ascription of presentness needs to be tensed as well, because the state of affairs will cease to be present (it is not tenselessly present). But then

[40] Truths about the future and the past can be derived from truths about the present combined with the eternalist before and after truths, so presentness will be my focus. More on this in a bit.

this tensed proposition will itself require ontological explanation, and an infinite regress follows.

The only other thing that eternalist A-theorists can say, given that they are committed to the very same things existing tenselessly and being past, present, or future, is to claim that there are two modes of existence and that neither is explainable as a property or a relation. The various states of affairs exist tenselessly, and present states of affairs exist in another way as well—presently. Nobody has really considered this view, probably because it is so very implausible. Are there really two distinct modes of existence, neither of which can be ontologically explained as the bearing of a property or a relation? I'm not sure how to refute this view except with an incredulous stare.[41]

The eternalist A-theorist must therefore fall prey to McTaggart's regress or else embrace a remarkably implausible view of the nature of existence. This is McTaggart's actual, implicit way of motivating his regress. His explicit way of motivating the regress, as I've already argued, presupposes a prior demand for ontological explanation—and this is that demand. He assumes at the beginning of his argument that "the terms of the A-series are characteristics of events"[42]—an assumption that drives the rest of the argument. This assumption makes sense only on eternalist A-theory. What is more, McTaggart gives a version of the grounding objection to presentism which reveals that he is thinking of A-theory as committed to eternalism:

> The C series, however, is as ultimate as the A series. We cannot get it out of anything else. That the units of time do form a series, the relations of which are permanent, is as ultimate as the fact that each of them is present, past, or future.

[41] It would also require a revision to my account of ontological commitment, one that acknowledges two different kinds of commitments — commitments to present existence and commitments to tensed existence.

[42] McTaggart, "The Unreality of Time," 467.

> And this ultimate fact is essential to time. For it is admitted that it is essential to time that each moment of it shall either be earlier or later than any other moment; and these relations are permanent. And this—the B series—cannot be got out of the A series alone. It is only when the A series, which gives change and direction, is combined with the C series, which gives permanence, that the B series can arise.

The C series is just the B series without a direction, without the distinction between before and after. McTaggart is claiming that the whole timeline of events must exist eternally in order for there to be time and temporal truths. This is precisely what presentism rejects, and we can read this passage as an early assertion that presentism is insufficient to ground temporal truths. McTaggart is clearly presupposing that only an eternalist version of A-theory could be right, and it is against this view that he deploys his regress argument.

The version of eternalist A-theory that arises in this passage is a bit different from the usual version. Most eternalist A-theories combine presentness with the B-series, reducing futurity and pastness to the properties of being before or after the present. In other words, they get change from the A-determination of presentness but get direction from the B-series rather than the A-series. I tend to think that such versions of eternalist A-theory are better than McTaggart's. This is just an aside, though; what is important for my purposes is that McTaggart is certainly presupposing that only eternalist A-theory is a viable option for the A-theorist.

One important objection can be treated here. There may be versions of eternalist A-theory which do not accept the demand for truthmakers. Their motivation for the eternalist component of the view would have to be a version of the grounding objection to presentism that doesn't rise to the level of a demand for truthmakers. (I won't try to develop such a version of the grounding objection here.) Some of these versions of

eternalist A-theory will be the sort of A-theory which does not disagree with B-theory about what exists (and so only counts as an A-theory according to a different way of drawing the line between A- and B-theory). Against such theories, my objection is still effective, but it will be an external critique rather than one internal to the view. It will not be the case that the view is antecedently committed to the truthmaker principle that is its death knell, but since I have independently argued for just such a truthmaker principle, the objection is still fatal.

Much of what I have said in this section is not new. Early critics of McTaggart, like Broad, thought that the key to avoiding his argument was to deny his assumption that A-determinations needed to be explained as characteristics of events. More recently, Craig has noted that this assumption seems tied up with eternalist A-theory in some way.[43] None, however, have noted that it is eternalist A-theory's acceptance of the demand for truthmakers, and rejection of presentist strategies for meeting that demand—the combination of which is the motivation for the eternalist component of the view—which renders this regress-generating assumption unavoidable. As a result, none have noted the continuity between the famous grounding objection to presentism and this way of motivating McTaggart's regress.

3.3 Presentism

Presentism and B-theory both avoid the absurdity of having to posit two distinct senses of existence—one tenseless and one present—neither of which can be explained as the bearing of a property or relation. B-theory claims that everything exists tenselessly

[43] William Lane Craig, "McTaggart's Paradox and Temporal Solipsism," *Australasian Journal of Philosophy* 79 (2001), 32-44.

while presentism claims that everything exists presently. As a matter of fact, though, this is a somewhat misleading way of putting the difference between presentism and B-theory, since it makes it sound as if the difference between the two is a difference as to the nature of existence. It is not. The disagreement between the two is over what sorts of things exist (not what sort of existence they have). Presentists claim that everything that exists is simultaneous with everything else that exists; B-theorists deny this. As a result, they differ as to the sorts of things they will admit into existence. B-theorists claim that Seabiscuit exists, while A-theorists deny it because Seabiscuit is definitely not simultaneous with everything else that exists.

Presentism has two ways to avoid the fate of eternalist A-theory, two options that are not available to eternalist A-theory. First, presentism can deny that truths about the future and the past need truthmakers. This is not an option for eternalist A-theory because it undercuts the motivation for the eternalist component of the view, unless the eternalist A-theorist can come up with some weaker grounding claim that still rules out presentism and motivates eternalism. Second, presentism can accept that truths about the future and the past need truthmakers and identify truthmakers for those truths which can plausibly be thought to exist simultaneously with everything else. This is not an option for eternalist A-theory because it also undercuts the motivation for the eternalist component of the view.

The first option, denying that truths about the past and the future need grounds, is perhaps the most popular version of presentism. The arguments I gave in chapter two that all contingent propositions need explaining in terms of existence-claims or truth-functions of such apply equally well to truths about the future and the past, though.

Though they are about the past and the future, they are true *now* and need truthmakers now. The popular presentist move to make past and future truths primitive, therefore, is mistaken.

Presentism must therefore provide truthmakers for contingent past and future truths (or rather some important subset of those truths). More precisely, it must ontologically explain such truths in terms of existence claims or truth-functions from such—ontologically explain past and future truths in terms of things which exist now. They need not give truthmakers for negative or universal truths, though they must give falsemakers for negative or universal falsehoods.

Presentism is not without options here. Bigelow and Crisp, among many others, have proposed candidates for present truthmakers for non-present truths.[44] I cannot hope to evaluate the quality of these explanations here, and I won't try, since there may be other candidates for possible truthmakers that have yet to be proposed. I will say this: McTaggart's regress motivated by truthmaker theses, also known as the grounding objection, is not obviously fatal to presentism, since it has a number of options for meeting the demand for truthmakers. It may be that the truthmakers offered by B-theorists, though, are more plausible than those offered by A-theorists, which may mean that B-theory comes out ahead for reasons of explanatory plausibility. This moves the discussion away from a general consideration of McTaggart's Paradox into more specific discussion of particular presentist and tenseless theories.

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[44] See: John Bigelow, "Presentism and Properties," in James E. Tomberlin (Ed.), *Philosophical Perspectives, 10, Metaphysics*, (Oxford: Blackwell, 1996), 35-52; Simon Keller, "Presentism and Truthmaking," in Dean W. Zimmerman (ed.), *Oxford Studies in Metaphysics, 1* (Oxford: Clarendon Press, 2004), pp. 83—104; Thomas M. Crisp, "Presentism and the Grounding Objection," *Noûs* 41 (2007): 90—109; Craig Bourne, *A Future for Presentism* (Oxford: Oxford Univ. Press, 2006); Alan Rhoda, "Presentism, Truthmakers, and God," *Pacific Philosophical Quarterly* 90 (1): 41-62.

4. The Third Demand: Ockham's Razor

4.1 Introduction

Even if the previous two demands for ontological explanation are denied, A-theory is not off the hook. One major motivation for B-theory is the concern for theoretical simplicity: Ockham's Razor. B-theory offers a reduction, so the argument goes, while A-theory denies that reduction. Ockham's Razor always rules in favor of reduction so long as there are no significant costs involved—so long as there is no reason to deny the reduction. Ockham's Razor therefore serves as a third demand for ontological explanation that threatens McTaggart's regress.

Ockham's Razor is a different sort of demand than the previous two, however. It is much weaker. All that is needed to resist it is an argument that the only available explanations fail in important ways. That said, the Razor does establish a burden of proof. In the absence of reason to resist the B-theoretic reduction, it should be accepted. The A-theorist must therefore present some reason to think that the B-theoretic reduction fails, or the B-theorist wins by default.

There are two major arguments of this sort, objections to B-theory's explanations. The first is the famous translation argument, which has been the focus of debate over B-theory for a long time. The second is an argument from the phenomenology of the human experience of time. I will also consider a third, less powerful argument against B-theory, McTaggart's own argument. I will conclude that none of these arguments succeed in casting doubt on B-theory's attempted reduction. In particular, the translation argument mistakes the role of paraphrase in determining ontological commitment.

These arguments are usually construed as arguments for A-theory, arguments which warrant resisting the pull of Ockham's Razor. If these arguments are combined with a stronger demand for ontological explanation, though—one that cannot be resisted in the way that Ockham's Razor can and on which the regress cannot be stopped any other way than by B-theoretic explanations—then they establish McTaggart's original conclusion: the unreality of time. These arguments purport to show that, whatever demand for ontological explanation of A-propositions there is, B-theory cannot meet the demand either. This can be taken as a reason to reject the demand (as A-theorists wish it to be and which should be done in the case of Ockham's Razor), or as a reason to eliminate true A-sentences entirely and time along with them (as McTaggart would have it and stronger demands for explanation may warrant).

Though none of the A-theoretic arguments against B-theory succeed, there is still one other way that the A-theorist can avoid the argument based on Ockham's Razor. As I said before, the two ways for A-theory to avoid McTaggart's regress is to deny the motivating demand for explanation or to give a regress-stopping explanation that does not reduce A-determinations. The above arguments take the former route; the latter route remains unexplored. In the case of McTaggart's regress motivated by Ockham's Razor, the A-theorist can try to give an alternative explanation which is just as reductive as the B-theorist's explanation, but which reduces something other than A-determinations. Then A-theory would come out even with the B-theory in terms of satisfying Ockham's Razor. I will argue, in the final subsection, that those versions of presentism which meet the grounding objection by attempting to identify present truthmakers for non-present truths also can be seen as attempts to satisfy Ockham's Razor in this way. The result:

Ockham's Razor does not decisively rule in favor either of presentism or of B-theory, though eternalist A-theory once more falls short.

4.2 Resisting the Third Demand: the Translation Argument

The most important argument against B-theory is the translation argument. The major defense against that argument is what is often called the "new" tenseless theory of time. I will outline and defend a new version of the new tenseless theory and conclude that the translation argument fails to defeat B-theory.

A-theory and B-theory are competing claims about what exists.[45] Since the philosophers involved in the debate are mainly interested in preserving ordinary beliefs and assertions about time, A-theory and B-theory generally involve claims about the ontological commitments of ordinary temporal beliefs and assertions. B-theory therefore can be cast as a claim about ontological commitment. Actually, it is two claims, one positive and one negative. The positive claim is that true temporal sentences, propositions about the past, the present, and the future, carry a commitment to things standing in before/after relations. The negative claim is that true tensed sentences do *not* carry commitment to anything irreducibly tensed or any irreducible A-determinations—anything temporal other than things standing in before/after relations.[46]

The 20th century's most commonly recognized way out of ontological commitment is paraphrase (or translation). So B-theorists for a long time focused on finding paraphrases of A-sentences which don't involve tense or A-determinations. A-

[45] With the qualifications I made in section 2.4.

[46] All this assumes that eliminativism about tensed sentences is not an option for the B-theorist. Nathan Oaklander apparently tries elimination, but as I've argued above, denying that there are any truths about the past or the future seems to me to result in McTaggart's denial of the reality of time. See Oaklander, "Two Versions of the New Theory of B-Language," in A. Jokic and Q. Smith (eds.), *Time, Tense and Reference* (Cambridge, MA: MIT Press, 2003): 271-303.

theorists, on the other hand, argued that no such paraphrases are to be found. And this has formed the core of their most important argument against B-theory, the translation argument: if ontological commitment to something irreducibly A-theoretic (either A-properties, or the tensed having of properties, or tensed existence, or something in the vicinity) is to be avoided, then there must be paraphrases available for the true sentences which employ these A-theoretic concepts. But there aren't any such paraphrases. So ontological commitment to something irreducibly A-theoretic is unavoidable.

A-theorists have been very successful in poking holes in all the proposed translation schemas for paraphrasing A-sentences, the most famous of which are the token-reflexive analysis and the date analysis. They have been so successful, in fact, that it is generally acknowledged even by B-theorists that there is no way to paraphrase A-sentences into B-sentences.[47] The failure of these attempts at translation has given rise to a new kind of B-theory, called the "new tenseless theory of time." The "old" tenseless theory accepted that paraphrase is the way out of ontological commitment and tried to provide paraphrases for A-sentences. The "new" tenseless theory denies that paraphrase is needed to avoid ontological commitment.

The occasion for the new tenseless theory's move away from paraphrase as a necessary way out of ontological commitment was the development of a new semantics, particularly the direct reference theories of indexicals and demonstratives associated particularly with Kaplan.[48] According to this new view of indexicals, two tokens of the

[47] Though see Alexander Pruss's blog for a new proposal. I'll argue in a bit that even if a translation could be found, it wouldn't matter very much.

[48] Quentin Smith, "Introduction: The Old and New Tenseless Theories of Time," in L. Nathan Oaklander and Quentin Smith (eds.), *The New Theory of Time* (New Haven, CT: Yale University Press, 1994).

same sentence type can express very different content (a different proposition), because what the indexical contributes to the content (the individual to which it directly refers) varies with the context. Translation, though, is a relation between sentence *types*, not sentence tokens, and so any sentence which translates a sentence with an indexical must vary in the content it expresses in the same way that the sentence with the indexical does. This means that the indexical may be ineliminable by translation, even if the content (proposition) expressed by any given token of the sentence can be expressed by another sentence that does not employ an indexical. The new tenseless theorists took a look at this view of indexicals and insisted that the untranslatability of the indexical surely could not be relevant for ontological commitment, and claimed that tense and A-determinations functioned as indexicals.

The new tenseless theorists therefore abandoned paraphrase as a necessary way out of ontological commitment because of motivations stemming from the new semantics for indexicals. Their proposals for what should replace paraphrase as the determiner of ontological commitment, though, are not well-developed or well-motivated. The "new tenseless theory of time" is actually a jumble of different theories, each with its own criterion of ontological commitment. And the central component of each theory, the criterion of ontological commitment, is never examined carefully as a general criterion for ontological commitment. All the major versions of the new tenseless theory, therefore, remain unsupported at the crucial point.

In the remainder of this section, I will use the account of ontological commitment defended in the first chapter to give a version of the new tenseless theory of time, one which avoids the force of the translation argument. I will examine and reply to the most

important objection to the view. Then I will canvass the major alternative versions of the new tenseless theory and argue the superiority of my proposal.

In the first chapter, I argued that the ontological commitment of a belief or assertion is determined by features of the *base proposition* of the proposition expressed by that belief or assertion. What matters for ontological commitment, then, is the proposition expressed by the sentence, not the sentence itself. The thing about indexicals is that sentences employing them express different propositions when uttered in different contexts. When I utter "I am over six feet tall," I express the same proposition that you do when you utter "Dan is over six feet tall," *not* the same proposition that you do when you utter "I am over six feet tall." In the case of tense (was, is, will be) and A-determinations (past, present, future, now), all incorporate an indexical element in the form of a direct reference to the time of utterance. "The ball is now green" uttered at *t1* expresses the same proposition as "the ball is green at *t1*" uttered at any time (assuming that the name *t1* has the same referent). Past and future tense and A-determinations involve a direct reference to the time of utterance plus an ascription of before- or after-relations to that time.

The translation argument against B-theory fails because it makes one basic mistake. Paraphrase is not the crucial thing for ontological commitment. Ontological explanation is. Paraphrase has been connected with ontological commitment, in the place of the more correct ontological explanation, because paraphrase often accompanies ontological explanation. If there is an ontological explanation, there is usually a paraphrase (though not the other way around, if the proposition is a base proposition). However, this fails when the same sentence can express different propositions in different

contexts. The most prominent example of this sort of sentence—one where paraphrase does not accompany ontological explanation—is a sentence employing an indexical. What is crucial for ontological commitment in the case of a sentence employing an indexical is the ultimate ontological explanation (the base proposition) of the proposition expressed by the sentence, not a paraphrase of the sentence itself. The indexical will usually not be translatable into a sentence expressing that base proposition.

Even if B-theorists *do* find paraphrases for A-sentences, they will still need to make the move that I just made and claim that it is ontological explanation, not paraphrase, which is determinative of ontological commitment. Any paraphrase of a sentence must be true in all the same circumstances that the original sentence is. Sentences employing indexicals express different propositions in different circumstances, which means that any paraphrase must also be able to express different propositions in different circumstances—and thus must employ an indexical. B-theorists must still claim, therefore, that the untranslatability of indexicals is not relevant for ontological commitment, because they will surely be as unwilling to admit the irreducible existence of properties corresponding to these other indexicals as they are of temporal indexical properties like presentness. A successful paraphrase of A-determinations and tense into other indexicals may be useful in that it may serve to highlight their indexical character, but it is not necessary in order for the B-theorist to claim that A-determinations are indexical in character. It follows that the search for paraphrases is something of a distraction from the real point at issue between the A-theorist and the B-theorist. Even if a paraphrase could be found, its finding is not of particular importance. What is important is the claim that A-determinations are indexical in nature, whether or not they

can be paraphrased using other indexicals. That is both necessary and sufficient for B-theory to avoid the translation argument.

There is one cluster of objections that threatens this version of the new tenseless theory of time, raised by Michelle Beer and a number of others since. Beer casts it as an objection to the claim that A-sentences can express the same proposition as B-sentences. She notes that A-determinations are not eliminable from belief-ascriptions, as they should be, she thinks, if the propositions they express can be expressed with B-sentences. I can believe that "Jeff's birthday is on April 4" without believing that "Jeff's birthday is today." I can know *a priori* that "*t2* is at *t2*" but I cannot know *a priori* that "*t2* is now."[49] Mellor adds that the tensed beliefs contribute essentially to the explanation of action. I may know all week that "Jeff's birthday is on April 4," but I spring into action (baking a cake, lighting candles, etc.) only when I realize that "Jeff's birthday is today."[50] If propositions are the objects of belief, it looks like A-sentences must express different propositions than B-sentences.

The first thing to note in reply to this objection is that *exactly* the same observations apply to all indexicals—this is just John Perry's problem of the essential indexical.[51] It even applies to other devices of direct reference like names—the problem parallels that famously identified by Kripke.[52] These objections therefore do not threaten the parallel established between tense and A-determinations on the one hand and other indexicals like "I" on the other. Surely the untranslatability of the indexical "I" does not

[49] Michelle Beer, "Temporal Indexicals and the Passage of Time," in Oaklander and Smith, *The New Theory of Time*, 87-93.

[50] D.H. Mellor, *Real Time II*, chapter 5.

[51] John Perry, "The Problem of the Essential Indexical," *Nous* 13 (1979): 3-21.

[52] Saul Kripke, "A Puzzle About Belief," in Avishai Margalit (ed.), *Meaning and Use* (Hingham, MA: Reidel, 1979), 239-283.

matter for the purposes of ontological commitment. Surely I am not committed to anything more than you are when I assert that "I am over six feet tall" and you assert that "Dan is over six feet tall." So these objections don't threaten the new tenseless theory of time in general.[53]

However, they do threaten my version of it. In fact, they threaten my whole criterion for ontological commitment. If propositions need to respect the ineliminability of indexicals, then it isn't the propositions which matter for ontological commitment. However, if we abandon my account of ontological commitment, we lose the explanation of why paraphrase has been so closely tied up with ontological commitment for so long, and we lose all the other theoretical benefits of my account. If there is another way out of this problem, we should take it. And there is a way out, one which even has independent motivation. The standard reply to Perry's problem, a version of which is proposed by Perry himself, is to claim that beliefs (and other propositional attitudes) are individuated not only by their propositional content but also by some other feature. Perry identified this other feature as a belief-state; he claimed that a belief is made up not only by *what is believed* (the proposition) but also by *how it is believed*, and this second factor is instrumental in explaining action and in explaining the irreducibility of the indexical in characterizing the belief and the ability to have knowledge *a priori*. This characterization of the extra factor in belief is a bit vague, and others have proposed more specific versions. Some have identified the extra factor with a Kaplanian *character*, a function

[53] Indeed, Beer uses the argument to motivate a different version of the new tenseless theory of time.

from context to content (proposition) that corresponds to a sentence-type. The development of two-dimensional semantics has resulted in many other options as well.[54]

This strategy has independent plausibility. It preserves much of the way we talk about beliefs. We will often say that you and I *agree*, that we believe *the same thing*, which I express by "I am over six feet tall" and you express by "Dan is over six feet tall." There is no truth here of which you are ignorant. More forcefully, there is no truth here of which God is ignorant. God cannot truly believe something that he expresses as "I am over six feet tall" and I can; but surely it isn't the case that I know something God doesn't.[55] Similarly, it preserves the common sense view that there is a sense in which I do not change what I believe as time passes—today I believe that yesterday was Monday, while tomorrow I will believe that two days ago it was Monday; I haven't changed my mind or corrected myself.[56] At the same time, this strategy preserves the contrary ways in which we talk about beliefs, which are captured in the examples that motivate the problem of the essential indexical in the first place. There is a sense in which I do change my beliefs as time passes and a sense in which I learn something new when I learn that I am Dan. There is reason to continue to accept, therefore, that indexicals are eliminable from the propositions that they express. There is reason to think that my version of the new tenseless theory of time escapes the objection based on the problem of the essential indexical.

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[54] See David Chalmers, "Two Dimensional Semantics," in E. Lepore & B. Smith (eds.), *Oxford Handbook of the Philosophy of Language* (Oxford: Oxford University Press, 2006).

[55] We'll put aside the question of whether Jesus was over six feet tall. The example could be modified rather easily. Linda Zagzebski uses an example like this to motivate a property of God she calls "omnisubjectivity," but unless she is willing to embrace pantheism, this does not allow God to truly believe something he expresses as "I am over six feet tall." The problem of the essential indexical is therefore not a good motivation for omnisubjectivity. Linda Zagzebski, "Omnisubjectivity," in Jonathan Kvanvig (ed.), *Oxford Studies in Philosophy of Religion, Vol. I* (Oxford: Oxford University Press, 2008), 231-248.

[56] Mark Richard, "Temporalism and Eternalism," *Philosophical Studies* 39 (1981): 1-13.

There are two basic alternative criteria for ontological commitment that have appeared in the literature, and the versions of the new tenseless theory of time are more helpfully categorized by the view of ontological commitment they presuppose than in any other way. It is common to identify the token-reflexive and date-analysis views as the two major versions of the tenseless theory of time, but these views take completely different forms depending on which criterion for ontological commitment they are paired with—there are token-reflexive and date-analysis versions of the *old* tenseless theory of time where they are offered as paraphrases of A-sentences and there are token-reflexive and date-analysis versions of the *new* theory of time where they are offered as truth-conditions or truthmakers for A-sentence tokens. The two alternatives to paraphrase as the way out of ontological commitment which have surfaced in the literature are these: truth-conditions for sentence tokens and truthmakers for sentence tokens. I will consider each in turn.

The most common replacement for finding paraphrases as a way out of ontological commitment has been the finding of *truth-conditions*. The truth-conditions for a sentence are conditions which are necessary and sufficient for that sentence to be true. The "sentence" for which truth-conditions are to be found must be a sentence *token*, because the truth-conditions for a sentence type will need to be true in all the circumstances that the sentence could be tokened, which means that indexicals will remain ineliminable in those truth-conditions.[57] B-theorists who subscribe to this criterion argue that it is possible to identify the truth-conditions for any given token of an A-sentence which do not themselves employ tense or A-determinations. Smart expresses

[57] D.H. Mellor may not have been perfectly clear in his original proposal along these lines, but Oaklander clears this up nicely. See L. Nathan Oaklander, "A Defense of the New Tenseless Theory of Time," in Oaklander and Smith, *The New Theory of Time*, 59.

this by saying that the truth-conditions for a token are expressible in a semantic metalanguage that does not employ tense.

There are two basic problems with this criterion for ontological commitment, which correspond to the two arguments I gave in the first chapter that it is ontological explanation that matters for ontological commitment. The first has to do with its ability to handle indexicals. The new tenseless theory's insistence on giving necessary and sufficient conditions for the truth of a *sentence token* has gotten it into a world of trouble. That is because conditions which are necessary and sufficient for the truth of a sentence token will probably have to refer to some facts *about* the token itself—which opens it up to counterexample. All of Quentin Smith's arguments against the new tenseless theory (aside from those in the family of Beer's) capitalize on this problem.[58] For one thing, the context (which takes the sentence type to the proposition it expresses) may not be essential to the token, which means that truth-conditions for the token may have to themselves express different propositions in different contexts. This is Smith's objection to the date-analysis version of the truth-condition tenseless theory of time. It may be that the very same token could have been uttered at a different date, and the truth-conditions for the *token* will need to respect that and not involve a particular date. For another thing, an attempt to avoid this last problem and make the context essential to the token will need to involve essential reference to the token, which will build into the truth-conditions something more than the proposition expressed by the token. This is Smith's objection to the token-reflexive version of the truth-condition tenseless theory of time. Suppose that a

[58] The arguments which follow can be found in one of the following of Smith's essays, all available in Oaklander and Smith's *The New Theory of Time*: "Problems with the New Tenseless Theory of Time," "The Truth Conditions of Tensed Sentences," "Smart and Mellor's New Theory of Time: A Reply to Oaklander."

token *A* of "it is raining now" is true if and only if it is raining simultaneously with token *A* and that a token *B* of "it is raining presently" is true if and only if it is raining simultaneously with token *B*. Suppose further that the two tokens are uttered simultaneously. The two token sentences mean the same thing and should be equivalent. But their truth-conditions do not imply one another—because one contains an essential reference to token *A* and the other contains an essential reference to token *B*. These problems arise because finding truth-conditions for sentence tokens forces the truth-conditions (which are supposed to determine ontological commitment) to respect the context that takes a sentence to a proposition, rather than just the proposition itself. The solution? Make the proposition expressed by the sentence the relevant carrier of ontological commitment, the thing you need to give truth-conditions (or explanations) of, not the sentence token. This corresponds with my argument in the first chapter than it should be propositions, not states of affairs or sentences, which are the relata of ontological explanation and the determiners of ontological commitment. One of the problems with paraphrase as a determiner of ontological commitment is that it is a relation between sentence types rather than propositions; truth conditions of sentence tokens, it turns out, fare no better and should be abandoned in favor of propositions.

The second problem with this criterion of ontological commitment is the same as the second problem that infected paraphrase: it lacks a direction. Paraphrase can be a way into or out of ontological commitment, and the same goes for truth-conditions. Even if tenseless truth-conditions can be given for tensed sentences, so too can tensed truth-conditions be given for tenseless sentences, though such truth-conditions will vary depending on when the truth-conditions are given. Suppose that the sentence "it is now

raining" tokened at t_3 is true if and only if it is raining at t_3; so too the sentence "it is raining at t_3" is true if and only if it is now raining (if it is now t_3). Or, if t_3 is two days past, then the sentence "it is raining at t_3" is true if and only if it was raining two days ago. And so on—the point is just that the existence of truth conditions for a sentence token is insufficient to determine whether the statement of those conditions determines the ontological commitment. Ontological explanation solves this problem because it has a direction. It is the base proposition that determines ontological commitment.

The second replacement for paraphrase as the way out of ontological commitment is the finding of *truthmakers*. Not all of those who have taken this route have called them truthmakers, though. Beer claims that it is the event *reported* by the proposition that is relevant for the ontological commitment; Williams claims that it is the state of affairs *referred to* by the proposition that matters. I've already made my reply (in the first chapter) to this proposed criterion for ontological commitment: it is basically right, but it doesn't absolve us of the responsibility to identify base propositions. This criterion, properly formulated, actually entails the criterion I've advanced, that the base proposition determines ontological commitment. The argument, in short, is this. A proposition (or sentence, or belief) doesn't carry a commitment to just any truthmaker. The proposition that there are human beings doesn't carry a commitment to me, even though I am a truthmaker for the proposition. Instead, it carries a commitment to whatever is minimally necessary to make the proposition true. And a statement of this commitment—what I earlier called the statement of the minimum truthmaker—will itself be the base proposition of the proposition whose minimum truthmaker it states. So the truthmaker

criterion is not really an alternative to the use of ontological explanation as a necessary way out of ontological commitment but an elaboration on it.

So far I have stated and defended a new version of the new tenseless theory of time, which defuses the translation argument against B-theory by denying that finding a paraphrase is necessary to avoid ontological commitment, and argued its superiority to the alternative versions. I'll conclude this section by heading off two dialectical mistakes made by Quentin Smith. First, Smith has attacked the pure direct reference theory of indexicals, which features in the discussion both as a component of the new tenseless theory of time and its original impetus. He seems to think that if his attack is successful, then he has succeeded in refuting the new tenseless theory of time altogether and showing the translation argument to succeed in refuting B-theory. This is a mistake. The various accounts of ontological commitment lumped under the heading of the "new tenseless theory of time" are united only by their rejection of the old tenseless theory of time's assumption about ontological commitment, the idea that a paraphrase must be found if ontological commitment is to be avoided. That rejection is correct if there is a parallel between tense and A-determinations and indexicals. Surely the untranslatability of "I" matters not at all for ontological commitment, and if A-determinations are untranslatable for the same reason, then that shouldn't matter for ontological commitment either. The direct reference theory of indexicals just helps explain why that untranslatability doesn't matter for ontological commitment. It isn't enough to salvage the translation argument just to reject the direct reference theory. If Smith leaves the connection between A-determinations and indexicals intact, then the translation argument remains refuted; the tenseless theorist will just have to go looking for another explanation of why the

untranslatability of indexicals doesn't matter for ontological commitment. And Smith's attack on the direct reference theory doesn't purport to sever that connection.

Second, Smith sometimes seems to take proposed B-theories as arguments against A-theories. He sometimes, then, restrains himself to saying that a B-theory has not *proven* parts of its reductive mechanism. I refuse to accept this burden of proof (though I have given arguments for my account of ontological commitment), because I take it that nothing I've said here proves B-theory. It hasn't proven that "now" is an indexical or that there are no tensed propositions or that A-determinations refer to different propositions in different contexts. It merely resists the translation argument for A-theory by showing that all these are epistemically possible. Whether B-theory ultimately prevails is a matter of comparison with A-theory. It may be that the version of the new tenseless theory of time that I've advanced has certain advantages, like explaining the "sameness" of A-beliefs at different times.[59] But the A-theory may account for that also and have other advantages.

4.3 Resisting the Third Demand: the Phenomenological Argument

The second way to resist the B-theoretic reduction of A-determinations is an argument from the human experience of time. The phenomenology of the human experience of time, so the argument goes, involves A-determinations (past, present, future) in an irreducible way; if B-theory is true, then the human experience of time would not involve A-determinations in this irreducible way; therefore, B-theory is false.

[59] See Richards, "Temporalism and Eternalism." This can serve as an argument for B-theory, separate from McTaggart's paradox and beyond the scope of my treatment here. The important thing for my purposes is to note that I have not used the new tenseless theory as an argument *for* B-theory but as a defense against the translation argument *against* B-theory.

The first premise is hard to controvert. Many human attitudes and emotions are crucially sensitive to the pastness, presentness, or futurity of the state of affairs at which the attitude is directed. I can feel remorseful for past wrongdoing, but this emotion is arguably inappropriate when directed at future wrongdoing; I can be relieved that a painful experience is no longer present ("thank goodness that's over!"); I can fear future suffering, but past suffering is arguably not an appropriate object of fear, and in any case with respect to many sufferings I can appropriately fear them when they are future and appropriately stop fearing them when they are past. Other examples abound—our emotions, experiences, desires and attitudes seem to involve A-determinations in an irreducible way.

The second premise is easier to controvert, however. Notice that this argument is a sort of extension of the translation argument to attitudes other than belief and to experiences, particularly emotions and desires. The B-theorist's reply should be just the same as the reply to the translation argument. Like beliefs, other attitudes and experiences (including emotions) that have propositional content involve more than just a proposition. They involve something like a mode of presentation, or a Kaplanian character, or whatever the correct version of two-dimensional semantics posits as the second dimension (alongside a proposition) of meaning. If we have already accepted this for beliefs, there really is no difficulty in accepting it for other attitudes and for experiences like emotions. In fact, if emotions can serve as evidence for and justify beliefs, as I am convinced they can, then it makes sense that *both* emotions and beliefs

involve this dual character (having propositional content and a mode of presentation for that content), because then the evidential support relation can encode both features.[60]

I have refused to take one popular way out of this argument, which is to deny the second premise by insisting that experiences like emotions do not have content at all.[61] We need not deny the genuinely cognitive and representational character of emotions in order to deny the second premise, and doing so would carry significant costs to our understanding of emotions. I simply don't think it plausible to deny that emotions have propositional content and do in fact represent the world as being a certain way.[62]

4.4 Resisting the Third Demand: McTaggart's Strategy

The third way to resist the B-theoretic reduction of A-determinations is McTaggart's argument against B-theory. McTaggart claims that the B-series cannot account for change unless it is paired with the A-series. The argument goes like this.[63] Time essentially involves change—a universe without change would be a universe without time. But if the B-series is all there is to reality—if all temporal reality merely consists of moments of time standing in before- and after-relations—then change is impossible. Consider the possible objects of change: events and moments of time. Events cannot change because their positions on the B-timeline never change; it is always true that an event is located where it is on the timeline. Moments of time even more

[60] See Adam C. Pelser, "Emotion as a Basic Source of Justification," unpublished paper, and also his *Emotion, Evaluative Perception, and Epistemic Goods*, Ph.D dissertation, Baylor University, in progress.

[61] Mellor, *Real Time II*, 40-42.

[62] For a defense of this, see David Cockburn, "Tense and Emotion," in Robin Le Poidevin (ed.), *Questions of Time and Tense* (Oxford: Oxford University Press, 1998), 77-91; and Robert C. Roberts, *Emotions: An Essay in Aid of Moral Psychology* (Cambridge: Cambridge University Press, 2003).

[63] McTaggart, "The Unreality of Time."

obviously cannot change their position on the timeline. So if the B-series is all there is to time, change is impossible. But then there is no time, because without change there is no time.

My statement of the argument should have made its weakness clear. The fatal flaw to the argument is its failure to consider candidates for the subject of change other than events and moments of time. The paradigm subjects of change are not events but *substances*, and on the B-theory of time substances can change either by being located at multiple times and bearing different properties at those times (endurantism) or by being composed of stages which are located at different times and which differ qualitatively from each other (perdurantism). McTaggart's argument therefore fails for want of imagination as to what could count as the subject of change.

There is, however, something right about his argument, as I argued earlier. There is a sense in which the B-series without the A-series cannot account for change. McTaggart simply fails to identify the correct sense of "without." If "without" corresponds to elimination, such that all A-sentences are simply false, then McTaggart is right that change is impossible. If no sentence is true which claims that something *will be* the case, or *was* the case, or *is now* the case, then surely there is no change in the world. However, if "without" corresponds to reduction, such that there are true A-sentences but they express propositions which are explained by B-propositions, then there is no reason to think that change is impossible. And it is the latter reductive thesis that the B-theory generally advocates. McTaggart failed to discern that as a possibility. This puts a kinder cast on his mistake, I think. Many philosophers have failed to make the proper

distinction between reduction and elimination, and it is only because of this failure that McTaggart's argument against B-theory fails.

4.5 Satisfying the Third Demand: Presentism and Ockham's Razor

The argument for B-theory from Ockham's Razor went like this: B-theory offers a reductive explanation of sentences employing A-determinations, while A-theory must simply refuse to offer such an explanation due to the threat of McTaggart's vicious infinite regress. In the absence of contrary considerations, Ockham's Razor rules in favor of the reductive project, and so in favor of B-theory. One way to resist Ockham's Razor is to argue that there are problems with the reductive project—that is what the three previous arguments were for. There is another way to resist the argument, however. The second way is to offer an alternative to B-theory's explanation, such that A-theory gets to count as a sort of reductive project as well. This doesn't amount to resisting Ockham's Razor but to satisfying it without embracing B-theory's total reduction of all A-determinations and tense.

Presentism's reply to the grounding objection may constitute just the sort of reductive explanation that would qualify A-theory as a sort of reductive project. Admittedly, presentism (because it is a version of A-theory) does not reduce tensed propositions to tenseless ones. However, if it replies to the grounding objection by identifying presently existing truthmakers, then it *does* reduce future- and past-tensed propositions to present-tensed ones.[64] It is not obvious that this is any less reductive, all things considered, than B-theory. Therefore, the sort of presentism that accepts the

[64] This follows from my argument that the statement of the minimum truthmaker for a proposition is its base proposition.

demand for truthmakers and meets it by identifying presently existing truthmakers for truths about the past and the future seems to escape elimination by Ockham's Razor. This gives the presentist another reason to try to meet a truthmaker demand, aside from the plausibility of such demands: successfully identifying truthmakers for temporal truths also puts presentism into the good graces of Ockham's Razor.

Ockham's Razor, therefore, does not favor B-theory over presentism (or vice versa). At this point, the debate comes down to the quality of the particular explanations offered by the two views: whether they are subject to counterexamples, whether they are antecedently plausible, whether they fit with accounts of other things (like causation, modality, and God's relationship to time). These various other arguments may be thought of as debates over which of the views curries the favor of Ockham's Razor and provides the most theoretical unification, simplicity, and explanatory power.

4.6 Conclusion

The examination of the debate over the nature of time from the perspective of McTaggart's regress argument ends in a stalemate between B-theory and presentist theories that identify present truthmakers for non-present truths. (At least, this is true insofar as they remain on the level of generalities—the grounding objection may be fatal to presentism if no satisfactory present truthmakers for past and general truths are found. Once they are found, though, the battle is between the relative explanatory power, simplicity, and plausibility of the two views.) By contrast, eternalist A-theory and the sort of presentism that denies the demand for truthmakers fall both to the truthmaker-motivated version of McTaggart's regress and to the Razor-motivated version.

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