Syracuse University
SURFACE

Philosophy - Dissertations | College of Arts and Sciences

8-1-2012

Ideology, Truthmaking and Fundamentality

Anthony Robert James Fisher
Syracuse University, arjfisher@gmail.com

Follow this and additional works at: http://surface.syr.edu/phi_etd

Part of the Metaphysics Commons

Recommended Citation
Fisher, Anthony Robert James, "Ideology, Truthmaking and Fundamentality" (2012). *Philosophy - Dissertations.* Paper 71.

This Dissertation is brought to you for free and open access by the College of Arts and Sciences at SURFACE. It has been accepted for inclusion in Philosophy - Dissertations by an authorized administrator of SURFACE. For more information, please contact surface@syr.edu.

ABSTRACT

In chapter 1 I outline two conceptions of ideology: *ideological pessimism* and *ideological realism*. Ideological pessimism is the view that ideological inquiry has dim prospects insofar as ideology is tied to meaning. Ideological realism is the view that there is a fact of the matter about which ideology is taken as primitive when attempting to describe reality correctly. I respond to an argument on behalf of ideological pessimism, develop ideological realism, and then defend it against an objection that attempts to derive the unpalatable consequence that a main dispute in the metaphysics of properties is verbal.

In chapter 2 I argue that we should uphold the traditional understanding of the ideology/ontology distinction in light of ideological realism. I then argue against the doctrine that certain disputes about composition have the epistemic consequence of providing no grounds for us to believe in one theory over another.

In chapter 3 I argue that truthmakers do not necessitate the truths they make true. They either grounds their truths or make true their truths and nothing else can be said about the connection between truth and reality. It is to be taken as primitive that truthmakers make true the truths they make true.

In chapter 4 I explore two versions of truthmaking as a theory of fundamentality. I argue against the first and defend the second against various objections and problems. I argue that if we adopt truthmaking as a theory of fundamentality, then we should believe in the second version.

IDEOLOGY, TRUTHMAKING AND FUNDAMENTALITY

Anthony Robert James Fisher

B.A. (Hons) University of New England, Australia

A Dissertation

Submitted in Partial Fulfilment of the Requirements

For the Degree of Doctor of Philosophy

In the Graduate School of Syracuse University

August 2012

© 2012 Anthony Robert James Fisher

All Rights Reserved

ACKNOWLEDGEMENTS

First and foremost I owe a huge debt to André Gallois who has been an excellent mentor during my time in the States. I thank him for long discussions over lunch and detailed comments and feedback on several versions of my thesis.

I thank Peter Forrest for substantive feedback and long exchanges via email throughout the writing process. He has made substantive contributions to most chapters and many other papers I have written over the last couple of years. I am immensely grateful to Hugh Mellor for extensive conversations on no less than three continents and helpful feedback on my thesis and other papers.

I owe another personal debt to Joshua Spencer. I benefited greatly from auditing classes with him at Cornell, sitting in on his own classes at Syracuse and for insightful suggestions and comments. I must thank José Benardete for being an endless source of inspiration and for setting the standard of philosophical enthusiasm. In particular, I thank him for long discussions on Quine and 'the rules of the game'.

Thanks also to Helen Beebee, Mark Heller and Kris McDaniel for feedback and discussion on various portions of my thesis. I have also benefited from conversations with Alan Baker, Sam Cowling and Paul Snowdon.

Lastly, I owe an enormous debt to Ned McClennen for providing me with the *financial means* and *office space* during the summers of 2009, 2010, 2011, fall 2011 and right now (summer 2012) which gave me the time, money and space every student envies in graduate school. I cannot stress the importance of this luxury in my success at Syracuse University.

Contents

ACKNOWLEDGEMENTS iv
Introduction 1
1 Two Conceptions of Ideology 14
1.1 The Concept of Ideology 15
1.2 Ideological Realism 26
1.3 Motivations for Taking Ideology Seriously 34
1.4 The Forrest Objection to Ideological Realism 42
2 Ideological Realism and Method 49
2.1 Two Understandings 49
2.2 Against Reflectance 55
2.3 The Traditional Understanding 63
2.4 Composition and Epistemicism 71
3 Truthmaking 82
3.1 Truthmaker Overview 82
3.2 Truthmaker Necessitarianism 91
3.3 Against Truthmaker Necessitarianism 97
3.4 Ideological Primitivism about Truthmaking 100
4 Truthmaking as a Theory of Fundamentality 108
4.1 Fundamentality 108
4.2 Cameron on Truthmaking 119
4.3 Moderate Truthmaking 126
4.4 In Defence of Moderate Truthmaking 133
Bibliography 143
Vita 150

Introduction

W.V. Quine (1951) famously drew the distinction between ideology and ontology. The ontology of a theory is whatever the theory says exists, while the ideology of a theory is the collection of ideas that are expressed by the language of the theory. For Quine every metaphysical theory has an ontology and ideology as equally important parts.

The ideology/ontology distinction is well-known in metaphysics and is overwhelmingly present in many metaphysical disputes. The distinction also shows up in the philosophy of mathematics, especially in debates about the existence of abstract entities. Recently in contemporary metaphysics there has been much discussion about the methodology of metaphysics and the notions of ideology and ontology.

The basic project of this dissertation is to explore the notion of ideology in contemporary metaphysics. A major part of this project involves the methodology of metaphysics and questions such as: how should we understand the notion of ideology? How should we interpret the virtue of ideological parsimony? How should we understand the ideology/ontology distinction? Before we can answer these methodological questions, we need to answer questions that directly bear on the notion of ideology such as: what is ideology? What role does it play in a metaphysical theory? These questions are important for understanding metaphysics and need urgent attention.

Another part of this project is to argue for a certain methodological framework and then apply it to certain first-order debates in metaphysics. As a result, I discuss at length many current debates in metaphysics. In particular, debates in the metaphysics of composition, properties, truthmakers, grounding and fundamentality. The overall structure of the dissertation can be seen

as two distinct chapter-pairs (ch. 1 + 2; ch. 3 + 4); the first of which applies its methodological conclusions to the second.

Although the notion of 'ideology' and the work that it can do in metaphysical theorising is a topic that is very much up for debate, and indeed some of these debates are at the heart of the present work, the following illustration will serve as a provisional understanding of the notion of ideology for the purposes of getting started.

Suppose that all there is is a world of two black cans. Call this world w1. If we wanted to create a list of what there is, we should write down that there is one thing and there is another (and perhaps that there is nothing more; but I leave this issue to one side). The question of 'what there is', as Quine famously noted, is a question about ontology. If the ontology of a theory is whatever the theory says exists, then our list of what exists comprises our ontology. In the present case, our ontology contains two entities. However, just saying what exists does not provide a complete *description* of w1. After all, both cans are black. Thus, we require a *device* of expression to help express the fact that both entities are cans and are both black. We require the predicate '… is black' and '… is a can' to say what these entities are like. A theory's ideology is comprised of the terms of the theory. Since these predicates are classified as terms, they are part of the ideology of the theory. If we restrict our theory to predicates, then our ideology will just be a list of the predicates of the theory. In the present case, the ideology is comprised of '… is a can' and '… is black'.

This provisional characterisation of ideology is enough to make it vivid why questions about ideology are relevant to metaphysics. As this example shows, our theories require an ideology to

tell us what the world is like. There are however several ways in which we can understand what ideology is primarily concerned about and what the study of ideology ultimately amounts to.

For the Quinean (although the characterisation to follow may not be attributable to Quine himself), the study of ideology is primarily an inquiry about the meaning of the terms in a theory. However, the theory of meaning, according to Quine, is bankrupt in many ways. Since ideology is tied to meaning, the Quinean thinks, ideological inquiry has dim prospects.

In contemporary metaphysics this kind of pessimism towards meaning is virtually non-existent. So, if we still accepted that ideology is primarily about meaning, then ideological inquiry would be an acceptable enterprise. However, in metaphysics the emphasis on ideology is less about the meaning of terms and more about how and what ideology represents or helps describe. To illustrate using the example of the two black cans, if it is a fact that the first can resembles the second can, then our ideology better capture this by introducing a term that correctly describes in what respect the cans resemble each other. Without this 'resemblance' predicate we fail to correctly describe reality. We fail to capture in our theory the fact that the two cans resemble each other. This emphasis on providing descriptions and capturing facts about reality is what has fuelled the recent focus on ideology in metaphysics.

If the project about providing descriptions of the world captures the claim that metaphysics is about what there is and what it is like, then metaphysics not only involves ontology but also ideology. Ideology therefore is just as important to metaphysics as ontology.

This metaphysical project is about providing descriptions of the world but this is admittedly done by first noting that the world had some kind of unique complexity that is to be captured in the descriptions we hope to provide. The world has to be a certain way for us to characterise it

using (in part) a predicate, operator or connective. The facts have to be there so to speak for us to construct a theory that describes them; to do otherwise amounts to some kind of linguistic idealism.

In metaphysics today there is a strong aversion to most kinds of linguistic idealism. Metaphysicians are attracted to a realist and objectivist picture of reality. They believe that there is an objective structure to the world that is independent of what we say and think and independent of language *simpliciter*. Now, because there is this objective structure 'out there' in reality so to speak, our best theories should aim to describe it correctly. Our theories should contain certain devices of expression of what I shall also call 'pieces of ideology' because the world is a certain way and has a certain structure.

But at the same time the descriptions we hope to provide are not mere descriptions. Instead they are *fundamental* descriptions of reality. This programme can be understood roughly as follows. In metaphysics we propose fundamental descriptions of the world. This can be understood in a complete and incomplete sense. In the complete sense, we are asked to envisage that 'all God has to do' is lay out the fundamental truths and everything else follows (in a specified sense). This fundamental description determines the correct logic, the fundamental truths, and what primitive (i.e., unanalysable) terms are included in the ideology of the theory, that is, the primitives of the theory that 'carve nature at its joints'. Some statements are special. They are of the form 'there are Fs' and these truths will contain a general kind, say, F.

The primitive expressions of this fundamental description *show* us something about the world, they are used to describe the fundamental structure of reality, and they express the fundamental 'ideas' of the theory. As a result, questions of ontology are understood in terms of

the most fundamental sense of the quantifier(s), that is, the quantifier(s) of the fundamental theory. Questions of ideology are understood in terms of the primitive expressions that 'carve nature at its joints'. On this conception, the ideology of the theory takes on a more metaphysical role. What is primitive is a matter of fact, not a question of convention.

The conception of ideology that falls out of this discussion is, what I call, a realist conception of ideology. A realist conception of ideology says that there is a correct ideology that must be used to provide a complete description of reality. A major goal of this thesis is to spell out this realist conception of ideology in detail and defend it against an objection that has been unaddressed in the literature.

Another distinction that is at work in this conception of ideology is the distinction between primitive and non-primitive ideology. The ideology of a theory is comprised of its terms, but its primitive ideology is comprised of its primitive terms. The primitive terms are the unanalysable terms of a theory. The word 'unanalysable' means 'admits of no further analysis'. Thus, how we understand the project of analysis will affect how we understand what it means for a term to be primitive. This in turn affects our notion of ideology. To briefly illustrate, if we thought that the project of analysis was to provide an account of the meaning of terms, our analysis would encapsulate a semantic project. The primitives of the analysis would be semantic primitives and so semantically unanalysable. If we thought the project of analysis was not semantic, then our primitive terms need to be characterised differently. I leave this point open-ended here. I return to this issue in more detail in chapter 1.

Why are such reflections on the notion of ideology important and how is this relevant for the methodology of metaphysics? The notion of ideology is at heart of the methodological issues I

discuss in this thesis. For instance, how we understand the ideology/ontology distinction will depend on how we understand the notion of ideology and ontology. In addition, how we interpret the virtue of ideological parsimony will also depend on how we understand the notion of ideology.

Let us demonstrate the importance of ideology in the context of ideological parsimony. Ideological parsimony is a theoretical virtue that is typically regarded as a methodological principle or constraint that guides us in our construction of metaphysical theories and in comparing metaphysical theories to determine which theory we ought to believe or assign greater credence to. The whole point of invoking ideological parsimony is similar to the reasons why we appeal to the virtue of ontological economy to determine which theory we ought to prefer.

Roughly, in the case of ontological economy, if two theories account for the same phenomena or 'philosophical data' but one theory posits an extra kind of entity that the other does not, then we should believe in the theory that posits less kinds of entities. To provide a concrete example, consider dualism and materialism from the philosophy of mind. If we suppose that materialism can account for exactly the same phenomena or data as dualism, phenomena such as our belief reports, activity of mental states, etc, then we should prefer materialism on grounds of ontological economy. Materialism has provided an equally adequate theory in terms of explanation but by positing one less kind of entity than dualism.

Likewise, in the case of ideological parsimony if we have two theories that purport to explain the same set of facts or data but the first theory uses extra "pieces of ideology" that the second does not use, then we should prefer the latter theory. In the case of ontological economy, it is intuitively clear that what is being counted or weighed are *kinds of entities* (although economy

can be about the *number* of entities; I leave this issue to one side here). But what is a 'piece of ideology'? Without a more detailed picture about what pieces of ideology are the virtue of ideological parsimony remains drastically unclarified. If we said more about what ideology is, and provided some systematic treatment of the notion of ideology, etc, then we can begin to see what ideological parsimony amounts to. Therefore, the notion of ideology is at the heart of the issue of parsimony. Without clarifying ideology we cannot clarify ideological parsimony.

So we must have some proper understanding of ideology to make sense of ideological parsimony and the ideology/ontology distinction. Indeed, it seems that if we are to make any sound judgement about method in metaphysics, we need a proper understanding and fleshed-out view of the notion of ideology. This is the underlying reason why I take the basic project of this dissertation to be worthy of discussion.

For the sake of clarity it will be helpful to provide a chapter summary to indicate to the reader the rough dialectic of the dissertation and how it is structured. The following summary also contains what conclusions are argued for and how they are defended from objections along the way. I also give an indication of how these conclusions fit together.

In chapter 1 I introduce in more detail the notion of ideology as it is inherited from Quine. I outline, what I call, the Quinean conception of ideology (which is not to be confused with Quine's actual view on ideology). According to the Quinean, ideological inquiry is connected to the theory of meaning since the study of ideology consists in providing an account of the meaning of the terms of a theory. I then provide another way to understand the notion of ideology that is connected to the project of describing reality's structure. On this view, there is a fact of the matter about which primitive ideology ought to be used to correctly describe reality.

This is, what I call, the realist conception of ideology or *ideological realism*. I have spelled out a lot of the details above and won't reiterate them here. In chapter 1, I also look at ways to 'take ideology seriously'. Taking ideology seriously simply amounts to taking ideology to be about the world and as important to a metaphysical theory as the study of ontology. I then defend ideological realism against an objection that has yet to be addressed in the literature.

Having defended ideological realism, I consider its methodological consequences in chapter 2. The first consequence is that the virtue of ideological parsimony is actually a guide to truth (cf. Sider ms). More parsimonious theories are most likely to be true. They are more likely to provide the correction description of reality. The notion of ideology also affects how we understand the distinction and difference between ideology and ontology. In chapter 2, I defend the traditional understanding of the ideology/ontology distinction. I state as a methodological *maxim* that primitive ideology is ontologically innocent and hence does not correspond to the entities in our ontology. Thus, when we have an ideological cost (i.e., accepting a primitive term), it does not follow that there is a direct one-one ontological cost. If the predicate '... is F' is primitive according to theory T, then the ontology of T does not contain *Fs*.

This is not to say that there are no cases in which we have both an ontological cost and an ideological cost. There can be ideological costs when there are ontological costs. But such ideological costs will not be in a direct one-one correspondence with the ontological costs of a theory. If the ontology of theory T contains complex entities, then our ideology should contain a device to describe the structure of those complex entities. To illustrate, suppose there are complex objects made up of parts. Examples include: tables, chairs and cats. These complex entities stand in a certain relation to their parts. Let us call this the 'parthood' relation. To help describe the fact that this tail is part of this cat we require a device of expression, namely, the

‘parthood’ predicate ‘… is part of …’. If our ontology contains such complex objects, then our ideology should contain the ‘parthood’ predicate.

Part of my defence of the traditional understanding of the ideology/ontology distinction derives from a concern to preserve the fact that ideology can be traded off with ontology and *vice-versa*. If a theory has the primitive p, then by introducing talk of entities of some kind K, we can analyse p in terms of quantification over objects of kind K. To illustrate, we may start out with the primitive operator ‘□’ (which means ‘necessarily, ...’) in our ideology yet realise we can easily do without it by quantifying over possible worlds. There are cases where the reverse is no less plausible. For instance, we could start out with a theory that says numbers exist and come to the conclusion that we can eliminate talk of these *entities* we call numbers by introducing a modal operator into our ideology.

I argue that the uniqueness of this relationship between ideology and ontology ought to be preserved. As part of the recurring theme in this thesis, we will examine various disputes in which the trade-off between ideology and ontology takes centre stage. It figures at the centre of disputes concerning the existence of properties, possible worlds, numbers, holes and much more. This is no accident. The relationship between ideology and ontology must be understood in this way to make sense of these disputes. (I do not suggest that *all* debates in metaphysics hinge on the trade-off between ideology and ontology.)

In trading ideology for ontology we seem to be switching between linguistic expressions and the existence of entities. If they are wholly distinct from one another, it seems that the reasons behind believing in the existence of entities are disconnected from the reasons behind accepting a certain number of primitive terms in our theory. Ideological realism provides the common

ground for our reasons to believe in the existence of entities and the terms of our theory. Ideology tells us just as much about the world as ontology. So, the term that helps us describe the world matters just as much as the entities that the theory says exist. Ideological realism justifies our traditional understanding of the relationship between ideology and ontology. It explains why we are able to, and should, compare linguistic expressions with the existence of entities. That is, why we should regard a primitive predicate in equal standing with talk of entities.

In the final section of chapter 2, I argue against the metametaphysical claim that the debate over whether there are composite objects provides no justification to believe in one competing theory over the other. I use ideological realism and the methodological consequences I have extracted to and apply it to this particular dispute about composite objects.

In chapter 3, I focus on the theory of truthmaking and critically discuss the leading accounts of what it is for something to be a truthmaker for a truth. I discuss the main arguments for the orthodox explanation of truthmaking, which claims that what it is for a truthmaker to make true a truth is for it to necessarily be the case that if the truthmaker exists then the truth is true (also known as truthmaker-necessitation). I consider arguments against truthmaker-necessitation and conclude we are better off rejecting truthmaker-necessitation. I then present two further accounts of truthmaking. The first says that what it is for a truthmaker to make true a truth is for it to be grounded in a truthmaker. This view has recently been defended by Jonathan Schaffer. The second is a primitivist view about truthmaking. On this view, the two-place predicate '… makes true …' is taken as a piece of primitive ideology. I evaluate the costs of these final two theories and claim that the former has far higher ontological costs than the latter, but that the latter has ideological costs that the former lacks. I tentatively conclude this chapter with the claim that

amongst the accounts of truthmaking on offer either Schaffer's view or primitivism is the best account of truthmaking on offer.

In chapter 4, I consider the theory of truthmaking as a theory of fundamentality. I outline the conditions a theory must meet in order to be a serious contender as a theory of fundamentality. I critically discuss two theories of truthmaking as theories of fundamentality and look at the various obstacles that arise for each theory. In the later sections of chapter 4, I provide a defence one version of the theory of truthmaking as a theory of fundamentality. The position I ultimately prefer is a theory according to which there are universals and particulars and a primitive 'instantiation' predicate in the ideology of the theory. I also introduce the primitivist account of truthmaking from chapter 3. Hence, I add a primitive 'makes true' predicate that applies to truthmakers and truths. This version of truthmaking is known as moderate truthmaking since only some truths have truthmakers and the truths that do not have truthmakers have a metaphysical semantics that is derivable from the truths that do have truthmakers. My goal in this last chapter is to provide a defence of this kind of truthmaker theory of fundamentality against relevant objections from the literature.

No thesis or book is without presuppositions. In discussing fundamentality I presuppose that there is a fundamental language or that there are candidate fundamental languages and that it is intelligible to think of fundamentality in these terms. In particular, I assume that *fundamental ontology* is the component of a theory that quantifies over certain kinds of things in the most fundamental sense (see Dorr 2005; Sider 2011). These are the entities that fundamentally exist.

I presuppose metaphysical realism. I take metaphysical realism to be the view that there is an objective structure independent of what we say and think and independent of language

simpliciter. Metaphysical realism is used in chapter 1 to provide some sort of justification for ideological realism. If the thesis could tolerate a subtitle, it would be "A Study in Metaphysical Realism". I also assume that debates in metaphysics are substantive. Hence I do not engage in recent work by Eli Hirsch (2011) and others who reject that certain disputes are substantive.

I assume that the enterprise of 'metaphysical explanation' is legitimate however unclarified. Opposition does exist to such an assumption: (Daly 2005; Hofweber 2009). To what extent it is clarified, I take a metaphysical explanation to be an account of some fact or other in a theory. For instance, if what it is for *a* to be F is for *a* to instantiate some universal *U*, then we have explained why *a* is F. We could say the fact that *a* is F holds in virtue of the fact that *a* instantiates *U*. The thought generalises to entire theories which provide accounts of a wide-range of phenomena or 'philosophical data' using entities of the same kind with a handful of primitive terms. Thus, I take Lewis' (1986b) modal realism as falling under the umbrella of metaphysical explanation and thus taken as a legitimate explanation which competes against rival theories.

As a consequence, I assume that the theoretical virtues of ideological parsimony and ontological economy are legitimate virtues. They provide some reason for us to believe that theories which have such virtues are most likely to be true. I do not combat the claim that these virtues are merely pragmatic and that pragmatically virtuous theories only satisfy *our* desire for simplicity (cf. Bricker 2008, 119).

Before we begin it will also prove helpful to mention some of the key terms that are being used throughout the thesis. My statements of these terms however are not meant to be definitions of the terms as in almost every case no one provides a definition of the term I am using. First, there is the term 'primitive'. The word 'primitive' is understood as 'unanalysable'. The word

‘primitive’ is usually attached to ‘ideology’. So ‘primitive ideology’ refers to the unanalysable terms of a theory. The word ‘primitive’ is not to be confused with ‘fundamental’. Although I do not give an analysis of ‘fundamental’, I attach it to two other words: 1) ‘truth’ and 2) ‘entity’. Thus, a ‘fundamental truth’ is a truth that holds in virtue of no other truth. For instance, the truth that the can is black is fundamental if it holds in virtue of no other truth. A ‘fundamental entity’ on the other hand is an entity that does not ontologically depend on any further entity. An Aristotelian might say that quality (whiteness) ontologically depends on substance (Socrates). I say in several places that a state of affairs ontologically depends on a universal and particular. The term ‘grounding’ also gets used but it means the same thing as ‘ontological dependence’. Another term that I use a lot is ‘fact’. This just means ‘true proposition’. Lastly, the word ‘truth’ just means ‘true proposition’ or ‘true sentence’.

1

Two Conceptions of Ideology

The notion of ideology plays an important role in contemporary metaphysics. However, the notion of ideology is admittedly obscure and has received little attention in the literature. At first glance, ideology is about the 'ideas' or concepts that are expressed in a theory. But in order to express ideas in a theory, we require some device of expression. For example, to express the idea of one thing being part of another we require a predicate such as '… is part of …'. This way of understanding ideology dates back to W.V. Quine (1951). Quine understood ideology as primarily associated with questions about the *meaning* of the terms that are used to express 'ideas' in a theory. But for Quine, if ideology falls within meaning, it also inherits the decrepit state of the theory of meaning. There are however other ways to understand the notion of ideology. Recent developments in metaphysics provide a way to interpret ideology as playing a descriptive role that helps state the basic truths of a theory. On this latter conception of ideology, there is a fact of the matter about which ideology should be used to accurately describe the world. In this chapter, I explore both conceptions of ideology, provide some motivations for taking ideology seriously (i.e., to take ideology as not being merely about *our* concepts) and respond to an objection against the latter conception of ideology.

1.1 The Concept of Ideology

One of the most widely used distinctions in metaphysics is the distinction between ideology and ontology. Quine told us that the study of what there is consists in answering the question: 'what entities are the variables of quantification to range over if the theory is to hold true?' (1951, 14). The study of what there is just is the study of ontology. The ontology of a theory is nothing more than the values of its bound variables.[1] On the other hand, the ideology of a theory, according to Quine, consists in answering the question: 'what ideas can be expressed in it?' (*ibid*). The ideas of a theory are expressible in a given language using predicates and other devices of expression. Questions of ideology are thus concerned with two things: 1) what *ideas* are primitive and derivative and 2) what *predicates* or *other devices of expression* such as an *operator* (e.g., 'it was the case that …) are taken as primitive and defined. The distinction between ideology and ontology divides a theory into two separate and exhaustive components.[2]

To illustrate this distinction, consider a theory of natural numbers. Call this theory T. According to T, there are the natural numbers 0, 1, 2, 3, 4, …, and so on. Now, consider the following sentence of T:

'the number 1 exists'

This sentence can be regimented into, say, first-order classical logic as follows (let '1' denote 1):

'$(\exists x)\ x = 1$'

[1] Hence the slogan: *to be is to be the value of a variable*. See (Quine 1939; 1953b, 15; 1966a); for discussion see (Alston 1958; Azzouni 1998; Bar-Elli 1980; Brogaard 2008; Hodges 1972; Humphries 1980; Jubien 1972; Melia 1995; Orenstein 1990; C. Parsons 1970; Skidmore 1973; Szabo 2003).

[2] Quine introduces the distinction in (1951) and uses/mentions it in (1953a, 1966b, 1966c, 1976, 1983).

Given that the ontology of T is whatever entities are the variables of quantification of T, 1 is an item of the ontology of T. As Quine famously claimed, 'to be is to be the value of a variable' (see note 1). T is made up of further sentences that say what exists according to T. There are sentences which can be regimented in line with our above example which tell us that according to T: there exists the number 2, there exists the number 3, etc. On the other hand, the ideology of T is the collection of ideas that are expressed in T via the devices of expressions of T. Quine describes 'the ideology of a theory vaguely as asking what ideas are expressible in the language of the theory' (1951, 15). Let us suppose that according to T the items of its ontology can be manipulated in such a way that some procedure takes one or more natural numbers as input and produces a third number as output. For example, *binary* operations take two input numbers and produce a single output number. Now suppose we wish to express the idea of adding two numbers together to produce another number. To do this we introduce the binary operation of 'addition' into the ideology of T. To illustrate, the number 1 and the number 2 can be 'added' together to 'produce' a single third number, namely, 3. The idea of addition can be represented using the plus sign '+' and we can write our example of adding 1 and 2 together to yield 3 as follows:

'1 + 2 = 3'

We can express further ideas about other relationships between the natural numbers through this method of introducing "pieces of ideology" to represent operations on the natural numbers. If we wanted to express the idea of one number being subtracted from another to yield a further number, we introduce the binary operation of 'subtraction'. Theory T would then contain an ideology with two operations, namely, 'addition' and 'subtraction'. It is important to note that the ideology of T is in no simple correspondence to the ontology of T since the ideas of

'addition' and 'subtraction', as Quine points out, 'need not have any ontological correlates in the range of the variables of quantification of the theory' (1951, 14).

To sum up the main points of this illustration, the ontology of T contains the natural numbers and the ideology of T contains the ideas about the relationship between the natural numbers. In other words, the ontology of T tells us what the theory says exists, while the ideology tells us about what the entities of the ontology are like. The ideology, for instance, plays a role in telling us that: 1 when added to 2 yields 3.

The notion of ontology is well discussed in the literature. Contemporary metaphysics has focused heavily on ontology, ontological commitment and issues surrounding quantification. On the other hand, the notion of ideology and its exact role in metaphysics has received little attention. This is unfortunate as there is widespread use of the ideology/ontology distinction in debates about properties,[3] mathematical entities,[4] modality,[5] truthmaking,[6] composition,[7] material constitution,[8] and more. More often than not parties to such debates appeal to the ideology/ontology distinction when they construct arguments that uncover a violation of the theoretical virtue of ontological economy *or* ideological parsimony.[9]

To illustrate, consider the debate between a realist about universals and a realist about tropes. Universals are repeatable entities that are multiply instantiated at different times and places by

---

[3] For example, (Forrest 2006).
[4] For a survey and critique of this distinction in this dispute, see (Shapiro 1997, §7.5 ff.).
[5] Lewis is the well known example, see (Lewis 1986b).
[6] See (Armstrong 2004b); for a methodological critique of truthmaking, see (Daly 2005).
[7] See (Bennett 2009) for a survey of this debate using the ideology/ontology distinction.
[8] Again, see (Bennett 2009).
[9] Throughout my entire thesis I reserve the word 'economy' and its cognates for the ontological variety of simplicity and I reserve the word 'parsimony' and its cognates for the ideological variety of simplicity. For example, if I say a theory is not economical, then I am referring to the ontological variety. In places where ambiguity may rise I hope to specify which variety I am referring to.

distinct particulars. The mouse pad and the stapler (say) instantiate the very same property of blackness. Tropes on the other hand are non-repeatable entities—known as particularised properties—that are instantiated by only one particular (or perhaps they are the fundamental building blocks that make up particulars). This mouse pad has its own blackness. The trope is the mouse pad's blackness and nothing else can have this blackness.[10] D.M. Armstrong, a devout realist about universals, rejects tropes because trope theory requires extra primitive predicates (e.g., '… resembles … to degree …') to capture specific axioms of resemblance that hold between certain tropes. According to the realist about universals, these axioms are reduced to axioms of identity. As a result, the trope theorists incurs an extra ideological cost because of the primitive two-place predicates it requires to account for facts about resemblance (Armstrong 1997a, 170-1). The number of primitives required by trope theory makes the theory ideologically extravagant when compared to realism about universals. This ideological extravagance is a reason to reject trope theory in favour of realism about universals.

Methodological arguments of this kind depend on the ideology/ontology distinction. Realism about universals is able to reduce axioms of resemblance in terms of axioms of identity because universals explain certain facts about resemblance. They therefore have a less ideologically extravagant theory but at some further *ontological* cost. Armstrong's argument thus relies on some distinction between ideology and ontology. The distinction itself depends on the respective notions of ideology and ontology. The notions of ideology and ontology affect how we understand the ideology/ontology distinction. It is important to better understand the notion of ideology because of its involvement in a large amount of disputes in metaphysics.

[10] The non-transferability of tropes has been contested; see (Dodd 1999, 150).

However, the notion of ideology has not received direct attention at length in the literature. The above example, which involved a simplified theory of natural numbers, shows us that ideology is about the ideas that are expressed in a theory. So it seems ideology is about the concepts or notions at work in a theory. For instance, the concept of addition was introduced to represent how two numbers are added together to yield a single third number. But at the same time we require *devices* in order to express these ideas, devices such as the binary *operator* of addition. Such devices are really 'bits of language' which are typically labelled as terms or expressions. This suggests that ideology is also about the terms or symbols of a theory. For instance, suppose there is a world in which there exists two black cans. If we wish to construct a theory that accurately represents this world, we need to take the two particulars as the values of quantification and introduce predicates such as '… is black' and '… is a can' into our theory. Consider the following:

'$(\exists x)(\exists y)$ x is black and x is a can, and y is black and y is a can, and $x \neq y$'

The ontology of this theory are the two particulars, while the ideology is comprised of the predicates '… is black', '… is a can' and other logical expressions from first-order classical logic (such as 'identity' and 'negation' assuming that $\neq$ is defined in terms of 'not' and 'identical to'). The above sentence states the fact that these two entities are black cans and so accurately represents the world in question. However, it seems the ideology of this theory is more about the predicates than about the concepts that are expressed by the predicates of the theory. This theory is more about predicates or terms because we are concerned with stating a fact about what entities exist in a certain world and what these entities are like. My remarks at this stage regarding what ideology is mostly concerned about will remain undecided between concepts and terms taking centre stage. I do not see this as a major setback since predicates for instance

express concepts. If a theory contains the predicate '… is black', then we can presumably suppose that '… is black' expresses the concept of blackness. Therefore, the devices and what they express are not completely alien from one another. Indeed, this inter-connection between concept and term explains why Quine and many others who appeal to the notion of "ideology" move seamlessly back and forth between concepts and terms.

There is a further distinction that is typically drawn within the ideology of a theory. This distinction is between *primitive* and *non-primitive* ideology. As Chris Daly remarks, 'a theory's ideology comprises each term that the theory uses…and a theory's primitive ideology comprises each term that the theory takes as a primitive term' (2005, 87). Quine also has a similar distinction in mind when he writes, '[in] ideology there is the question of what ideas are fundamental or primitive for a theory, and what ones derivative' (1951, 14). If we assume that terms express ideas or concepts, then it is plausible to suppose that a primitive term expresses a fundamental or primitive idea.

But what does the word 'primitive' mean in this context? Presumably, 'primitive' means 'unanalysable'. But what does 'unanalysable' mean? 'Unanalysable' at first pass may be said to mean 'admits of no analysis'. Thus, if a term is unanalysable, then it admits of no analysis (or is *unable* to be analysed). But what does 'admits of no analysis' mean? The question now turns on what one takes the project of analysis to really consist in. For the *Quinean* (which may not be truly representative of Quine's views), the phrase 'admits of no analysis' most likely means 'no further analysis in terms of other *predicates or terms* in the given theory'. But Quine further tells us that 'the ideology of a theory is a question of what the symbols *mean*' (1951, 14, my italics). The project of analysis is thus one that involves the *terms* of the theory and the *meanings* of the terms in the theory. It is a project of semantic analysis. A primitive term—and therefore a piece

of primitive ideology—is thus *semantically unanalysable* in a theory. (We will see later that the project of analysis can be interpreted in such a way that it is not concerned with meanings and semantic theory.)

These remarks are the beginnings of what I call the Quinean conception of ideology. To be clear from the outset I explicitly and intentionally call this view 'Quinean' and not 'Quine's view' for while I have found in Quine doctrines that support what I am calling the Quinean conception, I have also found other remarks in Quine's work that support the view that ideology is, to quote Quine, 'where the metaphysical action is' (1976, 504). Therefore, I am hesitant to attribute this view of ideology to *Quine* despite the fact that I mention his views to motivate and explicate it.

The Quinean conception of ideology understands ideology as a question about the meaning of symbols in a given theory. The symbols of a theory just are the theory's predicates and other devices of expression. As was established earlier, predicates and other devices of expression do not fall under the variables of quantification. Therefore, they do not ontologically commit us to any items of ontology. Ontology, for the Quinean, is whatever entities are among the variables of quantification. Ontology is the doctrine of 'what there is' and this is sufficiently captured by the existential quantifier of first-order logic. On this Quinean view, ideology and ontology amount to 'distinct domains of inquiry' (Quine 1951, 14). Ideology falls within the *theory of meaning* and its associated concepts: analyticity, syntheticity, synonymy, significance, entailment, intension and necessity. By contrast, ontology falls within the *theory of reference* and its associated concepts: truth, denotation, extension, naming, coextensiveness and values of variables.

Insofar as ideology falls within the theory of meaning, the purported analysis of a set of terms within a theory offers a semantic analysis. If no semantic analysis is given of some term and it is taken as primitive, then the unanalysed term is regarded as a *semantic* primitive. A semantic primitive can also be used to define up other terms in a theory in virtue of the primitive expressions accounting for the *meaning* of non-primitive expressions. According to the Quinean, this type of project strictly speaking does not count as ontological inquiry; rather it should be understood as *ideological inquiry*. But as Quine writes,

> Now the question of the ontology of a theory is a question purely of the theory of reference. The question of the ideology of a theory, on the other hand, obviously tends to fall within the theory of meaning; and, insofar, it is heir to the miserable conditions, the virtual lack of scientific conceptualization, which characterize the theory of meaning (1951, 15).

Quine thought that the theory of meaning was in an irredeemable state of disrepair and that the concepts involved formed a definitional circle that cannot be broken in order to explain *meaning* (see Quine 1953c). He also repudiated attempts to explain meaning by postulating language-independent entities such as propositions, given that they are intensional in nature and so cannot be a part of our theory without violating the extensionality of our language or drastically revising first-order logic (something we ought to avoid) (see Quine 1960, ch. 6). According to the Quinean, ideology and the prospects of ideological inquiry appear very dim; and especially dim for metaphysics insofar as in metaphysics we are attempting to determine *which pieces of ideology ought to be primitive and which pieces of ideology ought to be non-primitive.*

If the question of ideology boils down to questions about the meaning of terms and which terms are semantically unanalysable and which terms are non-primitive, then since there are no

meanings or there isn't any such thing as meaning, the Quinean has to reject the project of determining primitive and non-primitive ideology based on facts about the meaning of terms and the meaning of sentences in a theory. A sceptical view towards meaning results in a sceptical view towards primitive ideology. Call this view about ideology, *ideological pessimism*.

A few things need to be said about this view. First, it is a not an anti-realist claim about ideology. The kind of Quinean conception on offer here does not claim that there is no fact of the matter about what terms ought to be taken as primitive, which is a view typically associated with Rudolph Carnap. This sort of Carnapian view is best labelled as *ideological anti-realism*. Ideological pessimism is not a form of ideological anti-realism. Second, the view is better understood as occupying a sceptical position towards ideological inquiry *if* ideological inquiry is a matter about the meanings of expressions and more importantly about the question of which *primitive* expressions account for the *meanings* of non-primitive expressions. The impossibility of a theory of meaning rules out any possible account of explaining the meanings of non-primitive expressions in terms of the primitive expressions of a theory.

Moreover, if we are sceptical that there is a relation of synonymy, we might also be sceptical about whether there is even a distinction between primitive and non-primitive terms. A non-primitive term, on the semantic project, is a term that is synonymous with some complex term that is composed of primitive terms. So, if there are no facts about synonymy, there won't be any facts about which terms are primitive and which terms are non-primitive.

In short, ideological pessimism as construed here is a form of scepticism about the prospects of *primitive* ideology accounting for the meanings of non-primitive expressions simply because such an account depends on the theory of meaning. The source of scepticism for the ideological

pessimists originates from scepticism about the theory of meaning. In other words, if ideological inquiry is bound to the theory of meaning, it inherits the problems that plague the theory of meaning.

Ideological pessimism rests on the crucial claim that the theory of meaning has no prospects as a subject of inquiry. In today's environment this kind of scepticism towards meaning has waned drastically for the following reasons. First, the clarification of modal concepts brought about by the axiomatic development of modal logic provides one clear instance of an intensional notion that was made respectable for further inquiry. Second, the theory of meaning as a 'semantic theory' which assigns semantic contents to expressions of a language has become acceptable over the last twenty years or so in the philosophy of language. For example, one type of 'semantic theory' assigns *propositions* as the meanings of sentences. Third, the postulation of propositions as entities which play an explanatory role in a theory has also become more common. And finally, many reject the Quinean critique of intensional notions such as analyticity and the attacks in 'Two Dogmas of Empiricism' against the analytic/synthetic distinction and its epistemological significance.

Now, Quine *himself* can concede the claim that the theory of meaning is a subject worthy of philosophical and scientific investigation. Quine would simply divorce ideology from the theory of meaning and claim that ideology and 'ideological study can be usefully pursued thus within the theory of reference' (Quine 1951, 15). I am happy to accept this response on behalf of Quine in order to show that *his* views on ideology can be favourably understood. But such a response simply changes the Quinean conception I articulated above. I am more interested not in *Quine's actual doctrines* here (and there are many doctrines that I glossed over in my presentation of Quine), but rather in *the Quinean* conception of ideology I sketched above since I fear it is part

of the reason why many people today do not explicitly discuss the notion of ideology. I also think there are other ways to understand Quine and his views on ideology. For instance, in 'Ontology and Ideology Revisited' Quine (1983) revisits the notion of ideology and attempts to incorporate it into this doctrine of observation sentences. This approach would also be one further way to reconcile Quine's views on ideology. But I cannot do full justice to Quine here unfortunately.

If the impossibility of a theory of meaning is rejected, then talk of meanings as entities which play the role of the semantic content of sentences provides one way to sketch the beginnings of a conception of ideology that is somewhat more optimistic than the Quinean conception sketched above. Put briefly, if propositions are the meanings of sentences, then we have some way of taking talk of meanings as legitimate. If we have legitimate talk of the meaning of sentences and expressions, then some non-primitive ideology can be given a respectable semantic analysis in terms of the primitive ideology of a theory. Thus, the project of analysis as a semantic project becomes a respectable line of ideological inquiry.

However in the next section I consider another way to understand the notion of ideology that focuses more on what truths are stated or what facts are expressed in a theory. This second way of understanding ideology should be seen as a *reaction* to ideological pessimism rather than as a direct competitor or an outright denial of pessimism. I argue that ideology plays an important descriptive role in a theory and that if metaphysical realism is true, there is a fact of the matter about which expressions or terms ought to be taken as primitive in our best metaphysical theories.

1.2 Ideological Realism

Let us begin with the idea that ideology plays a serious role by figuring in the descriptions of reality according to a theory. In effect ideology plays a role in stating the truths of a theory. Put briefly, on this view ideology is involved in stating truths or expressing facts in a theory.

To illustrate, consider the following theory T*. According to T* the world is a world of concrete particulars. A concrete particular is a non-repeatable entity that occupies a region of spacetime (in what follows I set aside the qualification of particulars occupying regions). A concrete particular for instance cannot be wholly present in more than one region of spacetime (although there might be exceptions or far-fetched possibilities that I am ignoring here). An entity that is non-repeatable is to be contrasted with an entity that is repeatable such as a universal. A universal can be wholly present in more than one place at the same time. The universal of *being red* may be instantiated over there and here at the same time and therefore is wholly present over there and here at the same time. T* rejects the existence of universals. According to T* there exists concrete particulars such as black cans, red letterboxes and negatively charged quarks. Therefore the ontology of T* *only* contains concrete particulars. T* is one form of nominalism. T* rejects not only universals but also classes, sets, *possibilia*, states of affairs, etc.

Now suppose there is a world (call it w1) in which there are three concrete particulars: two black cans and a negatively charged quark. In order for T* to provide an accurate description of w1 it is insufficient for T* to merely list the things that there are. To provide an accurate description of w1 T* must describe the contents of w1 correctly. T* cannot say what w1 is like without using predicates. T* must say which entities are black and which entities are negatively

charged. Further, T* must say which entities resemble each other and which entities do not. This is where the role of ideology steps in. Ideology helps us *describe* the contents of w1. Ideology helps us say what the world *is like*. In this particular case, we require the predicate '… is black', '… is a can', '… is negatively charged', and '… is a quark'. Now according to T* we have the sentence:[11]

'$(\exists x)(\exists y)$ x is black and is a can, y is black and is a can, and $x \neq y$'.

The above sentence states the truth that there two wholly distinct black cans. We might innocuously assume that if the above sentence is true, then we can simply call the sentence a truth or say that it takes the form of a truth. (This assumption retains the spirit of nominalism.) Now, if there exists two wholly distinct black cans, presumably they resemble each other. So in w1 T* should contain the sentence:

'$(\exists x)(\exists y)$ x resembles y'.

Therefore, we need to introduce into the ideology of T* the predicate '… resembles …' in order to accurately describe w1. If we did not include this 'resemblance' predicate, we would be failing to describe w1 correctly.

Let us pause here to point out a couple of things. First, predicates and other pieces of ideology have a serious *descriptive* function in our theories (Melia 2005, 68). There is no reason to think that in order to truly describe something the relevant predicate or term must *refer* to some entity. The realist about universals should also accept this result since according to most realist theories about universals the 'instantiation' predicate does not correspond to a universal of instantiation. Second, because ideology plays a role in stating truths according to a theory,

[11] The following sentence may require the qualification 'In w1, …'. But I am ignoring that here.

ideology is a 'worldly matter'. The ideology is as significant or important as the ontology of a theory. I take this to be the same intuition that Sider expresses when he says that 'a theory's ideology is as much a part of its worldly content as its ontology' (2011, 13).

Let us now return to world w1 and theory T*. In w1 we said that one of the sentences of T* states the truth that *x* resembles *y*. According to the proponent of T* however, this resemblance truth is not taken as a fundamental truth, or at least it ought not to be taken as a fundamental truth if we can give some constitutive account in terms of more fundamental truths. We should have a preference for reducing truths where possible insofar as a fundamental truth is understood as a brute or unexplainable truth. Multiplying brute or unexplainable truths ought to be avoided. The proponent of T* claims that the truth that *x* resembles *y* holds *because x* is black and *y* is black. The more fundamental truth is that *x* and *y* are both black.

This type of project however is markedly different from the semantic project that was associated with the Quinean conception of ideology. But following Melia we can draw a useful distinction:

> The project of analysis can be understood in two different senses. On the one hand, an analysis may be offered as a semantic thesis about what a certain part of language does or should mean. On the other hand, an analysis may be offered as a metaphysical or constitutive thesis. For instance, Tarksi's analysis of 'A logically implies B' as 'for all models in which A is true, B is true' can be interpreted either as a proposal about how we should define 'logical consequence', or a proposal about what the relation of logical consequence really is (2005, 70).

The proponent of T* interprets the project of analysis as metaphysical or constitutive. Thus, *what it is* for *x* to resemble *y* is for *x* to be black and for *y* to be black. But what it is for *x* to be black and what it is for *y* to be black is taken as fundamental according to T*. The fact that or the

truth that *x* is black holds in virtue of nothing. It is an unexplained truth according to T*. The realist about universals—just to illustrate a contrast—does provide a further metaphysical account of such monadic truths. According to the realist about universals, what it is for *x* to be black is for *x* to instantiate some universal *U*. The realist thereby reduces monadic truths about concrete particulars to facts about the instantiation of universals by particulars. The predicate '… is black' which is taken as primitive according to T* is thereby given an analysis according to the realist and is thereby no longer primitive. The realist, of course, introduces the 'instantiation' predicate as a piece of primitive ideology, a predicate that the nominalist repudiates. On the metaphysical construal of the project of analysis '… instantiates …' according to the realist about universals is *metaphysically primitive*.

This distinction between different interpretations of 'the project of analysis' should not be understood as mutually exclusive. If we endorse the metaphysical construal of analysis, we are entitled to endorse the semantic construal of analysis as well. For instance, we may accept that '*x* resembles *y*' is semantically primitive *and* metaphysically primitive. That is, we may believe that '… resembles …' admits of no semantic analysis and that it is a fundamental fact that *x* resembles *y*. The point of the distinction is to show that we *can* embark on two distinct projects of analysis. We should also be weary of slipping between the two projects or making inferences from conclusions that are drawn in one project to conclusions in the other. For instance, even if '… resembles …' is semantically primitive, it does not follow that it is a fundamental truth that *x* resembles *y*. For we may adopt the view that *x* resembles *y* because *x* and *y* are both black (Melia 2005, 71). Similarly, even if the truth that *x* resembles *y* is taken as fundamental, it does not follow that no semantic analysis of the 'resembles' predicate can be given or that we must accept '… resembles …' as semantically primitive.

In contemporary metaphysics there has been growing focus on the metaphysical construal of the project of analysis. It has been increasingly common to ask questions such as "What is it for ϕ to be ψ?" and receive an answer in the form:

> *what it is* for ϕ to be ψ is for ϕ to be χ.

The answer if it is one that involves fundamental truths will involve some primitive ideology (χ will be partially made up some piece of primitive ideology). To illustrate, consider the question: what is it for *x* to be black? The realist replies: what it is for *x* to be black is for *x* to instantiate some universal *U*. The following portion of this answer "to instantiate some universal *U*" involves the primitive 'instantiation' predicate. As noted above the 'instantiation' predicate is metaphysically primitive according to the realist about universals. The sense of 'primitive' that is being used here has been labelled by others as the 'interesting sense' of 'primitive' (Nolan 2008, 191). Cian Dorr thinks this interesting sense of 'primitive' is the sense of 'primitive' that is at the heart of metaphysics. He writes,

> I regard the question of which predicates are primitive in this sense as the most fundamental question of metaphysics. Traditionally, metaphysics aspires not just to answer a long list of questions of the form 'are there Fs?' but to understand the *ultimate structure of reality*. This aspiration should be understood, I think, as equivalent to the quest for a complete list of primitive predicates (2004, 155-6, his italics).

The notion of 'metaphysical analysis' and the associated notion of 'in virtue of' are admittedly obscure. I will not attempt to provide answers about how the precise details ought to be filled out. Such a task would require a longer discussion than I can provide on the subject and I think the answers are yet to be fully worked out by metaphysicians. At the moment many

contemporary metaphysicians are exploring various research programmes aimed at discovering the underlying details of this metaphysical project of analysis. What is common ground amongst metaphysicians is that this *talk* of 'what it is for ϕ to be ψ' and this *talk* of 'in virtue of' is not something that must be outright banished from our theorising.

What is relevant from this discussion is the claim that the notion of ideology plays a specific and important role in this metaphysical project and that the role it plays has to do with contributing to expressing facts in a theory and being *part of* the descriptions of the world or reality according to a theory. The distinction between primitive and non-primitive ideology *roughly* maps onto the distinction between fundamental and nonfundamental truths. Primitive ideology (that is, the metaphysically unanalysable expressions) of a theory figures in sentences that express fundamental facts according to a theory. This is the powerful and important descriptive role that primitive ideology plays in fundamental metaphysics.

Now, contemporary metaphysics for the most part operates on the assumption that metaphysical realism is true. Metaphysical realism is the view that there is an objective structure to reality that is independent of what we say and think (and independent of language *simpliciter*). When metaphysicians put forth a metaphysical theory, their aim is to represent this objective structure. If the theory is true, then it represents the structure of the world correctly. We should add the qualification that the *type* of theory on offer is one that involves a certain type of inference, namely, inference to the best explanation. Inference to the best explanation is usually contrasted with deductive and inductive inferences. Deductive inferences make an inference based on logical entailment, whereas inductive inferences make a judgement based on past facts about a given phenomena. Inferences to the best explanation infer that given some phenomena this is the most likely (and most lovely?) explanation on offer. At any rate, if metaphysical

realism is true, then some theories that represent the structure of the world will be wrong and others will be right. If this sounds too strong, we can say a theory is either more likely to be true or more likely to be false. Metaphysical realism provides the insight that there is a correct way to describe or represent the structure of the world.

Now, given the claim that ideology plays a serious descriptive role in a metaphysical theory as demonstrated above and given the claim that metaphysical realism is true, it follows that there is a *correct ideology* that helps accurately describe the structure of reality. There is a correct description of the world that tells us what there is *and* what it is like. Our primitive ideology contains the predicates, operators, etc, that it does *because* the world is objectively speaking a certain way and has a certain structure independent of how it is described or what we say and think about it. Sider (2011, ms) has recently expressed this sort of view about ideology. He writes, '[ideology] represents the world as having structure corresponding to its primitive expressions' (2011, viii). To use one of Sider's examples, if a theory contains the primitive modal operator 'necessarily, …' which is represented as '□', then the theory is committed to representing the world as having modal structure.

If you think that ideology represents the world as having structure and that there is an objective structure to reality independent of what we say and think, then there is a fact of the matter about which expressions ought to be taken as primitive in a metaphysical theory. Call this *ideological realism*. Ideological realism says that there is a correct ideology that plays a part in providing an accurate description of reality's structure.

Here is one last example to illustrate ideological realism. Suppose vagueness obtains in the world and further suppose it is metaphysically vague that God is on top of Mount Everest.[12] We might think this tells us that *there is vagueness* and perhaps we would subscribe to such a claim if we endorse the view. However, any ontological claim is restricted to 'there is some thing or entity such that it ...' where we insert the appropriate predicate. Therefore, the ontological claim that there is vagueness does not provide the right description of reality since we want to capture some fact about a certain portion of reality. If we introduce a 'vagueness' predicate, we would still fail to properly describe how the world is. For we don't want to say God or Mount Everest is vague. In addition, to say the world is vague fails to capture the specific claim that over there high in the mountains vagueness obtains. Certain pieces of ideology can fix this problem. One way to capture the claim that there is vagueness or that vagueness obtains in the world is to introduce a vagueness operator '$\boldsymbol{V}$' that attaches to whole propositions or sentences to make new sentences. In the theory the sentence '$\boldsymbol{V}(p)$' expresses the fundamental fact that it is vague that p. This piece of primitive ideology plays a descriptive role in the theory in virtue of being part of a description. In order to state the truth that it is vague that p we need '$\boldsymbol{V}$'. Of course, whether or not this operator is introduced into the theory is based on whether vagueness objectively obtains in reality.[13] Sometimes—usually in a negative way—ontology helps determine the stock of terms in our theory. To illustrate using a different example, if we discovered that there are no parts, we would not need a 'parthood' predicate to describe when one thing is part of another. Similarly, if there is no vagueness, there is no need for '$\boldsymbol{V}$'.

[12] The example is adopted from (Heller 1996).

[13] You might think for this theory to be correct it cannot be the case that it is vague that it is vague that p; but because vagueness obtains, the theory characterises all fundamental facts as vague, which will include the fact that there is vagueness. I won't dwell on this here.

To summarise this section, let me outline the *main stages* of the discussion that led up to ideological realism. I first began with the task of showing how ideology has a descriptive role to play in our theories. Given this role, ideology is not just about our concepts but rather about being part of descriptions of the world. Part of this descriptive role, I argued, is to state the basic truths or fundamental facts of a theory. Second, I introduced the metaphysical construal of the project of analysis that attempts to provide accounts of the form '*what it is* for ϕ to be ψ is for ϕ to be χ'. This is contrasted with the semantic project of analysis. Third, I showed that from this rough framework of 'metaphysical analysis' we can understand the idea that primitive terms play a role in stating basic truths or expressing fundamental facts of a theory. Fourth, I introduced the assumption that metaphysical realism is true. Metaphysical realists believe that there is an objective structure to the world that is independent of what we say and think. Finally, we arrived at the idea that the primitive ideology of our theory is involved in representing reality's structure and that because there is an objective structure 'out there', there is a fact of the matter about which primitive ideology should be used to help accurately describe reality.

1.3 Motivations for Taking Ideology Seriously

All pieces of primitive ideology, as Melia notes, 'play a meaningful role in sentences stating basic truths about the world' (2005, 68). This is what it is to take ideology seriously. But since predicates do not harbour ontological commitment many people have not taken ideology seriously. This, I say, is a mistake. Although a predicate or term does not harbour ontological commitment, it does not imply that the predicate or term should not be taken seriously. A

primitive predicate may lack a referential function but it still has a descriptive function. The descriptive function, as argued above, plays an important role in a metaphysical theory.

There are many ways to not take something seriously. For instance, if we do not take morality seriously, we could take this to mean that morality is not about the world but rather about us and our expressions of preference and emotion towards a particular act. Likewise, if we do not take ideology seriously, we could take this to mean that ideology is not about the world but rather about *our* concepts and what concepts are basic to *our* conceptual scheme. Indeed the word 'ideology' brings with it bad connotations (as Quine remarked when he first introduced it in (1951)). The word 'ideology' suggests it is about the study of 'ideas' or 'mental entities'.

In this section I discuss considerations in favour of taking ideology seriously. Some of the discussion is aimed at motivating the claim that ideology is about the world and not solely about our concepts. My goal is rather modest. I do not attempt to provide full-blooded *motivations for ideological realism*. Therefore, I do not take the conclusions of this section to motivate the claim that there is a fact of the matter about which terms ought to be taken as primitive in our theory. Nor do I take the conclusions of this section to motivate the claim that there is a correct primitive ideology required to describe reality's structure or state the basic truths. I am only interested in motivating the claim that the ideology of a theory ought to be taken seriously because ideology is just as much about the world as the ontology of a theory. Ideology is not solely about our concepts or the ideas expressed in a theory.

Our first consideration involves the status of quantifiers as they are typically construed in contemporary metaphysics. Quantifiers are *ontologically* significant because they determine the domain of our ontology; they are the 'gateway' to ontology so to speak. Some of Quine's early

remarks on ideology suggest that the ontology of a theory can be detected by determining the meaning of its quantifiers. He writes, '[t]he ontology of a theory may indeed be considered to be implicit in its ideology; for the question of the range of the variables of quantification may be viewed as a question of the full meaning of the quantifiers' (1951, 14). Given that quantifiers are devices of expression that are taken to be no different—in this particular respect—to predicates and operators, we have an instance of one piece of ideology that is about the world.[14]

Our second consideration is more complex. Putnam provides insight into the claim that predicates tell us something about the world just as much as the objects in our ontology in his attempt to critique, *inter alia*, Quine's criterion of ontological commitment. Consider two theories: T and T′. Theory T says there are physical objects such as fundamental particles. T quantifies over physical things and so has an ontology of physical objects. Theory T′ on the other hand says there are integers such as the number 1. T′ quantifies over integers and so has an ontology of numbers. Putnam (1975) invites us to consider a 'proxy function' that operates as a mapping device from physical things to numbers. This proxy function implies that any theory that quantifies over physical objects can be replaced with a theory that quantifies over integers, provided that the predicates of the first theory are replaced with appropriately corresponding predicates. For instance, T can be replaced with T′ by dropping quantification over particles, introducing quantification over integers, and replacing predicates such as '... is spin up' with '... is the number which is assigned to an object which is spin up'. T and T′ are therefore 'inter-translatable' (Putnam 1975, 184). Given that T and T′ quantify over different objects, their ontologies differ. However, as Putnam concludes,

[14] This is more of an innocent observation than a genuine motivation since it should be uncontroversial that quantifiers are ontologically significant. But in any case a quantifier is still a piece of ideology. So by that standard it is a piece of ideology that is about the world.

> '[i]t seems to me that a theory may presuppose objects as much through the predicates it employs as through the objects it quantifies over; and that, intuitively T′ in the above example has an ontology of material objects just as much as T does' (1975, 184).

The intuition here is that the ideology of a theory in some cases tells us something, however little, about the world or what is in it. In the example above, it is clear that the predicate '... is the number which is assigned to an object which is spin up' involves the extra notion of a physical object, for what else could 'assigned to an object which is' be about? But other cases highlight this intuition equally well. For instance, the predicate '... is a chair' presumably applies to a certain kind of object, namely, a material entity. If a theory contains such a piece of ideology, it is natural to think that the theory is also committed ontologically speaking to material objects. Of course, we might wish to reduce physical objects to sets and regions of spacetime such that a physical object is identified with some coordinate of spacetime. We might press on regardless and reduce regions to pure sets (such as Quine 1976). Such a theory quantifies over sets but replaces ordinary monadic predicates like '... is a chair' with 'chair of the region whose coordinates are' that applies to some set or set of sets. The insistence on replacing the ordinary predicate further illustrates that there is something counter-intuitive about the predicate '... is a chair' applying to sets and not material objects, which is to say that '... is a chair' intuitively applies to material objects.

But let us extend Putnam's intuition and make the underlying point vivid by considering the following theory. Let us entertain a toy theory of frog-leaping, where 'Fx' represents 'x is a frog' and 'Jxy' represents 'x jumps over y'. The following axioms are now introduced:

a) $(\forall x)(\forall y)((\mathrm{F}x \wedge \mathrm{F}y) \supset (\mathrm{J}xy \vee \mathrm{J}yx))$

b) $\neg(\forall x)(\forall y)(\forall z)((\mathrm{F}x \wedge \mathrm{F}y \wedge \mathrm{F}z) \supset ((\mathrm{J}xy \wedge \mathrm{J}yz) \supset \mathrm{J}xz))$

c) $\neg(\forall x)(Fx \supset Jxx)$

The theory says if any two things are frogs, then either one jumps over the other; but if the first frog jumps over the second and the second frog jumps over a third, it does not follow that the first frog jumps over the third; and lastly no frog can jump over itself. It is true that the theory of frog-leaping involves quantifiers that range over some kind of entity. But, what kind of entity it is said to quantify over *can be* determined by the predicates '... is a frog' and '... jumps over ...'. Simply considering the predicates alone, I say, yields a *prima facie* reason to think that the theory 'assumes the existence' of material objects that stand in spatial relations.[15] Of course, to properly represent this state of affairs we *must* quantify over such kinds of entities. This is part of Quine's insistence that we regiment our theories to determine their ontological commitment.

But the point is that ideology sheds light on *facts* about the entities that are quantified over. As mentioned earlier, the predicates fulfil a descriptive function by being part of the descriptions of the world according to a theory (see Melia 2005, 67-8). It is through the predicates, operators, logical constants, etc, that a theory represents the structure of the world. This is not to say that 'the structure of the theory' tells us what the structure of the world is, but rather 'the structure of the theory' offers an 'intended structure' (Wilson 1981, 412). The theory, after all, may be false.

There is a way to vastly misunderstand the conclusion just drawn. For instance, Putnam argues that the cases above show us there is something wrong with Quine's criterion of ontological commitment. Putnam seems to think that the predicates 'presuppose objects just as much as quantifiers'. Therefore, if ontological commitment is understood in terms of quantification, we rule out the possibility of predicates playing any role in determining the

[15] If we are adverse to saying there are spatial relations that the frogs stand in, I am happy with the weaker claim that the theory assumes the existence of whatever the predicates apply to—in this case, frogs.

ontological commitments of a given theory. The objection concludes, this result does not sound at all plausible given the examples just considered. So Quine's *criterion* should be rejected. But I think this is a misunderstanding for the following reasons. Firstly, Quine drew a distinction between the ontological commitments of a theory and its ontology. He reminds us that ontology is nothing more than the 'range of the variables' of a given theory whereas the ontological commitments involve the values that are 'common to all ranges of interpretations of the given quantifiers' (Quine 1969, 315). Therefore, it is Quine's conception of ontology and not his criterion of ontological commitment that Putnam is really calling into question (cf. Wilson 1981, 420). But more importantly, and this is the second reason, it does not follow that the criterion of ontological commitment should be rejected, but rather that our criterion of ideological commitment should be brought to the fore as a commitment on a par with our ontological commitments. In other words, ideological commitment should be understood as just another form of metaphysical commitment.[16]

To be clear, we should conclude the following: 1) ideological commitments are treated on a par with ontological commitments, 2) our conception of ideology is about the world but only insofar as it represents the world having a certain 'intended structure', and 3) the way ideology represents the 'intended structure' of a theory is via expressing facts or true propositions and not by ontologically committing us to entities that must reside in our ontology.

Our third consideration in favour of taking ideology seriously stems from a particular understanding of the role of concepts and conceptual analysis in metaphysical theorising. Frank Jackson, for instance, argues that '... conceptual analysis is the very business of addressing when

[16] Again, 'metaphysical commitment' is the broader phrase that encompasses ideological and ontological commitment. This is backed by the idea that metaphysics is ideology and ontology.

and whether a story told in one vocabulary is made true by one told in some allegedly more fundamental vocabulary' (1998, 28). To illustrate using Jackson's example, the justified-true-belief account of knowledge is a thesis that the terms 'belief', 'truth', and 'justification' are used in an account to make true some other account that uses the word 'knowledge'. According to Jackson, in explaining how a story told in one vocabulary makes true another story told in some less fundamental vocabulary, we entertain possible cases to search for counter-intuitive results. In the current illustration, Edmund Gettier (1963) showed us that the standard account of knowledge did not intuitively satisfy certain situations where accidently true beliefs were in fact justified. For Jackson, entertaining possible situations in this way amounts to conceptual analysis or at the very least to a kind of conceptual investigation that helps to provide an account such that one set of terms or vocabulary of a language is made true by some more fundamental language.[17]

What is relevant for our purposes here is the claim that entertaining concepts in this way leads to 1) exploring the content of concepts we possess, and 2) providing an account of non-fundamental vocabulary in terms of fundamental vocabulary.[18] 1) is mostly relevant because exploring the content of our concepts shows us something about the world or the way the world (or some portion of it) might have been, etc. If we think that concepts show us something about the world, then the predicates that are used to express them also show us something about the world. Again, we do not thereby ontologically commit ourselves to some ontology, for we are yet to determine what exactly makes those sentences true. But at the very least ideology on the Jacksonian view is about the world. So ideology ought to be taken seriously.

---

[17] If conceptual analysis is permitted to introduce talk of entities, then we have secured the claim that conceptual analysis is about the world.

[18] To what extent we consider 2) to be properly motivated depends on whether fundamentality is relative or absolute. I note this subtlety here. I do not have space to discuss it.

I am not endorsing Jackson's thesis but I do take his proposal as one way to motivate the claim that ideology should be taken seriously. He has shown that concepts expressed by predicates and other devices of expression within the ideologies of our theories are 'worldly' in a sense that is relevant to metaphysical inquiry. Of course, if you are adverse to Jackson's thesis or related claims (which I did not mention) concerning, say, two-dimensional semantics, then this motivation for taking ideology seriously is not for you.

A fourth and final consideration brings doctrines from the philosophy of language to the fore. We might be attracted to the idea that there are Russellian propositions out there in the world, perhaps as abstract entities that have properties, objects and relations as their constituents. If I utter the sentence 'the goat is in the argan tree' I thereby express a proposition which has as parts some goat, that argan tree over in Morocco and the *in* relation. On such a picture the sentence 'gets at' the world via this abstract entity, i.e., the Russellian proposition. If the sentence is true in virtue of the proposition it expresses, and the predicate and subject are components of the sentence, then the predicate and subject also 'get at' the world just as much as the sentence. If we think pieces of primitive ideology 'get at' the world somehow, then we should be attracted to the thought that ideology is about the world and not merely about our concepts.

I sum, I take these four considerations to be various considerations in favour of the claim that ideology ought to be taken seriously. What it means to take ideology seriously is to believe that ideology is not only about our concepts or our conceptual scheme but also about the world. A device of expression, as I have shown, does not need to refer to an entity to be taken seriously. To reiterate, these considerations do not count in favour of ideological realism. In the final section of this chapter I discuss an objection against ideological realism.

1.4 The Forrest Objection to Ideological Realism

Ideological realism is subject to an objection that attempts to show, as an unpalatable consequence, that a certain dispute in the metaphysics of properties comes out verbal or non-substantive. I assume that this particular debate should not be regarded as verbal or non-substantive. So, ideological realism ought to be rejected. Call this the Forrest objection. In this section I present the Forrest objection and provide a response which I believe successfully defends and helps clarify ideological realism.

Before we consider the Forrest objection we need to understand the debate that is said to be verbal or non-substantive. To understand the two parties to the debate, we need to look at Ostrich Nominalism. Ostrich Nominalism is the view that there are only concrete particulars and *all* predicate are taken as pieces of primitive ideology. According to Ostrich Nominalism, the predicate '… is red' applies to this letterbox but there is no further fact that explains why this letterbox is red. That the letterbox is red is just a brute fact, a fundamental truth according to Ostrich Nominalism.

Forrest invites us to consider a certain breed of nominalist who adopts ideological realism. He calls the corresponding view 'paranominalism'. Paranominalism is the nominalist competitor against realism about universals in the particular debate that Forrest thinks is merely verbal. Paranominalism is similar to ostrich nominalism in that both views take predicates such as '... is F' as pieces of primitive ideology and claim that such predicates apply to certain particulars in virtue of nothing. The difference between the two is that paranominalism 'takes predicates and modalities with the utmost seriousness' (1993, 57) whereas ostrich nominalism does not. In some

fundamental language B, the paranominalist provides quantificational statements that tell us about their fundamental ontology, but they also provide 'lists of the fundamental categories of predicates, lists of the fundamental modalities, and so on. These [ideological categories] would all be treated with just the same seriousness or objectivity as the ontology' (*ibid*). Therefore, in B, sentences that possess predicational structure such as 'a is F' are taken as metaphysically significant and on a par with the ontology. This is more or less what ideological realism amounts to.

Forrest sets up the major premise by considering a dispute between paranominalism and realism about universals in the context of the following project of ontological reduction. Suppose we have some language L which is reduced to some fundamental language B. The dispute is restricted to some non-fundamental language L which only contains subject-predicate sentences of the form 'a is F' (this is for simplicity's sake). Now suppose the sentences of L are true because of the true sentences of B. We might say this reduction can be 'expressed by means of schemata of the form: 'S' is true if P' (Forrest 1993, 57), where 'S' is a truth of L and 'P' is a truth of B.

The realist about universals says that sentences in L such as 'a is F' are true because particular *a* instantiates universal *F*. The fundamental language B would therefore contain the primitive dyadic predicate '... instantiates ...' and be ontologically committed to two ontological categories, namely, particulars and universals that saturate either side of the 'instantiation' predicate. The paranominalist, by contrast, presents the fundamental language B as being ontologically committed to one category, namely, concrete particulars but retains 'a long list of predicates' that describe the ideology (Forrest 1993, 58). The dispute is set up such that the

realist says the predicates of the paranominalist correspond to their universals. Therefore, Forrest concludes,

> [t]his dispute is, I suggest, a verbal or conceptual one, not one concerning matters of fact. The long list of predicates required by the paranominalist stands in one-to-one correspondence with the category of repeatables [universals] of the realist, and these predicates show us as much about the world as do the repeatables [universals] (1993, 58).

There is no difference between paranominalism and realism about universals. If there is no difference between the two, then the dispute is verbal or conceptual. It is verbal or conceptual because there is a difference based on us given that what view we adopt depends on whether we choose metaphysically significant predicates over properties out there in the world. There is nothing else to discuss. But as metaphysical realists this debate between realism and nominalism is substantive and not verbal. If we cannot accept this dispute as verbal, ideological realism is false and we should, at Forrest's behest, reject views like paranominalism.

The most appropriate response to the Forrest objection is to question the comparison between the two views, as this is required to show that the dispute is verbal. There are some complications with the comparison, as Forrest (1993, 58-9) notes. For instance, if we consider complex instances of resemblances between properties such as 'red resembles orange more than blue', the paranominalist will require further paraphrases. But this won't undermine the comparison; it just makes the comparison more convoluted. There are other potential complexities involving 'causal regularities', which likewise can be set aside by restricting our focus to the simple example set above.

The difference between the two views can be drawn, I say, by looking at the ideology of the realist. Their ideology contains the dyadic predicate '… instantiates …' whereas the paranominalist's does not. Indeed, nominalists of most varieties have an aversion to such a predicate as it involves 'metaphysical glue' that sticks universals and particulars together in a mysterious way. This ideological difference is one starting point which may help to undermine the objection. But Forrest has a reply to this move. The dispute between the paranominalist and the realist is actually set up using his brand of realism. To understand the reply we need to look at Forrest's view in a bit more detail.

Forrest puts forth an ontology of universals and particulars. Both ontological categories are fundamental in that neither ontologically depend on each other nor any other category. He rejects the Armstrongian thesis that all universals supervene on their instances and so are not separable from them. Some universals, for various reasons, are taken to be uninstantiated and so separate from particulars, particulars that could instantiate them. By contrast, Armstrong believes that there is one fundamental ontological category of states of affairs that grounds (thin) particulars and universals. They are 'abstractions from states of affairs' (Armstrong 1997b, 29).

Forrest provides arguments for his position which need not distract us here (see 1993, §1). What is relevant is how we account for instantiation on his view. If universals are independent of particulars, then when related to particulars, we require that *a* instantiates *F* just because *a* and *F* are related by the instantiation relation *R*. Given that *R* is a universal, i.e., a repeatable entity, it is independent of *a* and *F*. Thus, it is related to *a* and *F* just because it is related to *a* by some relation R_1 and related to *F* by R_2. These further relations, given that they too are independent repeatable entities, require relations to be related to the things they are related to, and so on, but

in such a way that the explanation for why one thing is related to another is pushed back onto the newly introduced relation. The ensuing regress is a vicious one (Forrest 1993, 55).

Forrest's response to the regress is to say that the instantiation relation is not independent of its *relata*. He is entitled to say this because he holds the view that only some universals are uninstantiated. The universals that are instantiated presumably depend on their instances. He writes, '… if it be asked which properties or relations fail to be independent, then I reply that the threat of a regress shows that the relation of instantiation is not independent of what it relates' (1993, 56). On this view, particulars are to be identified with what Armstrong calls thick particulars or 'particulars-in-a-situation' (*ibid*). To illustrate, consider that particular letterbox and the property of *being red*. The letterbox is the letterbox 'in all its redness' and not to be regarded as a bare entity 'in itself'. The fact that the letterbox instantiates redness is, therefore, grounded in the essence of the letterbox and redness; the instantiation relation supervenes on the intrinsic nature of its *relata*. If it is dependent on what it relates, then the regress does not materialise. If a regress of relations were to be generated, it would be of internal relations that are 'nothing on top of' their *relata*. In addition, facts about their instantiation would be explained in terms of the nature of their *relata* (see also Nolan 2008).[19]

Forrest can reply that there is no ideological difference caused by the 'instantiation' predicate as it does not mark out some extra feature of the world (1993, 58). In short, there is no relation of instantiation. Instantiation facts can be made true or explained by the natures of universals and particulars. But I find the reply unconvincing. First, we commit ourselves to what Armstrong calls the doctrine of an 'ontological free lunch' (1997b, 12). Entity *e* is a free lunch just in case *e*

[19] Another solution is offered by starting with facts as the most basic entities and taking universals and particulars to be dependent on facts. But since I am discussing the issue within Forrest's ontology of universals and particulars I leave this proposed solution to one side.

is no addition to being. If *e* is ontically entailed by the mereological sum of *a* and *b*, then *e* is no addition to being. But it remains to be seen why saying *there is* a relation of instantiation does not invite us to include it as an element of ontology when working within a Quinean framework that presupposes the distinction between ideology and ontology (cf. Benardete 2002, 357). It seems we cannot have it both ways. Second, the reply undermines the full extent of ideological realism. All pieces of primitive ideology even if they do not commit us or correspond to some entity nonetheless express facts about the world. It isn't just a matter of what the ideology 'shows us' according to the ideological realist. So, from this standpoint if the realist has an 'instantiation' predicate they are committed to fundamental facts expressed in B that the paranominalist is not ideologically committed to.

A possible response: if a piece of ideology is to be part of the fundamental language—and so a piece of primitive ideology—it has to be 'unreduced' to anything in the ontology. So, given that Forrest claims there is a relation of instantiation, the 'instantiation' predicate can be reduced and thus not included in the primitive ideology. As a result, the lack of a difference between Forrest's realism and paranominalism is again secured. But this only moves the bulge in the carpet. We began with the assumption that for every predicate of the paranominalist there exist a corresponding universal in the realist's ontology and *vice-versa*. However, if the paranominalist rejects the universal of instantiation, then we have undermined the initial assumption of a one-one correspondence between the realist's ontology and the paranominalist's ideology.

My last comment on the difference between Forrest's realism and paranominalism is directed towards undetected pieces of primitive ideology in the paranominalist camp. For instance, if they introduce the monadic predicate '… is F' and say that it applies to *a* in virtue of nothing, then a primitive 'application' predicate is required to express this fact or to be part of the sentence ''…

is F applies to a'' (see Armstrong 1978a, ch. 2). Thus, we have another ideological difference that undermines the conclusion that this metaphysical dispute is verbal. The realist's ideology won't have an 'application' predicate.

The Forrest objection teaches us about an important aspect of ideological realism. The view is not primarily concerned with what can be 'shown' as opposed to what can be 'said'. Rather it is concerned with expressing fundamental facts about the world. If a piece of ideology is taken as primitive, it becomes part of the fundamental ideology or ideology of the fundamental language. In this language the pieces of primitive ideology are involved in sentences that express fundamental facts about the world. The primitive ideology of some fundamental language when saturated in certain ways to form sentences expresses facts about the fundamental structure of the world. Forrest's realism, therefore, posits extra structure to that of the paranominalist. Therefore, the 'instantiation' predicate is a further ideological commitment that is not held by the paranominalist. The dispute between paranominalism and realism is based in part on ideological disagreements.

Ideology represents the world being a certain way and it is through this representation of reality that the theory posits structure. If the theory is true, then the world contains the structure posited by the theory. In the next chapter we will look at the methodological consequences of ideological realism. In particular, we will discuss how the realist notion of ideology affects our understanding of the ideology/ontology distinction and how ideological realism interprets the virtue of ideological parsimony.

2

Ideological Realism and Method

According to ideological realism, the concept of ideology plays a crucial role in our metaphysical theorising and evaluation of theories. The notion of ideology however affects the way we understand the distinction between ideology and ontology. In light of ideological realism we need to determine how the ideology/ontology distinction is properly understood. This is the first concern of this chapter. Another goal of this chapter is to see ideological realism at work in certain metaphysical disputes. To this end I critically discuss an objection by Karen Bennett (2009) which concludes that in certain metaphysical disputes we have no grounds for adopting one competing theory over another. I provide a response to Bennett's objection using ideological realism and the understanding of the ideology/ontology distinction argued for in the beginning of the chapter.

2.1 Two Understandings

In metaphysics we propose fundamental descriptions of the world which aim to 'record' what the world is really like.[1] Ideological realism offers a particular conception of ideology that is connected to the notion of structure. Ideology gets at the world by representing reality's

[1] The guiding intuition behind this general claim is the idea that '[l]anguage is a describer and recorder of reality, not its creator' (Gottlieb 1980, 4).

structure.[2] If ideology, according to ideological realism, is about structure, and primitive ideology 'posits' fundamental structure, it seems right to say that ideology is about the world and that it 'gets at' the world in some way. Indeed if we are metaphysical realists, we want to further say that there is a metaphysically significant description of the world. That is, there is an objective answer as to which ideology is the ideology that 'carves reality at its joints'.

Our notion of ideology determines to what extent we take seriously the virtue of ideological parsimony. It will be helpful to pause here to mention some methodological consequences surrounding this theoretical virtue.

The currency of ideological parsimony is the primitive predicates or terms of a theory. Ideological complexity is understood usually in terms of the number of primitives. However, there is some precedent for believing that the argument places of a term also count as an increase in complexity. The 'mysteriousness' of primitives may also be a guide concerning the *introduction* of primitives, but perhaps not a guide for determining ideological complexity. The latter constraint tends to derive more from the intelligibility or lack thereof of a primitive.

If we are happy with the phrase 'ideological posit', then an ideological razor is not far off: *do not posit ideological primitives more than necessary*. This razor is intended as an application to a *single* theory. If we had some fact that ought to be explained by our theory and no other primitive term could be used in the explanation of this fact, then we are entitled to introduce an extra primitive into our theory. For example, if our theory consisted of the ideology of first-order

[2] Ideology consists of linguistic expressions and is derivatively concerned with the expression of 'ideas' or concepts. One reason why the expressing of ideas is typically associated with ideology and linguistic expressions is that propositions may have concepts or ideas (following the Fregean tradition) as constituents. If propositions have concepts as parts, then the predicate in expressing an idea expresses part of a proposition. Or rather the sentence expresses the proposition. If propositions had objects, properties and relations as constituents (following the Russellian tradition), then the appeal to 'ideas' or the expressing of concepts would not be as relevant. I leave it open whether propositions are Fregean, Russellian, or some mixture of the two.

logic (with identity) and we were required to explain facts about composite objects and no logical primitive could explain these facts, then we would have good reason to introduce a non-logical primitive such as 'parthood' or 'overlap' into our theory. (Assuming that 'parthood' is not already understood as a logical notion.)

An application of ideological parsimony to *two* theories usually occurs when comparing the number of primitives of each theory. The theory with fewer primitives is to be preferred and perhaps in a strong epistemic sense. The theory with fewer primitives is more likely to be true. Sider (ms) assigns a strong epistemic status to ideological parsimony. He believes that ideological parsimony is a guide to truth. For instance, he thinks that a particular version of mereological nihilism is true because it has fewer primitives than competing theories. But what is our justification for this?

Traditionally, ideological parsimony has been motivated by 'aesthetic elegance'. Fewer primitives provide a theory with a tight-knit unity originating from just a handful of terms. The motivation of aesthetic elegance comes from the axiomatisation of logic and mathematical theories (Oliver 1996, 3).

But if ideology is concerned about the world and if ideology (purportedly) represents the structure of reality, then our justification for reducing the number of primitives in our theory is more about the world than constructing an elegance system of primitive and derivative terms. This is so particularly when we are concerned with providing a fundamental description of reality. Presumably we are only concerned with the *unanalysable* terms. The nonprimitive terms are less important and drop out of the picture. Indeed in cases where we introduce talk of entities this ideology will be eliminated from our theory altogether. At any rate, we must be serious in

the theoretical activity of taking something as primitive. If we have the option to 'resist analysis' in order to stave off ontological commitment (say), then the choice cannot be taken lightly.

Now, given this robust and serious conception of ideology, how should we understand its relationship to ontology? There are two ways to understand the ideology/ontology distinction and hence the relationship between the two.[3] According to the first way, a piece of primitive ideology is taken as primitive because the entity that it names or refers to is fundamental. To illustrate, take the property *being charged* and suppose it is fundamental. If it is a fundamental property, then our theory must include the predicate '... is charged' as a piece of primitive ideology. According to this answer we can understand how primitive ideology 'gets at' the world and 'gets at' its structure. Our ideology contains the primitives that it does because of what is in the world and what the world is like. Our ideology contains certain predicates because the world has certain properties; our ideology contains certain operators because the world has certain entities that are modified in certain ways. For each entity or kind of entity there is a corresponding piece of ideology. Call this interpretation of the ideology/ontology distinction, the *reflectance understanding*.

A major consequence of this interpretation of the ideology/ontology distinction is that the ideological costs are aligned with the ontological costs of the theory. To illustrate, take Hud Hudson's (2005) occupancy account of material objects. The theory consists of two ontological categories: regions of spacetime, and material objects that occupy regions of spacetime. According to the theory, there exists a relation of occupation that holds between region and object, and there are fundamental truths in the theory such as 'there exists some material object *O* and a region *R* such that *O* occupies *R*'. Now, let's look at its costs. The theory is ontologically

[3] There might be other ways, but I am limiting the discussion to two.

committed to regions (and hence, substantivalism about regions), material objects and a fundamental relation of occupation, namely, the *being occupied by* relation.[4] However, in addition to these ontological costs, there are ideological costs. In particular, because the occupation relation is included in the ontology of the theory, we require as a piece of primitive ideology the two-place predicate '... occupies ...'. We 'reflect' this element of ontology in the ideology. Thus, the theory has the 'occupation' primitive as an ideological cost. A theory will therefore be economical and parsimonious at the same time, or violate both virtues at the same time.

According to the second way, ideology is ontologically innocent and does not correspond to items in our ontology. In contrast to the first interpretation, it is not the case that a piece of primitive ideology is introduced because the entity it refers to is fundamental. Instead, primitive ideology is about figuring in sentences that express fundamental facts about the world and its structure. Call this the *traditional understanding* of the ideology/ontology distinction, if only because it adheres to the traditional (i.e., Quinean) standpoint that primitive ideology is ontologically innocent and the well rehearsed dictum that we must quantify over something for it to belong to our ontology. Ideological realism, on the traditional understanding, is about fundamental facts about the world. The job of the metaphysical realist is to provide a fundamental theory that has both a primitive ideology and a fundamental ontology (i.e., what there is fundamentally). If a theory contains as a piece of primitive ideology the predicate '... is charged' and has an ontology of concrete particulars, then it is a fundamental fact that some particular is charged. If the introduction of the two-place predicate '... is present at ...' or '... occupies ...' is a piece of primitive ideology it does not correspond to a *relation* of occupation

[4] Hudson talks of a 'primitive relation 'present at'' (2005, 3) and later says 'as with parthood, occupation is here treated as a two-place relation' (2005, 6). See also (Hudson 2005, 102).

that resides in the ontology of the theory. Instead it is a brute fact that some material object occupies some region of spacetime; the sentence 'object O occupies region R' expresses a fundamental fact in the theory. To be sure, there might be interesting metaphysical questions about how and when an object occupies a region, and of course these questions require answers in the form of explanations. But *that* objects occupy regions is a fundamental fact in the theory.

A major methodological consequence of the traditional understanding is that the ideological cost of a theory does not imply an ontological cost or *vice-versa*. For instance, if the occupancy theorist introduces a two-place predicate '... occupies ...' they incur an ideological cost, they have increased the number of primitives in the theory. But it does not follow that there is an ontological cost as primitive ideology is ontologically innocent. Furthermore, the traditional understanding makes room for ideology and ontology to be traded off one another. An ideological cost can be reduced by introducing talk of entities. It is true that if there is an ontological cost, then there is *some* ideological cost, but it is not a direct corresponding cost. So for example if there exists the fundamental property *being charged*, then there is no corresponding '… is charged' predicate. Instead, any fundamental facts about the property lead to a cost in ideology. For example, the fact that *being charged* is instantiated requires the dyadic predicate of 'instantiation'. More on this later.

In what follows, I argue against the reflectance understanding (§2.2), provide some reasons to believe in the traditional understanding and discuss some of its advantages by discussing debates concerning the existence of abstract entities and possible worlds (§2.3). I finally discuss Bennett's claim that in certain disputes there are no grounds for believing in one theory over the

other and argue that when ideological realism and the traditional understanding are taken into account we do have grounds for believing in one theory over the other (§2.4).[5]

2.2 Against Reflectance

One of the consequences of the reflectance understanding is that whenever there is an ideological cost there is a direct corresponding ontological cost, but not *vice-versa*. For example, for every primitive predicate there is a corresponding property. But why accept this sort of one-one correspondence? Indeed, I take the following to show us that it is not the case that whenever there is an ideological cost there is a direct corresponding ontological one.

Firstly, we should be reminded that Quine's original motivation for drawing the ideology/ontology distinction was to articulate a way in which the certain aspects of the sentences of a theory, such as predicates, did not correspond to properties. Ideology was said to be wholly distinct from ontology. Therefore, if a theory incurred an ideological cost it did not likewise incur an ontological cost. Indeed, to render the nominalist's position coherent primitive ideology must be ontologically innocent. If the reflectance understanding is true, then we undermine our initial motivations for introducing the distinction. We also undermine the purported difference between ideology and ontology. In effect it becomes a distinction without a difference.

[5] Overall, I aim to show ideological realism at work with the traditional understanding of the ideology/ontology distinction. It must be further noted that some of the claims made in this chapter are normative. I argue, for instance, that the ideology/ontology distinction *should* be understood in a certain way. The arguments, however, are not to be seen as endorsing a particular *metaphysical* view.

Secondly, to say there is a one-one correspondence between predicates and properties might seem to suggest that for every predicate in our language there exists a corresponding property in the sense that there is a one-one mapping between a piece of language and a feature in the world. In what follows, let us consider some examples from ordinary language (which are mostly uncontroversial, but illustrative) and then consider cases from the fundamental language.

For instance, the predicate '... is red' in English would typically correspond to the property *being red*. But why think that ordinary language 'gets at' the world in this way? In fact we have reasons as metaphysical realists to think that the structure of the world, what is in it, what it is like, etc, is independent of what we say and think as well as independent of the subtleties of our language and its expressions therein. Many have argued for 'sparse theories' of properties that do not take properties as linguistic shadows of language. Suppose we have in our language the sentence '... accelerates through the speed of light' and further suppose there is no property of *being accelerated through the speed of light*. There will then be no property to which the predicate corresponds (Armstrong 1978b, 10). Keith Campbell argued for the same conclusion but within a theory of tropes. According to Campbell, tropes (the ultimate ontological assay of reality) are not part of any semantic theory concerning the application of predicates to the world. If we have the sentence 'a is F' which is said to be meaningful, we do not require 'there to be F tropes' (Campbell 1990, 25).[6]

In addition, it would be wrong to think the predicate '... is a unicorn' corresponds to the property *being a unicorn*, or that Wittgenstein's predicate '... is a game' corresponds to the property *being a game*. In the first case there may not be any fictional properties of fictional

[6] Others have picked up on the disconnect between properties and predicates, see for example (Mellor 1991; Wilson 1982, 558-61).

entities and in the second the properties that are said to be game-properties are distinct properties of specific games such that no unifying features exist to yield the property of *being a game*. The predicate remains primitive but there is no corresponding property. Last one: if we were expressivists in the best of moods, we would include the primitive predicate '... is good' in our moral theory and we might say 'the maximisation of well-being is good' but it does not follow that there is a corresponding property of *being good*. We merely cheer for the content of the utterance of the sentence and recommend that others do also. I conclude that ideology does not determine the extent of our ontology and that it is not the case that whenever there is an ideological cost there is a direct corresponding ontological cost. Therefore, the reflectance understanding of the ideology/ontology distinction is wrong.

You might object by pointing out that the examples employed above involve predicates from ordinary language. Predicates, such as, '... is a unicorn', '... is a game', '... is red', '... is good', etc, are to be culled from our fundamental language. That is, the language which provides a fundamental description of reality that 'comprises a minimal basis' non-redundantly. Therefore, semantically defective, fictional, systematically ambiguous, etc, predicates are to be eliminated from the ideology of our theory (see Dorr 2004, 157). If we endorse this kind of culling, then the examples above seem irrelevant and so do not give us a reason to reject any one-one correspondence between the primitive ideology of the fundamental language and the properties within its fundamental ontology.

But I do not believe that eliminating predicates of this kind undermines our reason for rejecting this kind of one-one correspondence. The same issues that arise for ordinary language arise for the fundamental language—particularly when we reflect on more metaphysical reasons for rejecting this kind of one-one correspondence. For example, Armstrong (1978b, 11) argues

that one of the foundations of '*a posteriori* realism' requires that we reject the existence of properties that are determined *a priori* to exist. This sort of reasoning if correct will apply to the fundamental language just as much as ordinary languages. For instance, consider the 'identity' predicate in the fundamental language B.[7] There are truths in B, such as, '*x* is identical with itself' where the 'identity' predicate applies to every particular. We know that this is the case *a priori*, and given Armstrong's *a posteriori* realism, all purported entities that are known *a priori* are to be rejected as properties (or in his case, universals). What universals there are is determined *a posteriori* from science and whether or not they are causally efficacious. For instance, since the property of *being self-identical* is not causally efficacious, it does not exist (or is not a sparse universal).

You might reject the Armstrongian project, so let us consider other reasons for denying that there is a *relation* of identity. We might think that intuitively some relation *R* exists just in case *R* holds between non-overlapping *relata*.[8] If the relata overlap, there is no relation *R*. The identity relation, were it to exist, holds between one thing; the relata would be identical and so overlapping. Thus, no relation of identity. Of course, this kind of argument can be resisted. The point is that there are at least some reasons to deny that there exists a relation of identity. Therefore, to say that there is a relation of identity is not an uncontroversial thesis. If this kind of one-one correspondence holds, we have ruled out the position that the relation of identity does not exist from the outset and assumed by definition a contested ontological thesis.

Here are two further examples. First, consider converse predicates. Take the predicate '*x* admires *y*' and suppose it corresponds to a property/relation. This predicate also has a converse,

[7] It is common to take 'identity' as a piece of primitive ideology.
[8] The intuition here comes from understanding a relation as literally an entity that holds between two other entities.

namely, '*y* is admired by *x*'. But intuitively it is implausible to say that the converse corresponds to the distinct property of *being admired by* (Simons 2010, 207). We intuitively think it corresponds to the same property as '*x* admires *y*'. Second, logical examples arise in the fundamental language just as much as in ordinary language. 'P or Q' may be part of the fundamental language but fail to correspond to some disjunctive property *being P or Q*. This consideration can also lead to the conclusion that we should reject disjunctive predicates from the ideology of our theory. But then again, this proposal is up for discussion as '$\vee$' may be used as a primitive predicate to define up conjunction and other logical predicates in the fundamental language.

There are other ways to deny this kind of one-one correspondence between primitive ideology and ontology. Instead of looking at the primitive predicates of a theory let us consider primitive operators. If this kind of one-one correspondence holds, then not only primitive predicates correspond to properties, but other pieces of primitive ideology, such as operators and logical constants, correspond to portions of the world in the same way. Take the tense operator 'it was the case that ...'. What in the world does it correspond to? What is the worldly correlate of this tense operator? It could be a property, say, a property of a proposition as follows. Take the following sentence in which the tense operator figures: 'it was the case that p'. This sentence expresses the proposition that p and the operator modifies the proposition accordingly. This modification can be understood as another feature or possible feature of the proposition, which is simply to say that the worldly correlate of the tense operator is a property. If so, then the same problems concerning one-one correspondence with predicates arises for operators (cf. Sider 2011, 85-90).

Let us consider logical constants, e.g., '∨', '∧', '¬'. If primitive ideology implies an ontological cost, what are their worldly correlates? One answer: relations. For instance, the primitive constant '∧' would correspond to the relation of *conjunction*. But if so, we can safely subsume this case under the issues surrounding predicates and properties. As above, we have no reason to think *there is* a relation anymore than we have reason to think that '... is F' corresponds to *F-ness*.

You might react to the suggestion that primitive ideology is not ontologically committing by saying: 'sure enough some pieces of ideology are ontologically innocent, such as primitive predicates, but there are pieces of primitive ideology that do correspond to entities in our ontology. For instance, when discovering the nature of the parthood *relation* it is common to take the two-place predicate '... is part of ...' as primitive and say that the primitive predicate expresses the *relation* of part. Likewise, the two-place predicate '... occupies ...' expresses the *relation* of occupation that holds between regions and objects. So, although some predicates do not correspond to entities in our ontology, others do (as just illustrated)'.

I reply that this admits a harmful confusion between a predicate expressing a property with expressing a concept. If anything we should say that a predicate expresses the concept of a relation or property. But it still fails to imply that the corresponding entity exists. I may have the concept of a leprechaun, which is a concept of an object, but it does not follow that it exists. Likewise, a predicate that expresses the concept of a relation does not imply that the relation exists.

In addition, if we accept that two-place predicates correspond to relations but one-place predicates do not, then what grounds this demarcation? What reason do we have to say that two-

place and not one-place predicates correspond to ontology? One reason might be the linguistic difference in adicity between the two predicates. But why think that a linguistic feature is enough to secure the connection between some parts of ideology to ontology? I submit it is hopeless to appeal to such linguistic differences. It is nothing more than a case of inspecting the features of language and mapping them in an objectionable way to the world (for proponents of this charge more generally, see (Dyke 2008; Heil 2003)). I admit that philosophers talk in ways that push them to freely talk about the world by reifying the entities they are said to be concerned with. But that they have this tendency is no reason to say we should adopt the methodological principle that *primitive* ideology (or some parts thereof) corresponds to ontology.

In denying the claim that whenever there is an ideological cost there is a direct ontological cost I do not mean to reject the fact that some philosophers, such as Armstrong, argue that some predicates correspond to properties, that is, to sparse universals. According to Armstrong, predicates that do correspond to properties are called 'pure' predicates (Armstrong 1978b, 15). Lewis also claimed that the terms of a primitive vocabulary 'express' perfectly natural properties (1983, 368). The pressing question now is: how are we to interpret Armstrong and Lewis' position on the assumption that there is no one-one correspondence between primitive predicates and fundamental ontology? Concerning Armstrong, we should interpret his claim that there are pure predicates as saying that pure predicates are not part of the *primitive* ideology of his theory. The fact that these predicates apply to certain particulars is in virtue of certain universals being instantiated by some particular(s). Therefore, these predicates are not primitive (i.e., unanalysed) because they have been analysed in terms of universals, the universals that explain why they apply to some particulars and not others. Similarly, we can interpret Lewis' use of the term 'primitive' not as 'unanalysable' in the sense that no analysis or account can be given of such

predicates, but rather as expressing perfectly natural properties. The sense of primitive here is different to its use concerning unanalysable ideology. As Cian Dorr remarks, 'the question whether a predicate is *primitive* is quite different from the question whether a predicate *corresponds to a universal*' (2004, 156, n. 4, his italics).

And I think Lewis would agree that primitive ideology does not correspond to ontology, for in his theory of classes he requires a singleton operator that expresses the *notion* of a connection between concrete particular and unit set. This operator cannot correspond to a relation that holds between the two *relata*. The whole point, on his view, of introducing the singleton operator as a piece of primitive ideology is to say that there is no relation that holds between concrete particular and unit set (for discussion, see Lewis 2002, §5). If we interpreted him as believing in some kind of one-one correspondence between primitive predicates and fundamental ontology, his view of classes would be glaringly inconsistent.[9]

To be clear, if we intend to offer an analysis of predication or of a predicate (of some type) by introducing talk of entities, then by giving this analysis the predicate that is part of the *analysandum* (what is being analysed) corresponds to a property (or ends up corresponding). But then the predicate ceases to be primitive, as we have given an analysis of it by trading it off for some ontology. We have ontologically committed ourselves to a particular property such that in our fundamental description of reality we are not required to say '… is F' rather we say 'there exists an F …' or as I will suggest in chapter 4: 'there exists some thing …'.

We can now draw an interesting distinction between differing senses of the word 'primitive'. We have identified two senses already at work in our metaphysical theorising. The first sense is

[9] Same remarks apply to his use of the primitive predicate '... is natural' which applies to classes.

connected to unanalysability and ideology (the opposing side of ontology) and the second is connected to ontology. The first sense of 'primitive' means 'unanalysable' in a theory. Primitive ideology, in this sense, does not correspond to any items in the fundamental ontology. By contrast, the second sense of 'primitive' means 'corresponds to an item in the fundamental ontology'. I reserve the use of the word 'primitive' for the first sense.

2.3 The Traditional Understanding

According to the traditional understanding of the ideology/ontology distinction primitive ideology is not ontologically committal and is not part of our ontology. Ideology, as the *distinction* tells us, is the opposing coin of ontology. But just because ideology is not ontologically committal or 'ontologically significant' it does not mean ideology lacks any metaphysical import. Ideology provides a serious descriptive function in any theory—whether one is a nominalist, realist or whatever. The way we are to understand the metaphysical import of ideology is to say that pieces of primitive ideology figure in sentences that express fundamental facts about the world. So although there is no one-one correspondence between ideology and ontology, ideology plays a part in 'getting at' the fundamental facts by being part of sentences that express fundamental facts. In light of ideological realism, there is a fact of the matter about what is the metaphysically privileged description of reality.

We should adopt the traditional understanding for the following reasons. First, it retains a real difference between ideology and ontology that was lost on the reflectance understanding. Second, it allows the ideological and ontological costs of a theory to remain separate. Third, it rightly separates ideological parsimony and ontological economy such that an increase in the

number of primitives does not imply additional entities in our fundamental ontology. Fourth, it captures the fact that ideology and ontology (in many cases) can be traded off one another. I take all these reasons as supporting the traditional understanding and as reasons to reject the reflectance understanding. The remainder of this section discusses these reasons at length. (This section includes some mention of ideological realism where relevant.)

One advantage of the traditional understanding is that it is able to capture the trade-off that occurs in some cases between ideology and ontology. By contrast, the reflectance understanding cannot capture cases of trade-off because whenever there is an ideological cost there is a direct ontological one. On the reflectance view if we attempt to introduce talk of entities with the hope of 'reducing' a primitive predicate so that it is no longer primitive, our attempt is undermined at the outset since the primitive predicate prior to the analysis already corresponds to the entity. So where is the trade-off to occur?

Let us look at two common cases of trading ideology for ontology in relation to the traditional understanding of the ideology/ontology distinction. The first debate I consider comes from the philosophy of mathematics. The major disagreement concerns the existence of abstract entities, such as, numbers or sets. According to the nominalist about numbers and sets, for example, Hartry Field (1980) and Charles Chihara (1990), the truths of mathematics can be accounted for without quantifying over abstract entities. The apparent commitment to abstract entities is negated by the introduction of primitive modal ideology. So long as we introduce a primitive modal operator that does not ontologically commit us to anything, we can uphold the nominalist project. We uphold the nominalist project because by introducing a modal operator we are not saying that numbers of sets exists. Realists about abstract entities (numbers or sets), by contrast, believe in an ontology of abstract entities. They think the only way to account for the

truths of mathematics is to admit numbers or sets as values of variables of the theory. The dispute is one of embracing modal ideology versus abstract ontology (see Shapiro 1997, 218). Quine, the most famous realist of all, confesses that,

> '[w]here there are such trade-offs to choose between, I am for positing the objects. I posit abstract ones grudgingly on the whole, but gratefully where the alternative course would call for modal operators' (1990, 30-1).

The trade-off in this debate turns on the epistemology of modal ideology and the acceptance of modal notions in our theory. Quine repudiated such notions and thereby excluded modal operators from his ideology. We might describe Quine as having an austere ideology. Since he rejected modal notions and modal operators but still wanted to accept the truths of mathematics, Quine was forced to introduce quantification over abstract entities. So, according to Quine our best theory in effect says that numbers (or sets) exists, and so he is ontologically committed to numbers (or sets).

On the other hand if a nominalist thought that modal notions were after all respectable as pieces of primitive ideology, then they would not find Quine's quantification over abstract entities necessary. They would be happy with the notion of a 'possible structure' as opposed to saying there exists abstract entities that exist outside of space and time.

This debate shows us how the trade-off between ideology and ontology is important for understanding the realist and nominalist's concerns. If modal ideology was just another ontological commitment, then the nominalist would have no justification for introducing it. The whole point of introducing modal ideology was to stave off ontological commitment *simpliciter*. Now, according to ideological realism, ideological commitments are on a par with ontological

commitments. Therefore, the nominalist's modal ideology commits them to the view that modal facts are among the fundamental facts of the world. In other words, it commits them to saying that the world has an irreducible modal structure (see Sider 2011, ch. 12).

If modal notions are acceptable and worthy enough to be in our modal ideology, there is of course the further question of whether such ideology can itself be reduced to further ontology. This leads me to the next metaphysical dispute, the dispute concerning the existence of possible worlds. Lewis provided an influential argument for the view that the actual world is just a concrete particular amongst many others in a vast plurality. Given that facts about modality are amongst the things that must be explained by our metaphysical theories, he argued that the modal operators of necessity and possibility are better off analysed in terms of quantification over worlds as follows:

(W) possibly *p* just in case *there is* a world *w* in which *p* is true.

Lewis argued that the postulation of worlds and the ontological roles they fulfil are indispensible in the context of providing explanations for modal predication and explanations that use modal terms or talk of *possibilia* and possible worlds. Lewis' theory is ideologically parsimonious, it provides a reductive account of modality, it is qualitatively economical and has great explanatory breadth.[10] The philosophical utility afforded by the view is a good reason to believe it is true (see Lewis 1986b, ch. 1).

The trade-off here is between modal ideology and an ontology of possible worlds. But note that we are not trading the operator 'possibly, …' for 'there exists an *x* such that *x* is a possible world'. If this is how the trade-off was understood, then we would not have a real gain in

[10] See (Daly 2005, §2) for a sceptical reaction to some of these supposed theoretical advantages.

ideological parsimony (i.e., we wouldn't have reduce the number of primitive terms). Instead we would have merely swapped 'possibly, …' for '… is a possible world'. The way to understand the trade-off in Lewis' case is to recall that by assuming a world as a value of a variable we are putting the world in the subject place of the sentence. We do not require the predicate '… is a possible world'. By quantifying over something we thereby refer to the entity in the theory.

(Another interesting and important example of this trade-off appears in the metaphysics of properties. The realist about universals argues that their view when compared with ostrich nominalism is more ideologically parsimonious. The realist has an ontology of universals and particulars but only one non-logical 'instantiation' primitive as a piece of ideology. The ostrich nominalist has an ontology of particulars and no universals but has many more non-logical primitive monadic predicates as pieces of ideology. The realist argues that they can eliminate the monadic predicates of the nominalist by introducing talk of universals. The analysis might be something to the effect: the predicate '… is red' applies to *a* just in case there is a property that *a* has. The realist in comparison with the nominalist reduces many predicates for just one (albeit it is obscure). We saw this sort of debate at length in chapter 1. Now, there is a concern here with whether the realist has eliminated any ideology. Suppose '… is red' applies to *a* just in case there is redness which *a* instantiates. Haven't we just swapped, as in the above case with possible worlds, 'red' for 'redness' since redness was used on the right-hand side of the analysis? How can this be a case of ideological parsimony for the realist? As in the above case with possible worlds, by assuming the property as a value of a variable it takes the subject place of the right-hand side and so puts itself in a place of reference in the theory. We thus do not need any predicate to say the entity exists. In chapter 4 I take this sort of proposal to great lengths. I go so far as to say that the realist can solely rely on the 'instantiation' predicate and make no mention

or use of terms such as 'particular' or 'universal' (see pp. 140-41). The realist need only say 'everything is either instantiated by some entity or instantiates some entity' as part of the fundamental description of reality according to the realist.)

Let us return to Lewis and possible worlds. Lewis has a specific argument based on ideological considerations that is of relevance here. It goes something like this. If we accept facts about modality, then we have to take into account modal claims. So our theory will include modal predicates or operators. If these modal terms are left in the ideology as primitive, we will end up with a large stock of *primitive* terms which will result in a bloated and un-parsimonious ideology. However, if this ideology can be traded in for some ontology and ideological parsimony is taken as a guide to truth, we have reason to reduce these primitives.[11]

Lewis introduces this argument by drawing an analogy with set theory. Typically understood, set theory contains a vast hierarchy of items, but at the same time a 'very meagre primitive vocabulary' which is 'definitionally extended' and satisfies our 'needs for mathematical predicates' (Lewis 1986b, 3-4). Set theory offers us great economy of primitive predicates in exchange for a myriad of items. Analogously, so the argument goes, Lewisian modal realism yields the same result. Lewis writes,

> 'It offers an improvement in what Quine calls ideology, paid for in the coin of ontology. It's an offer you can't refuse. The price is right; the benefits in theoretical unity and economy are well worth the entities' (1986b, 4).[12]

As with the debate in the philosophy of mathematics the question of more ideology versus more ontology is at the heart of this dispute. If we are happy with primitive modality, we can

[11] Cameron (2010b, 138-9) makes the point that what is relevant here is *each instance* as opposed to the modal operators in general. That is, it is about the modal operators applied to all its instances.
[12] See also (Melia 2008, 113).

stave off ontological commitment to possible worlds (whether they are concrete particulars, sets, or structural universals). Again, in light of ideological realism, the commitment to modal ideology is a commitment to fundamental modal facts and a commitment to fundamental modal structure. We can, therefore, characterise Lewis as an ideological *reductionist* as he provided an ideological reduction of modality.[13] By contrast Quine can be characterised as an ideological *eliminativist* about modality, for him, such notions were not even worthy of explanation. To finish off the taxonomy, the nominalist about abstract entities and possible worlds in both cases can be called an ideological *primitivist* about modality.

The phenomenon of trading off ideology for ontology or *vice-versa* occurs in more philosophical disputes than one might think.[14] If we undermine these trade-offs we will make a mess of too many disputes. Given that the reflectance understanding undermines these trade-offs, it is committed to this unacceptable consequence.[15]

There is one last issue concerning the trade-off between ideology and ontology which ideological realism provides a solution to. Admittedly, it seems the justification for our methodological reasons for reducing the number of primitive terms of our theory is disconnected from the justification of our methodological reasons for reducing the number of items we are ontologically committed to in our ontology. If ideology, as Sider puts it, is 'psychologised', then trading ideology for ontology or *vice-versa* is like trading 'apples for oranges' (Sider 2011, 14). As a result, we cannot adequately compare ideology with ontology. Disputes that involve such

---

[13] We can also characterise Lewis as an ontological reductionist about modality. But given that I am trying to classify certain views within the context of ideological realism, I put this characterisation to one side.
[14] Another debate where it features centre stage concerns the existence of holes. See (Lewis & Lewis 1970).
[15] One potential worry: in highlighting the trade-off between ideology and ontology do I thereby undermine the ideological realist's claim that ideology and ontology are both 'worldly'? No. The trade-off can be interpreted as a difference between facts that are taken as fundamental and facts that are explained by introducing talk of entities. It does not follow from simply highlighting the trade-off that ideology is not metaphysically significant or not about the world in a metaphysically interesting way. This was established in the previous chapter.

trade-offs hold no water. If we stave off ontological commitment to possible worlds by introducing as many primitive modal operators as necessary, how does this constitute a reason to *not* believe that possible worlds (whatever they are) exist? Moreover, if we reduce monadic predicates in terms of quantification over universals and thereby construct a theory with fewer primitives, how does this constitute a reason to believe in universals (*based on eliminating predicates from our ideology*)? So long as our justification for positing ideology and ontology are distinct, the trade-offs between ideology and ontology do not make sense. Oliver provides the following insight,

> '[w]hat is needed is some way of connecting the justifications of ideological [parsimony] and ontological economy so that the trade-offs deal in a common currency' (1996, 4).

According to ideological realism, the common currency simply put is structure. The reduction of primitive predicates shows us that the world need not have a certain amount of predicational structure. Likewise, by positing multiple primitive modal operators we commit ourselves to excess amounts of modal structure.[16] Ideological realism gives us a way to justify trade-offs between ideology and ontology. It provides the grounds on which we can understand the many metaphysical disputes that hinge upon trading off ideology for ontology and *vice-versa*.

[16] Taking structure as the common currency is a step in the right direction. But I fear that when we begin to insert extra details into a dispute the talk of structure becomes too coarse-grained. The realist about universals might argue that their theory is ideological parsimonious since they eliminate monadic predicates. Their theory posits *less* predicational structure. But as the nominalist is quick to point out, the realist still has a dyadic predicate, namely, '... instantiates ...'. Supposing the realist does not eliminate this predicate, does this mean that they haven't reduced predicational structure? Or should we say that they have merely reduced *monadic* predicational structure? Similarly, if we get into debates about higher-order quantification, the talk of structure is less illuminating. How are we to understand different *types* of quantificational structure? These issues are left for future research.

2.4 Composition and Epistemicism

Most people pre-theoretically believe that there are books, chairs, apples, etc, and therefore believe that there are composite objects—things that have parts which make them up. But there are metaphysicians who claim that there are no books, chairs, apples, even molecules or atoms. They say there are no composite objects, only simples—things with no proper parts (Dorr 2002; Merricks 2001; Sider ms; van Inwagen 1990).[17] Call the latter view *mereological nihilism* (hereafter nihilism) and the former view *anti-nihilism*.[18] Anti-nihilism comes in two varieties. The first version restricts the occurrence of composition to certain objects, usually based on what we 'ordinarily intuit' (Kriegel 2008). The second places no restriction on the occurrence of composition. There are composite objects which have as parts the most random of objects, e.g., my left foot and José's thumb (for related examples see Lewis 1991, 7-8).

The ontology of anti-nihilism includes tables, chairs, atoms, molecules, and simples. By contrast, the nihilist has an ontology of simples and *nothing more*. The ideology of anti-nihilism contains ordinary monadic predicates, such as, '... is a chair', '... is an atom', etc, that allow anti-nihilists to characterise the composite objects of their ontology. For example, the anti-nihilist says 'there is an *x* such that *x* is a chair'. The ideology of nihilism (as I am construing it) *replaces*

[17] To be fair van Inwagen does not believe there are no composite objects as he endorses the view that there are composite objects in virtue of some simples being caught up in a life somehow. And Merricks adopts the thesis that there are composite objects in virtue of some entities having causal efficacy somehow. So, it is strictly incorrect to classify them as nihilists.

[18] These labels are too broad to describe the more fine-grained positions that I am neglecting. Nihilism comes in two varieties. The first tells us that composition only occurs when one of the *x*s is identical to *y*. There is room on this view to say there is a composition relation but that it supervenes on every object it stands in the relation to. Composition would be an internal relation that supervenes on one of its *relata*. We can still say that simples have parts, they just have improper parts. The second tells us that there is no composition relation whatsoever and that nothing is a proper or improper part of anything since there is no parthood relation (see Sider ms). The fine-grained positions are not relevant here. Thanks to Josh Spencer for comments.

the predicates and singular quantification of the anti-nihilist's ideology with plural predicates and plural quantification.[19] To illustrate,

1) 'there is a book supported by a shelf'

is replaced with

2) 'those *xs* arranged book-wise are supported by those *ys* arranged shelf-wise'.[20]

Now, the nihilist claims that their theory is more ontologically economical than anti-nihilism. Where the nihilist has entities with no proper parts, the anti-nihilist has entities with and without proper parts. If it is reasonable to draw a distinction between composite objects and their parts such that composite objects or (say) mereological sums are of a different kind to their parts,[21] then the nihilist can claim they have an ontology that is *qualitatively* economical, i.e., economical *in virtue of having one less kind*. The nihilist's ontology is qualitatively economical since it admits nothing more than the distinct kind of object which lacks proper parts. The nihilist might also argue that their ontology is *quantitatively* economical in the sense that their ontology contains 'fewer objects'.[22] Regardless of the qualitative/quantitative distinction, the nihilist makes a charge from economy to reach the conclusion that their theory is in better shape, ontologically speaking.

---

[19] There are further ideological questions about nihilism that derive from whether we think ordinary sentences about composite objects are strictly false (Merricks 2001, ch. 12) or whether we think ordinary sentences about composite objects 'describe the same fact' as sentences about simples arranged in certain ways (van Inwagen 1990, 113). I do not discuss these issues here.

[20] van Inwagen's project is an eccentric take on paraphrase which is not connected to the meaning of sentences. van Inwagen believes that the ordinary sentence 'there is a chair in the next room' means there is a chair in the next room. My illustration here does not presuppose any particular form of reduction or paraphrase. See (Liggins 2008) for discussion.

[21] But consider van Inwagen (2006, 617) who argues that the phrase 'mereological sum' does not 'mark out a special kind of object'.

[22] Amie Thomasson (2007, ch. 9) presents the nihilist as citing quantitative economy as a reason to reject ordinary objects. See also (Merricks 2001, 40) for a statement of composite objects as 'needless multiplications'.

The anti-nihilist on the other hand points out that the elimination of composite objects in terms of plural quantification over simples and the introduction of plural predicates is an ideological cost that ought to be acknowledged by the nihilist. The main ideological issue I want to focus on is the introduction of *x*-wise predicates.[23] As Bennett (2009) has pointed out, the nihilist must account not only for sentences, such as, 'there is a chair in the next room', but also sentences such as 'the chairs are arranged in a row' and sentences from the sciences that employ predication of composite objects directly. For instance, in biology the sentence 'the organism perfected the function of the eye through evolution' requires the predicate:

> '((((((those simples arranged atom-wise) arranged molecule-wise) arranged organelle-wise) arranged cell-wise) arranged organ-wise) arranged …)' (Bennett 2009, 60).

This complex ideology is not required by the anti-nihilist.[24] Thus, in this sense anti-nihilism is ideologically parsimonious. In this debate, as I am sketching it, the moves available to each party involve some kind of trade-off between ideology and ontology. The nihilist reduces their ontology at the cost of ideology whereas the anti-nihilist reduces their ideology at the cost of ontology.

Bennett has recently argued that there is 'no compelling grounds for choosing between the competing positions' of nihilism and anti-nihilism (2009, 43). The fact that there is this trade-off between ideology and ontology at the heart of the dispute should lead us to be suspicious that we can be justified in believing one theory over the other. Bennett's official position is *epistemicism*. She writes, '[d]isputes about the truth-value of 'there are Fs' are not verbal disputes. But there is

[23] I put issues of quantification to one side.
[24] The sense of complexity can be understood in two ways. First, it is due to the *number* of primitive predicates, the fact that there are more primitive predicates than the anti-nihilist. Second, it is due to the complexity of the predicates themselves, that they are distributive, variably polyadic, and can be encased in one another as in Bennett's biology example. Either way is sufficient to reach some kind of complexity the anti-nihilist will gladly reject. I stick with the *number* of primitives for now as the metric of ideological complexity.

little justification for believing either that it is true or false' (2009, 42).[25] She argues for this claim within the context of two disputes concerning composition and material constitution, the second of which we won't discuss here. Her position should not be understood as suggesting across the board that all disputes in metaphysics provide little justification for believing one party over the other, but rather that in cases where ideology and ontology trade-off in a certain respect, the dispute provides no 'compelling grounds' to adopt one position over the other.

Part of Bennett's overall argument is that in the dispute between nihilism and anti-nihilism 'difference-minimising' is undertaken by both sides. The nihilist will minimise the difference between their view and anti-nihilism by introducing an *x*-wise predicate for every object the anti-nihilist quantifies over. If the anti-nihilist says 'there is an apple in that basket', then the nihilist will say 'those simples arranged apple-wise are in those simples arranged basket-wise'. Likewise, the anti-nihilist will claim that the objects in their ontology are nothing over and above the relevant simples arranged in certain ways. The reason Lewis' version of anti-nihilism does not commit him to an explosion of trout-turkeys, my-left-foot-José's-thumb, etc, is because these objects *are* their parts (Lewis 1991, 81). Lewis tells us that '[a] whole is an extra item in our ontology only in the minimal sense that it is not identical to any of its proper parts; but it is not distinct from them either, so when we believe in the parts it is no extra burden to believe in the whole' (1986a, 34). So, the mereological sum of this trout and that turkey is a non-identical but non-distinct item which is an 'extra' item only in some minimal sense. Of course we can quantify over the mereological sum and so it is part of our ontology in *that* sense (i.e., the Quinean sense) but that we can say it exists does not tell us anything about *how* it exists. The anti-nihilist says it exists in such a way that it is non-distinct but non-identical to other things in

[25] She provides two versions of epistemicism, which I call, strong and weak epistemicism. She argues for the weak version, which is silent on whether there is a fact of the matter about which side of the debate is right.

their ontology. Granted, this story is contentious, and in being dubbed the doctrine of the 'ontological free lunch' (Armstrong 1997b, 11-12) has received criticism (see, e.g., Benardete 2002, 357; Cameron 2008b, 7, n. 10; David 2005, 148; Melia 2005, 74). The point here is that anti-nihilism, just as much as nihilism, according to Bennett, hopes to minimise the difference between their opponents.

This difference-minimising for Bennett shows us two things. First, it shows us that there is no real methodological gain that one theory has over the other. For every composite object, there is a plurality of simples arranged in a certain way. These simples satisfy the predicate '... are arranged *x*-wise' or collectively instantiate the structural property of *being x-wise*. It seems then that the nihilist's attempts to construct an economical theory are thwarted by exchanging fewer *objects* for more *properties*. Second, it shows us that something fishy is going on with the trade-offs—small-ideology/big-ontology vs. big-ideology/small-ontology is akin to moving a bump around in the carpet. Her argument then is this:

> (P1) Nihilism is no simpler than anti-nihilism and the problems that the nihilist hopes to evade remain problems just as much for them as anti-nihilists.[26]
>
> (P2) If nihilism is no simpler than anti-nihilism and the problems that the nihilist hopes to evade remain problems just as much for them as anti-nihilists, then '[t]here does not appear to be any real grounds for choosing between the competing positions' (Bennett 2009, 71).

[26] The second conjunct of this premise, I leave to one side. I do not think it is the more important component of Bennett's argument. However, I actually think the problems do not arise if the nihilism is explicit about their nominalism. Bennett's claim that the nihilism has the same problems as the anti-nihilist depends on the assumption that nihilism has an ontology of simples and structural properties. If we drop the structural properties, and introduce an ideology of *x*-wise predicates, the problems don't arise. She concedes this on pp. 73-4. I discuss this below.

> (C) Therefore, there does not appear to be any real grounds for choosing between the competing positions, which is to say that '[w]e are not justified in believing either [nihilism or anti-nihilism]' (*ibid*).

Bennett calls the debate under question a case of underdetermination of theory by evidence. This underdetermination derives from the difference-minimising in the dispute. So, let's focus on the difference-minimising first. I suspect that the issues surrounding difference-minimising that lead to the suspicion that we 'are just riding a see-saw' (Bennett 2009, 65) are really a symptom of the fact that both theories are attempting to account for the same facts or 'philosophical data'. Both parties to the debate accept, for example, that there are facts about ordinary objects having parts. Anti-nihilism accepts ordinary sentences such as 'there is a chair in the next room' as exhibiting a logical form that leads us to say there is an *x* such that *x* is a chair (in the next room). The fact that is expressed by this sentence is captured in their ontology by admitting chairs and hence composite objects. The nihilist has to accept the same ordinary sentence and provide some account according to which they explain the truth of this sentence either by paraphrase, ontological reduction, an error theory, etc. What the nihilist will not do as Bennett points out is 'smile' and say 'nothing remotely in the *ballpark* of talk about composites' (2009, 61, her italics), for this would be tantamount to undermining a central part of the 'philosophical data' that is to be explained by our leading theories on composition. Indeed, Bennett is aware of my diagnosis. She writes,

> My suggestion that these are cases in which the available evidence does not settle which side is correct should not be particularly surprising, given that I have argued that these debates are 'difference-minimizing'. They are debates in which everyone takes the data to be largely the same (2009, 72).

What is the available evidence here? I say we have reason to believe in the existence of a certain kind of entity if it does some explanatory work in a theory. We have reason to believe in universals if they ground or figure in explanations concerning the laws of nature, causation, resemblance, etc. In the most radical cases (although this case may be controversial), even when it comes to scepticism about the external world, our reason to believe in certain entities comes from the explanatory power derived from the theory at hand. We might think that we believe in the external world because our best theory postulates its existence, independent of you and I, to explain certain phenomena or data we take as worthy of explanation. However, if we have a competing theory that explains the phenomena or data equally well but postulates a different kind of entity, then we have no reason to believe in the existence of one kind of entity used in one theory over the other. So, I grant the conditional that *if* the dispute between nihilism and anti-nihilism is difference-minimising such that both parties have succeeded in accounting for all the facts, then the evidence on which we are justified in believing a certain theory is underdetermined. I shall contest instead the premise that the dispute is one of difference-minimising.

Let us return to the debate between nihilism and anti-nihilism. The nihilist, I claimed, is ideologically committed to an overly complex ideology because they introduced a large number of primitive *x*-wise predicates.[27] Bennett however understands the nihilist's theory as either introducing *x*-wise predicates which apply to pluralities of simples *or* postulating structural properties that are collectively instantiated by simples. Call the first version of nihilism, *nominalistic nihilism* and the latter *property-nihilism* (for lack of a better name). To secure the truth of the premise that the debate between nihilism and anti-nihilism is one of difference-

[27] Perhaps the complexity is a result of the complexity of the predicates themselves—perhaps the number of argument places. See note 24.

minimising, Bennett requires property-nihilism since it is only with property-nihilism that she can claim the entities of one theory do the same explanatory work as the entities of the competing theory.

But the debate between property-nihilism and anti-nihilism is not a debate between a small-ideology/big-ontology theory and a big-ideology/small-ontology theory. This is the wrong comparison. What we need is nominalistic nihilism for the appropriate comparison. But the comparison between nominalistic nihilism versus anti-nihilism won't result in a difference-minimising case since the nihilist's primitive ideology does no explanatory work. Indeed, Bennett needs property-nihilism to ground the claim that the entities of the competing positions explain the same philosophical data equally well. Therefore, the dispute between nominalistic nihilism and anti-nihilism is not one of difference-minimising. The fact that nihilism contains the unanalysable predicates that it does leads to the conclusion that there are some brute facts that are left unexplained according to their theory, facts which are not left unexplained according to anti-nihilism. The anti-nihilist for example can explain that the predicate '... are arranged table-wise' applies to some particulars and not others because of some composite object that has parts suitably arranged.

Bennett accepts this as one legitimate response to her argument. If it can be shown that nihilism is 'compatible with strict nominalism, and not committed to an ontology of properties that mirrors their opponent's ontology of objects' (Bennett 2009, 73-4), then we can resist the conclusion that there is no ground for believing in one view over the other. But I take nominalistic nihilism, from what is written in the literature, as more or less the standard view of nihilism that philosophers react to. van Inwagen's *Material Beings* in setting the precedent for debates on composition does not mention anything about plural properties or structural

universals. He does not even mention sets as candidates for properties were they to be required for nihilism or for his organicism. His discussion is rightly restricted to *predicates* and the paraphrase of ordinary sentences using *x*-wise predicates and plural quantification. Furthermore, I have not seen any objections in the literature against the claim that an ontology of simples is incompatible with an ideology of *x*-wise predicates and plural quantification.

If we take seriously the ideology of the theories under consideration, we can determine that property-nihilism has extra primitive ideology that the anti-nihilist lacks, and conclude that anti-nihilism is the simpler theory. According to property-nihilism there are no composite (material) *particulars*. There are only simples, but these simples stand in relations and have properties. In order to account for certain facts countenanced by science and ordinary language which talk about composite objects, property-nihilists require complex properties that are collectively instantiated by certain simples. If we take complex properties seriously, we need to say how they are made up of simpler properties. We also need a story about when one property is and is not a component of another. Such a story requires a distinct mode of composition that operates on properties to make (more) complex properties. This mode of composition is to be captured by a further device of expression in the ideology of the theory.

Given that the nihilist does not believe in composite objects, they will have to introduce a primitive operator or predicate to characterise the structure of complex properties. Supposing we introduce an operator (following (Fine 2010) call it '$\sum$'), we incur the extra ideological cost of imposing further structure on the world, structure that involves the nature of properties and how they are instantiated by particulars. Worse still complex properties do not behave like the objects of classical mereology since the same properties can be used to compose different structural properties. For instance, the property of *being methane* and *being butane* are both composed of

being hydrogen, *being carbon*, and *being bonded to* (Lewis 1986a, 36). Therefore, a single operation on properties that composes further properties is insufficient. What we need is to analyse ∑ into, say, three primitive operations, say, following Forrest (1986b, 17) 'contraction', 'product', and 'projection'. What was one piece of primitive ideology has now become three. If the nihilist is serious about complex properties, their ideology must reflect this fact by introducing further ideological complexity. Indeed, this is what ideological realism demands. Therefore, we can deny that 'nihilism is no simpler than anti-nihilism', i.e., the first conjunct of (P1). In fact, we have shown that it is more ideologically complex and so less parsimonious than anti-nihilism.[28]

Bennett concedes that the acceptance of nominalistic nihilism along with the claim that ontological simplicity is a guide to truth and ideological simplicity is not a guide to truth, provides justification for believing in nihilism over anti-nihilism. The concession shows us that the epistemicism on offer will naturally fail when we rightly take into account methodological considerations. But given ideological realism our ideological commitments are on a par with our ontological commitments. Ideological realism tells us that the ideology of our theory represents the world as having a certain structure. Property-nihilism, we have found, posits more structure than anti-nihilism. Nominalistic nihilism, as articulated above, is more ontologically economical than anti-nihilism but is less ideologically parsimonious because it includes a large stock of primitive *x*-wise predicates. (Perhaps, both varieties of nihilism are committed to a certain type of quantificational structure based on the introduction of plural quantifiers, but set that aside.) So, anti-nihilism wins the end game? Not quite. The debate takes a further turn if we introduce

[28] Bennett also classifies property-nihilism as a 'low-ontology' but I find this odd since its ontology includes objects *and* properties (of a unique and controversial kind). It is nominalistic nihilism which exclusively deserves the name 'low-ontology'.

sets into the nihilist's ontology. Sets can account for *x*-wise predicates but have accompanying ideological baggage, such as, 'set-membership' and the notion of a 'singleton'. (See (Sider ms) for discussion and a defence of, what I call, set-theoretic nihilism.) The dispute when understood in these terms requires us to look at the precise ideology of each theory and determine what number of primitives each theory has. Only then can we make a methodological judgement that one theory is more ideologically parsimonious than the other. The dispute is alive and well, and we are yet to have a victor!

In sum, any metametaphysical or metaontological judgement we make about certain debates, judgements such as 'this dispute is not verbal, but provides no grounds for us to believe in either competing theory', can only be made once methodological considerations are brought to directly bear on the dialectic. We cannot draw a metaontological conclusion or learn a 'metaontological lesson' from restricting or neglecting such methodological principles, for these are the principles that will affect our metametaphysical or metaontological judgement. We need to consider what ontological economy and ideological parsimony amount to, how the ideology/ontology distinction is to be understood, and whether the ideological or ontological component (or both) of our theories involves talk of structure.

3

Truthmaking

The fact that Socrates is white is true because Socrates is white. Intuitively speaking truths are true because of the world and what it is like. This intuition is widely accepted amongst metaphysical realists but it is given radically different explanations. The truthmaker theorist provides an explanation of this intuition by introducing the ideology of truthmaking. Truthmaker ideology primarily involves the concept of a truthmaker and the concept of truthmaking. Truthmaker theorists have presented competing theories that attempt to explain how what is true depends on what there is and what it is like. In this chapter I survey some attempts to explain the concept of truthmaking, argue against the orthodox explanation, and consider the hypothesis that the concept of truthmaking should be taken as primitive. I assume from the outset that talk of truthmaking is legitimate.

3.1 Truthmaker Overview

The standard theory of truthmaking, championed by Armstrong, is comprised of two theses:

(Truthmaker Maximalism) *Every* truth has at least one truthmaker (hereafter TM-M).

(Truthmaker Necessitarianism) T is a truthmaker for <p> just in case necessarily if T exists, then proposition <p> is true (hereafter TM-N).[1]

TM-M is a thesis concerning the *scope* of truthmaking. It is about what range of truths are required to have truthmakers. TM-N on the other hand is an analysis of what it is for something to be a truthmaker, although it may not tell us about the exact nature of truthmakers. It is also an explanation of the 'makes-true' connection (broadly construed) that allegedly holds between truth and truthmaker.

The literature surrounding truthmaking is mostly centred on TM-M. Defenders of truthmaking pursue a 'research programme' that focuses on finding truthmakers for recalcitrant truths such as negative existientials. Most opponents of truthmaking tend to reject the project just because they take TM-M to be manifestly false. TM-N on the other hand has received little attention and is regarded as the least controversial component of the standard theory of truthmaking (see Cameron 2008c, 109; Gregory 2001, 422). It is the orthodox explanation of truthmaking.

Talk of truths being made true by truthmakers admits of an ambiguity between a truthmaker being connected to the truth of a proposition and being connected to the existence of a proposition. That is, a truthmaker can either be related to a proposition or truthbearer with respect to the *truth* of the proposition or with respect to the *existence* of the proposition. To illustrate the ambiguity, let us consider the following argument from Armstrong for the conclusion that primary truthbearers must be propositions and not sentence tokens or beliefs:

[1] See (Armstrong 1997b, 115). I will write propositions with angle brackets, e.g., the proposition that p is written as <p>. In addition, the term 'fact' is reserved for true proposition. I do not take a stand on what the bearers of truth should be. They might be sentence-tokens or propositions. In cases where the difference matters to the discussion I will explicitly state so.

> True unexpressed propositions will be truths without any concrete truth-bearers. Some philosophers may think that we can ignore such cases. But in fact I think that this would be a mistake. They are, for me at least, conceptually very important. The reason for this is that the concept of such truths is needed to make sense of Truthmaker Necessitarianism. How can truthmakers necessitate truthbearers if the truthbearers are beliefs, statements and so on? How can something in the world, say the state of affairs of the dog's being on the dog-bed, necessitate that I have a belief that this is the case, or that somebody states that it is the case? What is necessitated can be no more than the true proposition <the dog is on the dog-bed>. That is why propositions must be the true truthbearers, or at any rate the most fundamental truthbearers (Armstrong 2004b, 15).

For Armstrong, we cannot rely solely on sentence tokens or beliefs to make sense of TM-N because TM-N requires T to necessitate the truthbearer in the sense that T necessitates its existence. Sentence tokens are not the right candidates to capture this fact because the *existence* of sentence-tokens and beliefs are not necessitated by their truthmakers. But, propositions account for this fact. So, propositions are the primary bearers of truth.

However, while a truthmaker does not necessitate *that* I believe the dog is on the rug, it does necessitate the *truth* of my belief. If necessitation is understood as entailing the truth of a truthbearer, then I do not see why the truthmaker cannot necessitate the *truth* of the sentence or belief so long as the sentence or belief exists (cf. Dyke 2008, 79). Supposing that beliefs are truthbearers (and are the only truthbearers for the following thesis), then we can revise TM-N as:

> (TM-N*) T is a truthmaker for belief P just in case necessarily if T exists and P exists, then P is true.

Given the disambiguation between the existence and the truth of a proposition standing in the truthmaking relation to a truthmaker, it does not follow that sentence-tokens are not appropriate entities for necessitation. If do not believe the dog is on the rug, my belief that the dog is on the rug does not exist. Therefore, if we take truthbearers to be sentence-tokens or beliefs, then if my belief does not exist, there is nothing around for the truthmaker to make true. However, if my belief exists, then there is something for the truthmaker to make true. (I should note here that TM-N* is not a distinct independent thesis from TM-N. It is rather a slight modification of the bearer of truth. The same relation is at work in both theories.)

I am not endorsing this TM-N* but rather illustrating that the disambiguation shows us that we should not be concerned about the existence of truthbearers but rather concerned about their truth. The question of whether one thing makes true another is about whether one thing confers the property of *being true* on a truth-bearer by standing in some relation to it.

Other explanations of truthmaking have been proposed. For completeness it will be instructive to briefly consider these accounts before directly discussing TM-N in the later sections. An account that is closely related to TM-N is:

> (TM-entailment) T is a truthmaker for <p> just in case T exists and <T exists> entails <p> (Bigelow 1988, 125; Fox 1987).

According to this view, entailment is strict implication between two propositions. P entails Q just in case necessarily if P is true, Q is true. TM-entailment has a close affinity with TM-N (as we will see again much later). John P. Fox sees the difference between TM-entailment and TM-N to be one of 'terminology reflect[ing] merely preference about semantic ascent as an idiom'

(1987, 189). Hence, 'a's existing necessitates that p just when 'a exists' entails p' (*ibid*). However, there are problems with TM-entailment.

First, the notion of entailment relates two propositions as opposed to some portion of reality and truth. Intuitively, the truthmaking intuition is one of *entities* that make truths true. Second, if TM-entailment is true, then every necessary truth is entailed by <T exists> since necessarily if <T exists> is true, then (say) <2+2=4> is true. To put the point another way, suppose I exist and <I exist> is true. <I exist> entails <2+2=4>. Therefore I am a truthmaker for the proposition that 2+2=4. Indeed, every concrete entity is a truthmaker for every necessary truth. But intuitively I do not *make true* <2+2=4> or any other necessary truth. The semantic ascent has therefore taken us too far from the insight that truth is grounded in reality.[2]

However, the same argument can be directly mounted against TM-N. According to TM-N, T is a truthmaker for <p> if and only if in every world in which T exists, <p> is true. We can write this as:

> (TM-N**) For all propositions *p* and all worlds *w*: if *p* is true at *w*, then there exists some *x* in *w* such that necessarily, if *x* exists then *p* is true (Schaffer 2010a, 311).

Now consider the necessary truth <2+2=4>. Every world in which I exist, <2+2=4> is true. So it seems I count as a truthmaker for <2+2=4>. But intuitively neither I nor any other individual are truthmakers for <2+2=4> or any other necessary truths (Schaffer 2008, 12). Furthermore, there are interesting questions surrounding the status of necessary truths and how they are to be made true. It seems intuitively that they are true regardless of the world and that a

[2] See (Restall 1996) for an amendment to the notion of entailment using some kind of relevance logic that introduces a 'relevant' notion of implication.

truthmaker theorist should give an account perhaps of why this is so. But according to TM-N** these questions are rendered uninteresting or answered by *fiat*.

In addition, there are issues with the relation of necessitation collapsing into the standard logical notion of entailment. Proponents of TM-N typically regard the relation of necessitation as a matter of ontological entailment between entity and truth. Armstrong for instance claims that truthmakers *entail* their truths. Ontic entailment seems to amount to: entity e1 ontically entails e2 just in case necessarily if e1 exists, e2 exists. This is to be contrasted with the modal notion of entailment used in TM-entailment where <p> entails <q> just in case necessarily if <p> is true, <q> is true. But necessitation between entity and truth while a cross-categorial connection collapses into a relation between propositions. That is to say, TM-N collapses into TM-entailment as follows:

(P1) □ if T exists, then <p> is true. (TM-N)

(P2) □ if <T exists> is true, then T exists. (assumption)

(C) Thus, □ if <T exists> is true, then <p> is true. (from 1, 2 transitivity of strict implication)[3]

The conclusion is TM-entailment. Hence, the fact that T necessitates <p> collapses to <T exists> entails <p>. We do not have two notions of entailment: one between entity and truth and

[3] See (Cameron 2005, 44-5). One response is to reject (P2). There might be cases where <T exists> is true but is made true by a truthmaker that is not T. For instance, we might believe in mereological nihilism and hold that <the chair exists> is true but made true not by the chair but by a certain plurality of simples arranged chair-wise.

the other between two truths. Rather we have just one notion of entailment between two propositions.[4]

More down-to-earth proposals have been presented, sometimes in the hope of watering down truth "making" to truth supervening on being. For instance,

> (TM-supervenience) T is a truthmaker for <p> just in case every world where T exists is a world where <p> is true (Lewis 2003, 28).

TM-supervenience uses a discernability criterion of supervenience. If two worlds have a discernible supervenience base, then there will be a 'difference-maker' in both worlds[5] that guarantees that the same proposition will be true at one and false at the other. As the slogan goes: no difference in truth without a difference in being. One benefit of TM-supervenience is that we can allow truths 'to be true just because they lack falsemakers' (Lewis 2001, 610). Therefore, we need not be committed to negative existentials being made true by some 'positive' entity—such as a second-order totality state of affairs. TM-supervenience respects the intuition that negative truths are not made true by something in the world but rather are true because something fails to exist.

Despite its attractiveness, TM-supervenience has its dissenters. First, the notion of supervenience seems inadequate to capture the intuition that truth depends on being. Supervenience is a modal concept that merely consists in co-variation between the supervenient and subvenient entity. Supervenience just has the wrong logical properties to adequately capture truth's dependence on reality, for supervenience is not irreflexive and not asymmetric. Second,

---

[4] Thanks to André Gallois for comments.

[5] Lewis goes into more detail than I am explicating here. For instance, he distinguishes one-way difference-making from two-way difference-making, claiming that if we adopt the first we are no longer required to adopt the second—see (Lewis 2001, 610).

supervenience runs into problems concerning necessary truths akin to the objection raised against TM-entailment. The driving intuition for the truthmaker theorist is that truth depends on being, which suggests an asymmetric relationship between truth and truthmaker. The connection between truth and truthmaker is more intimate than supervenience.[6] Third, the watering down of truthmaking has the potential to dilute the entire project completely. If supervenience holds between A and B such that B supervenes on A, then we only know that B co-varies with A. But this co-variation could be due to B being identical to A or perhaps B being constituted by A (Heil 2000, 236). What we require to rule out other ways in which B supervenes on A is a story about in virtue of what B supervenes on A. Without a deeper story we risk losing what is distinctive about truthmaking.[7] If we wish to retain what is unique about truthmaking, we might be better off not introducing supervenience. (More can be said on behalf of TM-supervenience. I mention it here for completeness and because it one of the standard views that gets separately discussed in the literature. My focus is on TM-N and the proposals I am about to mention.)

A recent proposal that addresses the issue of intimacy is:

> (TM-grounding) T is a truthmaker for <p> just in case the truth of <p> is grounded in T (Schaffer 2008, 2010a).

A formulation in the same spirit is:

> (TM-in virtue of) T is a truthmaker for <p> just in case <p> is true in virtue of T (Rodriguez-Pereyra 2002, 34; 2005, 18).

---

[6] This objection is all too familiar. So I will not dwell on it here. See (Beebee & Dodd 2005, 4; Daly 2005; Forrest & Khlentzos 2000, 7; Merricks 2007; Rodriguez-Pereyra 2005).

[7] One deeper story proposed by Schaffer is to postulate a relation of grounding. This is one independent route to talk of grounding in the project of truthmaking.

Both proposals provide an analysis of what it is for something to make true a proposition—that it is grounded in some entity or is true in virtue of some entity. Both proposals are metaphysically bold hypotheses given that they postulate (i.e., say there is) a fundamental relation that holds between truth and truthmaker. These two views are relevant in later sections.

But before we move let us contrast these two views with one last proposal. The last proposal on offer is inspired by Melia's remark that '*makes true* is as ontologically innocent as *and*, *or*, and *not*' (2005, 79, his italics). Let us state it as follows:

(TM-truthmaking) T is a truthmaker for <p> just in case T makes true <p>.

According to this proposal the *concept* of truthmaking is primitive. We do not provide a further story about how T makes true <p> in terms of necessitation, supervenience or grounding. The notion of truthmaking is instead captured by the primitive two-place predicate '… makes true …'. Call this *ideological primitivism about truthmaking*. This view is compatible with the claim that it is not the case that necessarily if T exists then <p> is true. It is possible that T exists and <p> is false. However, this proposal does not *exclude* necessitation as a necessary condition. It is compatible with necessitation as a necessary condition, but as I will argue we do not have good reason to accept TM-N and this is partly due to necessitation. So, we need not include necessitation as part of primitivism. Also note that TM-truthmaking is a different view to TM-grounding and TM-in-virtue-of. The major difference lies in the fact that TM-truthmaking has a kind of nominalist stance towards the truthmaking *relation*, where TM-grounding (for instance) actually postulates a relation of grounding.

In what follows, I critically discuss the main reasons for adopting the orthodox account of truthmaking, i.e., TM-N (§3.2) and consider objections against the view (§3.3). Having narrowed

our options down to TM-grounding/TM-in-virtue-of and ideological primitivism, I provide a further sketch of both views and explore whether ideological primitivism has any benefits over TM-grounding/TM-in-virtue-of (§3.4).

3.2 Truthmaker Necessitarianism

Why believe in TM-N? Cameron says 'even if we can't *prove* necessitarianism I think it is a pretty attractive doctrine' (Cameron 2008c, 112). But what makes it attractive? Cameron argues that without TM-N we won't be able to capture the intuition that explanation 'bottoms out' in basic existence propositions. To see this, suppose that for God to provide a complete description of the world He need only rattle off propositions about what there is. Everything else will be made true by these basic propositions. If TM-N is false, then God would have to say more than <T_1 exists>, <T_2 exists>, …, and so on. He would have to not only say what there is but also what it is like—<Fa_1>, <Fa_2>, …, <Fa_n>. But according to Cameron, claiming that God has to say predicational truths in addition to existential truths goes against the 'whole spirit of truthmaker theory'. Therefore, TM-N is required to capture the intuition that explanation is ultimately grounded in basic existential truths.

This sort of reasoning can be resisted. First, if TM-N were false and we adopted some other explanation of truthmaking, it wouldn't necessarily follow that God would have to add fundamental predicational facts, such as, <Fa>, <Gb>, etc, to the fundamental account of the world. For instance, if we adopted TM-grounding, we could hold that all truths are grounded in reality and that God still says no more than <T_1 exists>, <T_2 exists>, ..., and that all other truths are grounded in these fundamental existential truths.

Second, if we assumed that TM-N is true, then we require something more than a list of what exists to capture all truths. The mere existence of an entity will be insufficient for predicational truths such as 'there is something red'. We require the state of affairs of *the teacup's being red* to make this truth true. If so, then we require states of affairs in our ontology. But if we require states of affairs in our ontology, then God will have to say that states of affairs exist. If God says states of affairs exist, he will be saying something about the structure of states of affairs and hence will be saying more than what there is. So, explanation does not bottom out at what there is given TM-N.

Elsewhere (2008a), Cameron provides an argument for TM-N based on the fact that 'it is a matter of convention that certain [sic] of the true propositions get labelled as necessary and others as contingent' (2008a, 301). Following Sider's (2003) neo-conventional view of modality, Cameron argues that a modal constraint can be introduced to count facts (true propositions) about truthmaking to be necessary. He continues:

> So we consider facts of the form 'A makes p true' to be objective facts about the world and let it be a constraint on our usage of modal vocabulary that when that is true it is also necessary that if A exists then p is the case. In that case we get an explanation for why truthmaker necessitarianism holds: it is simply analytic of the term 'necessary' (Cameron 2008a, 301).

On the face of it, this argument goes against the realist intuition that initially motivates truthmaker theorists to believe in truthmaking. To say that *we* can stipulate a constraint that makes facts about truthmaking necessary in order to secure the truth of TM-N goes against the core realist intuition of the truthmaker theorist. I understand that this neo-conventional view secures some kind of objectivity about modality. I am not objecting to the view based on distaste for saying all (modal) truths are subjective. What I am objecting to is that the *principled reason*

being employed here is based on our interests despite the fact that it is *objective* which truths are necessary and which are contingent. In addition, why do we have reason to stipulate that facts about what makes true what are necessary? Why not introduce the convention that facts about truthmaking are contingent? Cameron has provided no reason to suggest that convention will favour the decree that facts about truthmaking are necessary over the decree that facts about truthmaking are contingent.[8]

There is an argument for TM-N implicit in the literature which states that it is a *conceptual truth* that it is impossible for T to make true <p> without <p> being true. This is allegedly a conceptual truth since it is part of the concept of a truthmak*er* that if <p> has a truthmaker, then <p> must be true. Thus, if we claim there is a world in which T makes true <p> and yet <p> is false, we have failed to grasp the concept of a truthmaker and so failed to grasp the very core of truthmaking (Rami 2009, 3-4).[9] I believe Lewis has this sort of argument in mind when he writes:

> We might be tempted to redefine truthmaking so as to make it easy to find 'truthmakers' for intrinsic predications. Call *a* a *truthmaker** for *P* just in case every world where *a* exists with no change in its intrinsic properties is a world where *P* is true, in other words just in case every world where *a* has a counterpart that is also an intrinsic duplicate of *a* is a world where *P* is true (Parsons 1999). Long himself is a truthmaker* for the truth that Long is black, and for every other true intrinsic predication with Long as subject.

[8] There might be legitimate responses on behalf of the defender of the neo-conventional view of modality. But this only shows us that the disagreement has shifted to a disagreement about the correct view of modality. The defender of TM-N will therefore be committed to an unpopular view of modality that most of us *qua* metaphysical realists will naturally reject.
[9] Cf. (Milne 2005, 223).

> Truthmaking* is all very well. But what would it take to give us truthmakers for predications without having recourse to redefinition? (2003, 30).

The thrust of Lewis' argument is that if we provide a different account of what it is for a truthmaker to make a proposition true that is not in terms of necessitation, then we have 'redefined' truthmaking. There is something about the *concept* of truthmaking itself that leads Lewis to suggest that an account of truthmaking where truthmakers are understood in terms of intrinsicality is tantamount to changing the subject.[10] But, this stance on the project of truthmaking, I say, is too extreme. It seems drastic to say that in rejecting TM-N we have embarked on a project distinct from truthmaking. It is more appropriate to suggest that in this case one of the main theses of the standard theory is being challenged. Such a situation is not uncommon in metaphysics.

We should also distinguish the concept of a truthmaker from the concept of truthmaking. Although it is a conceptual truth that if <p> has a truthmaker, <p> must be true, nothing follows about the condition under which <p> is made true. The conceptual truth that if <p> has a truthmaker, then <p> must be true is compatible with the suggestion that facts about truthmaking are contingent. That is, there could be worlds in which T makes true <p> and other worlds in which T exists and <p> is false and yet it would still be true that *if* <p> has a truthmaker, then <p> must be true. Thus, it is not analytic that the concept of a truthmaker entails the concept of a relation holding between truth and truthmaker that implies a specific form of necessity connecting truths and reality. The concept of a truthmaker is distinct from the concept of truthmaking. Therefore, conceptual truths about the former won't necessarily tell us anything about the latter.

---

[10] On Josh Parsons' (1999) view, which is a clear rejection of TM-N, truthmakers have their truthmaking features *contingently* (cf. Nolan 2008, 171).

There is one last argument that might account for the idea that truthmakers are supposed to be necessarily sufficient and so necessitate the truth of the propositions they make true.[11] We want an argument for the conclusion that truthmakers necessitate the truth of the propositions they make true. We have already discovered that we cannot argue from a conceptual truth about the notion of a truthmaker to secure this conclusion, and it seemed equally bizarre to explain such necessity in terms of conventions set by us. But perhaps it is more promising to look at the nature of the truthmaker and argue that given what truthmakers are they necessitate their truths.

Let us suppose that all truthmakers are states of affairs. States of affairs are complex entities that are made up of universals and particulars. For instance, the state of affairs of *a's being F* is made up of the universal *F* and the particular *a*. A unique mode of composition operates on such entities to compose *a's being F*, also written as [Fa].[12] States of affairs are entities that have their constituents *essentially*. Take [Fa] and call it 'B'. If B were to lose its universal constituent for example, B would cease to exist (see Reicher 2009). But, for *reductio* let us suppose that essentialism about states of affairs is false. B could exist with the universal constituent *G* such that it is made up of *a* and *G*. We can write this as $B_{[Ga]}$.[13] Now suppose that in $world_1$ $B_{[Fa]}$ and <Fa> exist. Further suppose that B makes true <Fa>. In $world_2$, $B_{[Ga]}$ and <Fa> exist, but <Fa> is false. B is insufficient for the truth of <Fa> because B has its constituents contingently. In order to secure the claim that a truthmaker is 'necessarily sufficient' for the truth of a proposition, we have to postulate essentialism about states of affairs. B will be necessarily sufficient for the truth

[11] I thank André Gallois for detailed discussion here.
[12] For more detailed principles on the unique mode of composition that operates on states of affairs, see (McDaniel 2009).
[13] This is short hand for B has as its constituents particular *a* and universal *G*.

of <Fa> only if B possesses its constituents essentially. Thus, truthmakers necessitate the truth of the propositions they make true only if there is something essential about their nature.[14]

But this argument for TM-N presupposes that truthmakers are states of affairs. We are given a reason to adopt necessitarianism but only by appealing to the essentialist nature of truthmakers. If we do not think states of affairs exist or that they are the *only* truthmakers, this argument won't be compelling. There might be reasons to reject the thesis that all truthmakers are states of affairs. For example, (the existence of) Socrates seems to be a sufficient truthmaker for the proposition <Socrates exists>. We do not need the state of affairs of *Socrates' existing* to make it true.[15] Similarly, <Socrates = Socrates> seems to be made true by the existence of Socrates and not the state of affairs of *Socrates' being self-identical*.[16]

At any rate, if we find the final argument for TM-N attractive, we must accept the ontological cost of states of affairs or entities with essentialist natures. If we do not like this consequence, we won't find this argument for TM-N convincing.

---

[14] Contingent or transferable tropes would also fail to support TM-N. Non-transferable tropes would on the other hand support TM-N and my same point would apply as in the case of states of affairs.

[15] You might think that 'the existence of Socrates' refers to something more than just Socrates. If we adopted the view that existence is a first-order property had by individuals, we can add weight to the plausibility that *Socrates' existing* is a state of affairs or that the property of existing had by Socrates makes true <Socrates exists>. I do not have space to discuss these issues here however.

[16] Armstrong calls properties such as *being identical with a* 'third-class properties of particulars'. He writes, '*Being identical with a* is undoubtedly true of *a*. But there is no state of affairs involved, no genuine 'is' of predication. So it is a third-class property of *a*' (Armstrong 1997b, 44).

3.3 Against Truthmaker Necessitarianism

What reasons do we have to reject TM-N? John Heil (2000) has suggested it is possible that T exists and <p> is false. Consider the following counterfactual proposition:

(P) <Were you to drink this cyanide-laced tea, you would die>.

Suppose that in the actual world states of affairs of the molecular make-up of the tea make (P) true. Call the conjunction of these states of affairs 'T'. If TM-N is true, then T necessitates the truth of (P), and so there are no worlds in which T exists and (P) is false. But this is surely false, for it is possible that T exists and (P) is false because you may possess the antidote to the cyanide-laced tea (Heil 2000, 232-3).

The objection may be refuted by rejecting the initial assumption that T makes true (P). Why think that categorical properties or states of affairs of the molecular make-up of the tea *make true* propositions about the dispositional features or powers of the tea? This assumption depends on a further thesis about the relationship between categorical and dispositional properties. I do not have time to consider debates surrounding this issue.[17] I therefore rest content with Heil's first objection as containing a potential counter-example to TM-N.

Mellor presents the following argument against TM-N. Suppose there is a world (call it w1) in which the only entities that exist are [Fa] and [Fb]. Now,

> … as 'there is no particular that is neither *a* nor *b*' is a negative truth, it needs no truthmaker. All it needs is that no truthmaker for its negation exists, i.e. that no particular other than *a* or *b* exists.

[17] For debates about dispositions and powers, see (Bird 2007) and (Armstrong, Martin, & Place 1996). See also (Cameron 2005) for discussion of this objection. This objection also requires the falsity of TM-M.

> So if *a* and *b* are indeed the only particulars, whatever makes '*Fa*' and '*Fb*' true will also make true 'everything is *F*', even though it will not necessitate ['everything is *F*'] (Mellor 2003, 214).

Indeed, all generalisations are made true by first-order states of affairs in a given world but they do not thereby *necessitate* the truth of such generalisations. That is to say, it is not the case that in all worlds in which [Fa] and [Fb] exist they make true <everything is F>. [Fa] and [Fb] could exist with [Gc] in world w2. Contingent states of affairs are sufficient but not *necessarily* sufficient truthmakers. Therefore, it is not the case that truthmakers necessitate the truths they make true.

Mellor's argument employs the premise that the negative truth <there is no particular that is neither a nor b> does not require a truthmaker. Mellor appears to assume that this truth and perhaps all negative truths need no truthmakers to be true. They simply need 'no truthmaker for their negation'. If we thought that this negative truth does require a truthmaker, then we need something else besides [Fa] and [Fb] to make true <everything is F>. Perhaps, if we adopt Truthmaker Maximalism (or TM-M)—i.e., every truth has at least one truthmaker—we have some motivation to deny that the negative truth <there is no particular that is neither a nor b> does not require a truthmaker. In other words, if TM-M is true, then we require a truthmaker for the negative truth <there is no particular that is neither a nor b> (see Cameron 2005, 54). The truthmaker for such a truth is typically regarded as a totality fact that states that there is nothing more in the given world other than the first-order states of affairs that exist in the given world and the totality state of affairs (see Armstrong 2004b, ch. 6).

So, the obvious response to Mellor's argument employs TM-M. But now we have to weigh up our options. If we accept TM-M, we must embrace totality states of affairs—fundamental higher-order states of affairs. This also has the counter-intuitive consequence of making negative

truths true in virtue of some entity where we intuitively judge that a negative truth is true just because it lacks a falsemaker (cf. Lewis 1992, 216). If we reject totality states of affairs, we have reason to deny TM-M. If we deny TM-M, we have no defence against Mellor's argument for the falsity of TM-N (it appears).[18] But we can equally argue that we should accept TM-M and tolerate the ontological consequences. So, why accept TM-M? Cameron (2008c) provides us with an all-or-nothing affair. If we accept truthmaking, we embrace the goal of providing a general theory that tells us *what it is* for a proposition to be *made* true. If we acknowledge the burden of providing a general theory, Cameron concludes, we must go all the way and accept that each and every truth has a truthmaker. If we do not go all the way and therefore reject TM-M, then we shouldn't accept truthmaking (Cameron 2008c, 107-8). But why think this? Our line of reasoning could legitimately proceed as follows. We first come across a garden variety truth and realise that for it to be true it must be true because of the world in some way. We then consider other cases and conclude that what is true in general depends on being and that our theory should explain this phenomenon. But in attempting to provide a general theory we realise that there exist stubborn cases that intuitively do not depend on the world *in the same way*. For example, intuitively, a negative truth is true because of something the world does not have. *At*

[18] There are further issues with Mellor's argument that I am overlooking here. First, we might point out that his argument is self-defeating. If <there is no particular that is neither a nor b> requires no truthmaker, then why suggest that <everything is F> requires a truthmaker? The proposition <everything is F> is equivalent to a negative existential, say, <no F isn't G>. So, we should accept that <everything is F> requires no truthmaker. But then how can we conclude that <everything is F> has a truthmaker in w1 but is not necessitated by this truthmaker? Second, we might react to Mellor's argument by saying that for the argument to go through we need to assume TM-M since we need to suppose <everything is F> requires a truthmaker. But if we assume TM-M, then we cannot say that <there is no particular that is neither a nor b> needs no truthmaker. And this claim is the key premise in his argument. On further reflection however, I do not think Mellor's argument requires TM-M. He could simply assume that generalisations require truthmakers but that other truths such as necessary propositions do not require truthmakers. So, TM-M is not needed. But, even the weaker assumption that generalisations require truthmakers won't help, since generalisations are equivalent to negative existentials. My final thought is to say that in the context of Mellor's discussion we can interpret him as considering the issue of generalisations and whether they need truthmakers *and* whether they are necessitated by truthmakers were they to have truthmakers. On this reading, we suppose for the sake of argument that generalisations require truthmakers. We then see that, given his argument, were they required to have truthmakers they are not necessitated by their truthmakers. But what we should really conclude is that generalisations do not require truthmakers and that necessitation fails for generalisations.

this point there are many avenues in front of us, *one* of which is TM-M. Another is to postulate that *there are ways* of truthmaking (Mumford 2005, 269). Garden variety positive truths are made true one way while negative truths, general statements, mathematical truths, etc, are made true in another way, or perhaps are made true in their own particular ways. These other *ways* of truthmaking may not require truthmakers. Such a view might sound implausible, but it is one path we can take. Another avenue is to say more about the particular truths and provide an explanation as to why mathematical truths (say) are not true because of the world. Determining whether they are analytic for instance may provide an explanation that does not force us to adopt TM-M.[19] We could also provide an explanation for why some truths do not require truthmakers based on truth-conditional semantics or truth-functional constructions out of primary propositions (Mellor 2009). Therefore, the demand for a general theory of truthmaking does not entail the acceptance of TM-M. And so I conclude we should not tolerate TM-M's ontological consequences. If we do not accept TM-M, Mellor's argument seems convincing.

3.4 Ideological Primitivism about Truthmaking

None of the arguments against TM-N imply that we must abandon the project of truthmaking, or deny that entities make truths true. Moreover, it does not follow from the rejection of TM-N that we have thereby redefined the notion of truthmaking. Given that we have set aside TM-entailment and TM-supervenience, we are left with the following:

(TM-grounding) T is a truthmaker for <p> just in case the truth of <p> is grounded in T.

[19] For instance, Rodriguez-Pereyra (2005) restricts the range of truths that require truthmakers to synthetic propositions.

(TM-in virtue of) T is a truthmaker for <p> just in case <p> is true in virtue of T.

(TM-truthmaking) T is a truthmaker for <p> just in case T makes true <p>.

All three views are not subject to the objections that plague the earlier accounts of truthmaking. For instance, all three views capture the intuition that truth depends on being correctly. They do not succumb to the untoward consequence that every necessary truth is made true by every contingent entity since necessary truths are not grounded in or made true by contingent entities. Facts about what makes true what are contingent according to TM-truthmaking, it is possible that T exists even if <p> is false (given worlds in which they both exist). In some worlds T makes true <p> and in others T makes true other propositions. In addition, all three views are not committed to or require support from TM-M. But they are compatible with TM-M. Thus, if we are motivated to adopt TM-M, then these three views can accept TM-M as a component of their theory of truthmaking.

The first two views (shortened now to TM-G and TM-IVO respectively[20]) invoke the *notion* of 'grounding' or 'in virtue of' in their analysis of what it is for T to be a truthmaker for <p>. Some proponents of TM-G also talk of a *relation* of grounding that is said to hold between truth and truthmaker (see Schaffer 2008, 17). The idea here is that grounding is a relation that holds between truth and truthmaker. We should regard TM-G theorists as introducing a further ontological cost into their explanation of truthmaking because they say *there is* a relation of

[20] I will now regard TM-G and TM-IVO as interchangeable and when I refer to one I mean to refer to both unless stated otherwise.

grounding that holds between truth and truthmaker; this is to be literally understood as an entity that is *the grounding relation*.[21]

Contrast TM-G and TM-IVO with TM-truthmaking. TM-truthmaking is inspired in part by the following pessimism of Heil:

> 'I have no positive account of truthmaking to offer. I am doubtful that it is possible to explicate truth making in an illuminating way, that is, in a way that employs simpler, clearer concepts' (Heil 2000, 236).

I take the suggestion to be that the concept of truthmaking ought to be taken as primitive, especially because we have found no illuminating explanation of the concept in terms of the concept of necessitation, supervenience or (logical) entailment. The second piece of inspiration comes from a suggestion by Melia:

> '*makes true* is as ontologically innocent as *and*, *or*, and *not*' (2005, 79, his italics).

Thus, given that the concept of truthmaking is primitive, we retain '... makes true ...' as a primitive predicate of the ideology of the theory. This can equally be understood as '... makes it true that ...'. Melia's insight is that this predicate does not ontologically commit us to some relation. The 'makes true' predicate is therefore an ideological commitment of the theory. This does not undermine claims about what makes true what however. We can still say that 'T makes it true that p'. T and <p> are sufficient for this truth; no relation is required. Call this *ideological primitivism about truthmaking* (hereafter in this chapter, primitivism).

[21] There is an interesting question whether the grounding relation is internal or external. If it is internal, then it might be plausible to say it is not fundamental.

Melia's preferred view is an account of truthmaking 'without truthmakers' given his 'sensible nominalism'.[22] He writes, 'the phrase 'makes true' is treated as a *predicate*, a predicate which takes names of states of affairs on one side and names of sentences on the other' (2005, 78, his italics). Therefore, Melia writes truthmaking claims as follows:

(*) 'a is red makes true the sentence 'a is coloured''

According to Melia, the ontological commitments of (*) are the particular *a* and the sentence 'a is coloured'. This subtlety of Melia's view is made more explicit with the introduction of a truthmaking operator 'TM(,)' that makes a new sentence from two other sentences. In Melia's case 'TM' makes the sentence 'TM('a is red', 'a is coloured') from 'a is red' and 'a is coloured'. Strictly speaking this operator is a sentential connective. Hence we can dispense with the idea of a truthmaking claim having *relata*. But there is nothing built into primitivism that says our theory needs to be nominalist through and through. We can easily take the 'makes true' predicate as relating states of affairs and propositions. The upshot of primitivism is that we are not *forced* to say there is a relation of truthmaking that holds between truth and truthmaker.

Can we say more about truthmaking according to primitivism? According to Melia, truthmaking requires a 'more intimate connection' than the explanations of TM-N, TM-entailment, or TM-supervenience. The connection should be one of 'constitution', as Melia notes, 'that which makes a truth true should be *constitutive* of the truth' (2005, 82, his italics).[23] For example, it is necessary that if Manchester is dreary, then 2+2=4. Necessary truths can supervene on any concrete individual, therefore, according to TM-supervenience, the state of

[22] His nominalist ontology contains 'rich individuals' such as red cars, blue letterboxes, purple roses but no universals, sets, classes, state of affairs, *possibilia*, etc. See (Melia 2005, 71-2).
[23] Mill might have had the same thought when he asked: 'What is that which is expressed by the form of discourse called a Proposition, and the conformity of which to fact *constitutes* the truth of the proposition?' (Mill 1843, book 1, ch. 5, §1, my italics).

affairs of *Manchester being dreary* makes true 2+2=4.[24] Every world in which this state of affairs exists, the mathematical statement above is true. But, intuitively, *Manchester being dreary* does not make true 2+2=4. The state of affairs is not constitutive of 2+2's equalling 4.

Melia does not provide further detail as to what this more intimate connection is but it seems the intuition is equally captured by TM-G and TM-IVO insofar as we have arrived at the idea that truth is intimately related to being in some asymmetric way. It seems he is compelled to leave the thought at that since he is not willing to countenance a relation that holds between two entities. This lack of 'ontological' explication is no fault of Melia's view or the less nominalistic variant I mentioned above. We can easily understand the notion of 'makes true' through various examples and it seems we can understand sentences that involve the 'makes true' connective or predicate just as we can understand sentences that involve 'and', 'or', etc.

For the remainder of the section I compare TM-G and primitivism (the less nominalistic version which takes 'makes true' as a primitive predicate that applies to T and <p>). I argue that we are better off choosing primitivism over TM-grounding because of the extra ontological commitments of the latter. But I do not have a decisive objection here.

First we need to be clear on the two views I am considering in this debate. In one corner we have 'makes true' as a piece of primitive ideology that applies to truthmaker and truth. (This is distinct from Melia's 'TM' operator that makes a truthmaking sentence from two other sentences.) Let us restate primitivism as follows:

> (TM-TM*) For all propositions *p* and all worlds *w*: if *p* is true at *w*, then there exists some *x* in *w* such that *p* is made true by *x*.

[24] This point was established earlier. The example here is more for contrast.

In the other corner we have TM-G which is committed to a fundamental relation of grounding that holds between truth and truthmaker. We should be clear that it is the *truth* of the proposition and not its existence that is grounded in the truthmaker. We do not want to say that what it is for a truth to be made true is for *it* to be grounded in some entity. Rather we want to say that the *truth* of the proposition is grounded in some entity. Once we disambiguate between the grounding of the existence of the proposition and the truth of the proposition, it is clear that the notion of grounding is not grounding of entities on entities. Instead it is one of entities 'truth-grounding' propositions. The proposition itself *may be* existentially grounded in more fundamental features of reality since propositions are typically regarded as nonfundamental. But this is not the relation we should be interested in. Call the relation we are interested in *truth-grounds*.[25]

According to Schaffer, TM-G requires more than just the postulation of *the* grounding relation. It requires the background metaphysics of *substances* and *posteriors* which are in general related by ontological dependence. Truth is just like any other derivative entity ontologically dependent on substance or the substances. Truth is a 'dependent abstraction'. Thus, the truthmaking relation is a subset of the more general relation of ontological dependence. As Schaffer writes,

> Thus I assume that the truthmaking relation is to be identified with certain instances of the dependence relation, namely, those which relate substance to truth:
>
> A5. *Truthmaking is truthgrounding*: the truthmaking relation is the relation of grounding between substance and truth.

[25] As we will see below, if truth-grounds is a restriction of ontological dependence in general, it is unclear how we can distinguish between the grounding of the truth of a proposition and its existence.

> (A5) is thus a twice-heavy assumption, for invoking a neo-Aristotelian metaphysical framework, and for explicating truthmaking within this framework of truthgrounding (Schaffer 2010a, 310).

We can restate TM-G as follows:

> (TM-G*) For all propositions *p* and all worlds *w*: if *p* is true at *w*, then there exists some *x* in *w* such that *p*'s truth at *w* is grounded in *x*.

Now this is not exactly Schaffer's account of truthmaking since he claims that truth is grounded in 'the world'. Worlds are the grounds of truth rather than some particular portion of reality. His reasons for this assumption are based on spelling out (and defending) a monistic metaphysic where what fundamentally exists is the One or the actual world as a whole. The One then grounds everything else. Schaffer's monistic goals here are not relevant. So we put to one side the assumption that worlds are the grounds of truth and instead focus on portions of reality grounding certain propositions. I discuss two tentative worries for TM-G* below.

First, (A5) specifies that the relation between truth and truthmaker is just the relation of ontological dependence. What makes it the truthmaking relation or what allows us to call it 'the truthmaking relation' or an instance of the truthmaking relation is that one of the *relata* is a truth. But it seems that truth-grounds or the truthmaking relation is really not that special. It is simply a restriction of the broader metaphysics of ontological dependence. Furthermore, if it is just a restriction of the general relation of ontological dependence we fail to capture the content of propositions when finding truthmakers and have lost the difference between grounding the truth of a proposition as opposed to its existence. Intuitively there is a difference to be drawn here. In addition, it is plausible to think that truthmaking is about subject matters and that what

propositions are about plays a central role. By subsuming truthmaking under ontological dependence we lose this important part of the theory of truthmaking (cf. Sider 2011, 162-3).

But I find this objection only partially compelling since I am somewhat sceptical that what propositions are about plays a central role in truthmaking. If we are to accept that most truths have truthmakers, then many truths will be made true by truthmakers that they are not about. If <the rose is red> is true, then it is most likely made true by states of affairs about microphysical particles. If <the proton is charged> is true, it may be true because of some more fundamental particles. If <the chair exists> is true, it may be made true by some plurality of simples arranged chairwise and not the chair. At any rate, if we are attracted to subject matters playing a role in truthmaking, then we have at least one reason to be sceptical about TM-G*.[26]

Second, this view comes with extra ontological costs. Not only are we to accept a relation of grounding and then identify a restriction on it to truths as the truthmaking relation, but we must accept the metaphysic of ontological dependence generally speaking. If we are adverse to this general metaphysic, we will be adverse to this account of truthmaking. Further, when comparing TM-G* and (A5) with primitivism we have an ontologically economical theory on offer. But primitivism has ideological costs that we cannot gloss over. I think the costs here are worth it in the face of positing the ontological complexity of TM-G* and A5.[27] In sum, I am content to exit the discussion with the claim that TM-G and primitivism are our best candidates for an account of what it is for a truthmaker to make true a truth.

---

[26] Schaffer has a response to a similar worry about subject matters in relation to his monistic truthmaking. But it relies on the assumption that propositions are sets of worlds, and that truthbearers are propositions. See (Schaffer 2010a, 316). This issue will resurface in the next chapter.

[27] To be fair, primitivism has its own ontological costs as well. A fuller treatment of the view will most likely lead us to admit states of affairs or tropes, etc. We may want to know whether they incur further ontological or even ideological costs.

4

Truthmaking as a Theory of Fundamentality

The metaphysics of fundamentality concerns the realm of the fundamental and the relationship between the fundamental and the nonfundamental. Thus, a theory of fundamentality must say something about what is fundamental as well as how it is related to the nonfundamental. Metaphysicians present different accounts of fundamentality based on their different approaches to metaphysics. Some have put forth purely ontological accounts of fundamentality that attempt to understand fundamentality *solely* in terms of *entities* being related to other *entities* (regardless of their ontological category). Others have presented linguistic accounts that attempt to understand fundamentality through the expressions of a fundamental language and the truths expressed therein. The theory of truthmaking as a theory of fundamentality is an attractive mix of both the ontological and linguistic approach. In this chapter I consider truthmaking as a theory of fundamentality. I explore two differing accounts and discuss problems and objections with each. Much of the discussion is a reaction and response to Sider's recent work on fundamentality.

4.1 Fundamentality

Metaphysicians understand the notion of fundamentality in various ways. (I take the notion of fundamentality to be both about the fundamental *and* its relationship to the nonfundamental.)

According to Schaffer (2009), the realm of the fundamental consists solely in the entities that are ungrounded, that is, entities that do not ontologically depend on anything else.[28] The fundamental entities are connected to the nonfundamental entities in virtue of grounding relations that hold between the fundamental and nonfundamental. This type of theory is spelled out completely in terms of talk of entities. Call it a purely ontological account of fundamentality since the theory understands fundamentality solely in terms of entities. In addition, it is important to note that the term 'fundamental' is being applied to entities here and not to truth.

At the other end of the spectrum are full-blooded linguistic accounts of fundamentality. These accounts understand fundamentality solely in terms of language and semantics. According to Sider (2011), the realm of the fundamental is understood in terms of the fundamental language, the expressions of which are said to perfectly carve reality at its joints. (We should note here that the sense of the word 'fundamental' is about truths and expressions and not entities. This is one major difference between Sider and Schaffer's approach to fundamentality.)

It will be helpful to discuss some of the details of Sider's understanding of 'joint-carving'. Sider's main thesis is that we should include as a piece of primitive ideology the following operator 'S' (Sider 2011, 91).[29] This operator operates on expressions from all *ideological* categories (from predicates to quantifiers and itself). For instance, the predicate '... is F' when operated on by 'S' yields 'S('... is F')'.[30] For now we might say this sentence means ''... is F' is structural' or, ''... is F' carves reality at the joints'. For Sider, 'fundamental' just means

[28] Schaffer's (2010a, 2010b) preferred position is that there is only one fundamental entity, namely, the One.
[29] In *Writing the Book of the World* Sider uses a specific symbol for the 'structure' operator that requires a font I do not have. I instead use 'S'.
[30] More precisely, Sider uses 'dummy variables' to make up complete sentences which he attaches to 'S'. Thus, 'Fx' (where x is a dummy variable) is attached to S to yield 'S(Fx)'. The use of dummy variables is more for grammar's sake. The goal is still to 'query' the predicate or other pieces of ideology. See (Sider 2011, 94).

'perfectly carves at the joints'. The whole point of postulating 'S' as a piece of primitive ideology that is applied to other pieces of primitive ideology is to capture the idea that a fundamental language is structural or carves reality at the joints. A fundamental language contains 'all and only' primitive expressions (Sider 2011, 8).[31] The notions or concepts that are expressed by pieces of primitive ideology are also said to be structural or carve at the joints.

According to Sider, structure is primitive. But what is structure? We might expect to hear not a definition or analysis but some kind of elucidation, for there is an air of paradox surrounding the very practice of primitivism. By taking something as primitive, we thereby corner off any deeper insight into the very nature of the primitive, an insight that we receive when providing an analysis. At any rate, we are told the following about structure. Structure is a 'worldly' matter, not something linguistic, conventional, etc. If a concept is said to be structural it is structural just because it is expressed by the appropriate term of a theory. The appropriate term is itself structural. More negatively, the word 'structure' is not a *noun*; it does not name anything (Sider 2011, 5, n. 5). Structure is not an *entity* of any kind, nor is it *stuff*. Further, 'structure' and its cognates are not predicates, such as, '... is structural'. Moreover, 'structure' is not a predicate *of properties*, 'nor of any other sorts of entities' (*ibid*). So, on Sider's view '... is structural' does not apply to properties, particulars, sets, states of affairs, etc. We do not say, strictly speaking, there are structural properties, relations, or structural particulars as 'structure' does not apply to ontology. 'Structure' applies to ideology (cf. Sider 2011, 94).

For Sider, the relationship between the fundamental and the nonfundamental is understood as a connection between the fundamental language and nonfundamental languages. The connection

[31] On page 8 Sider only states this as a sufficient condition. However, he provides the necessary and sufficient condition on p. 92, n. 14.

itself involves the linguistic notion of metaphysical semantics. Metaphysical semantics is a certain kind of semantic theory which attempts to spell out meanings in purely joint-carving terms. Sider also says that 'if the semantic theory takes the form of a truth-theory, then the truth-conditions must be stated in perfectly joint-carving terms' (2011, 112). A metaphysical semantics for some nonfundamental language would then consist in metaphysical *truth-conditions* for statements in some nonfundamental language. That is, a sentence S of language L is true in L just in case ϕ, where ϕ is phrased in purely joint-carving terms (Sider 2011, 113). But there are other forms that a metaphysical semantics may take such as the assignment of expressivist assertion-conditions to normative discourse or the assignment of proof-theoretic assertion-conditions to mathematical sentences. Sider's view of fundamentality (which attempts to account for what is fundamental and how it is related to the nonfundamental) has two main components. First, regarding the fundamental, Sider postulates a monadic 'S' operator that tells us when something is joint-carving or fundamental. Second, regarding the nonfundamental and its relation to the fundamental, Sider introduces an undefined notion of metaphysical semantics. In sum, Sider's view (to the degree that I understand it) is 'structure' plus 'metaphysical semantics'.

There are less extreme approaches that lie between linguistic and purely ontological characterisations of fundamentality. One less extreme approach to fundamentality is found in the project of truthmaking. Typically speaking, a theory of truthmaking begins with the general claim that every truth has a truthmaker (a claim I do not subscribe to). Thus every truth stands in the truthmaking relation to some truthmaker. The truthmaking relation intuitively speaking

relates entities and truth.[32] On one construal, the realm of the fundamental entities is the realm of truthmakers. (The sense of 'fundamental' here is applied to entities.) Call them *fundamental truthmakers*. Suppose further that truths are 'highly dependent' entities—perhaps objects grafted from our utterances and beliefs. The relationship between the fundamental and nonfundamental is understood in terms of every truth having a fundamental truthmaker. For instance, the truth that Obama will be re-elected is (or will be) made true by a complex conjunction of fundamental truthmakers that involve fundamental properties and relations distributed across the spacetime region of America.

(Later in this chapter I defend a more refined version of truthmaking that can be classified as a hybrid approach that conjoins Sider's notion of metaphysical semantics for nonfundamental truths with a theory of truthmaking that restricts what truths have truthmakers. The above sketch of truthmaking as a theory of fundamentality is intended to be a *rough* sketch of *one* theory of truthmaking as a theory of fundamentality. I do not accept the rough version just sketched.)

These approaches to fundamentality are meant to provide answers to the following questions: what is the realm of the fundamental? What is the relationship between the fundamental and nonfundamental? As we saw, the differing approaches to fundamentality have differing senses of the word 'fundamental'. Schaffer's approach understood 'fundamental' as applied to entities, while Sider applied it to truths and expressions.

A theory of fundamentality needs to provide us with more than just answers to these questions. There are three adequacy conditions that I think can be identified for a theory to be a candidate theory of fundamentality. These conditions are not uncontroversial. So, part of the

[32] There are of course other accounts of the truthmaking relation that understand the connection to be strictly between propositions. The example here is for illustrative purposes.

discussion that follows is concerned with how we should formulate a given condition and whether we should accept it as a genuine and general constraint on our candidate theories of fundamentality.

Let us revisit a now hackneyed metaphor. Suppose all God has to do to give a complete account of reality is to write a story that contained all the truths about the world concerning what there is and what it is like.[33] Intuitively, God would include just the truths necessary to provide a story that accounted for everything non-redundantly. If God can account for everything about Olympic-size swimming pools with a description that merely includes micro-physical truths, then God would not mention Olympic-size swimming pools. It seems the micro-physical truths are enough to account for truths about Olympic-size swimming pools. Truths about Olympic-size swimming pools in this respect are redundant.

The metaphor is latent with several interrelated concepts. First, there is the concept of 'completeness'. God in giving his 'account' provides a complete account, one that is in some sense 'responsible' for everything else (Sider 2011, 105). Second, there is the notion of 'redundancy'. God's 'account' is non-redundant (cf. Lewis 1983, 346). Nothing is described or mentioned twice, and nothing else is required except what is needed to account for everything else. Third, there is the concept of some 'relationship' between what is responsible for everything else and 'the stuff' that is redundant.[34]

The first adequacy condition is concerned with the concept of completeness. Sider gives us a plausible starting point for a relatively *theory-neutral* conception of completeness: '*every nonfundamental truth holds in virtue of some fundamental truth*' (2011, 105, his italics). This

[33] For this metaphor, see *inter alia* (Crane 1991).
[34] This does not suggest that what is redundant is not real or does not exist or exists in some other way, etc. Such issues are distinct from the general concept of redundancy.

statement has little content on its own. So it needs to be made more precise based on one's approach to fundamentality. For instance, Sider fills out completeness as follows: 'every sentence that contains expressions that do not carve at the joints has a metaphysical semantics' (2011, 116). Since for Sider 'fundamental' means 'carves at the joints', completeness amounts to the claim that every sentence that contains nonfundamental expressions has a metaphysical semantics. A typical truthmaker theory fills out completeness differently. A truthmaker theorist (which I don't endorse) *may* fill out completeness as: *every truth has a fundamental truthmaker*. The condition of completeness seems relatively uncontroversial. But each theory of fundamentality will fill out completeness based on their specific framework.

We also have a constraint that derives from the notion of a fundamental description involving nothing more than fundamental truths. This is the constraint of purity: '*fundamental truths involve only fundamental notions*' (Sider 2011, 106, his italics). The idea behind the constraint is that all God has to do to provide a complete account of reality is to provide the fundamental description of reality. This fundamental description won't mention (or use) any nonfundamental terms or refer to any nonfundamental entities, etc. The description is pure. As with the constraint of completeness, purity needs to be filled in according to one's approach to fundamentality. According to Sider, the purity constraint comes out as trivial since he defines the notion of a fundamental truth as one that consists of fundamental terms (Sider 2011, 116). If completeness is understood as: *every truth that has one or more nonfundamental notions holds in virtue of some truth that involves only fundamental notions*, then truths that involve only fundamental notions better involve only fundamental notions (which is just what purity says).

How is purity supposed to work? To take Sider's example, consider the truth 'there exists a city'. According to the *theory-neutral* version of purity (viz., fundamental truths involve only

fundamental notions), this truth is not fundamental since ‘city’ is nonfundamental. Now consider ‘there is a city in virtue of T’. This too is a nonfundamental truth. This simple test enables us to determine whether a truth is pure or impure. But in addition to this test, purity is supposed to be a general and sweeping constraint: ‘it requires facts about the *relationship* between the fundamental and the nonfundamental to be themselves nonfundamental’ (Sider 2011, 107, his italics). If we include a piece of primitive ideology— again following Sider’s example—say, ‘□’ in our theory, it follows that truths which involve ‘□’ and nonfundamental notions, such as a city, will also turn out nonfundamental. But if ‘□’ is involved in a truth that only has fundamental notions, say, C, then the corresponding truth will turn out fundamental. For instance, ‘□ all Cs are Cs’ is fundamental (Sider 2011, 108). So, purity tells us that according to our theory—whatever the primitive ideology—so long as a truth involves only fundamental notions it will be fundamental.

For Sider, purity yields the general conclusion that ‘connecting truths’, viz., facts about the relationship between the fundamental and nonfundamental, cannot be fundamental. *By definition*, Sider claims, connecting truths are about relating fundamental and nonfundamental notions, and so given our simple test turn out impure. It is wrong-headed to proceed by way of positing some relation or connection between truths or truths and the world to account for the relationship between the fundamental and nonfundamental. He writes,

> The point of using the method of posit would be to claim that the connecting truths involving the posited notion are fundamental truths, thereby obviating the need to say in virtue of what such connecting truths hold. But purity implies that the connecting truths could not be fundamental (2011, 110).

The relationship between the fundamental and nonfundamental must be sought some other way. Sider's preferred approach is to posit an 'undefined but nonfundamental notion' of metaphysical semantics that connects nonfundamental truths such as sentences of a nonfundamental language with fundamental facts. As mentioned earlier, we might say sentence S of language L is true in L iff ϕ, where ϕ is phrased in purely joint-carving (i.e., fundamental) terms. The truth that 'sentence S of language L is true in L iff ϕ' involves nonfundamental notions. Hence the truth is nonfundamental. This is the correct result according to Sider, for he claims that the notion of metaphysical semantics is nonfundamental. So, any connecting truths on his view will also be nonfundamental.

If we take metaphysical semantics as a form of truth-theory, then the metaphysical semantics of sentence S is the truth-conditions of S which are assigned to S by some metaphysical semantics for the language it is a part of. Metaphysical semantics further involves definitions of the predicates of some nonfundamental language in terms of the predicates of the fundamental language. Predicates of the fundamental language are predicates that perfectly carve at the joints or are structural. More precisely, the fact that, say, predicate 'Fx' carves at the joints is understood in terms of Sider's structure operator 'S' such that if 'Fx' carves at the joints, then 'Fx' is structural or 'S(Fx)'. Furthermore, the corresponding notion of metaphysical semantics is a 'suitably undefined but nonfundamental notion' (Sider 2011, 112). This last characteristic is important to avoid violating purity. Sider's metaphysical semantics avoids the violation of purity because Sider takes the facts about the connection between nonfundamental and fundamental truths to be nonfundamental. Sider can takes these connecting facts as nonfundamental because he invokes the nonfundamental notion of metaphysical semantics to explain the connection between fundamental and nonfundamental truths.

On the other hand, any theory that contains fundamental facts that are about the connection between the fundamental and the nonfundamental violates purity. The violation of purity by theory T is a reason to reject T. In sum, purity is a constraint on our candidate theories of fundamentality.

The third adequacy condition derives from the way the 'all God has to do' metaphor was presented (and from completeness). In the metaphor *what* God has to do is provide an 'account' or a 'description' of some kind. This implies—for lack of a better name—a propositional or truth-like constraint on our theories of fundamentality. Simply put, the constraint is: our theories of fundamentality must be able to answer why a fundamental or nonfundamental sentence, proposition or truth holds according to the theory. This constraint seems to follow from completeness insofar as completeness is concerned with a relationship between fundamental and nonfundamental *truths*. If our theory of fundamentality does not implement the notion of a truth, then it cannot answer questions about why certain nonfundamental truths hold. If this is a legitimate constraint, then purely ontological theories of fundamentality that offer an account of the fundamental and its relationship to the nonfundamental *solely* in terms of *entities* are disqualified as accounts of fundamentality (Sider 2011, 162). According to this constraint the *explanandum* must be a truth of some kind and its *content* must be explained in the given theory. This constraint has a distinctive explanatory element. A theory of fundamentality that grounds propositions *qua* entities in fundamental substances cannot satisfy the constraint since we are not concerned with grounding the proposition as an entity but rather concerned with explaining its content or what it represents (Sider 2011, 165). We might respond on Schaffer's behalf by saying that the truth of nonfundamental truths is grounded in entities, but that this just means propositions *about* these entities are true.

But in general we can ask: is this condition too stringent? On the face of it the propositional constraint only follows from our formulation of completeness in terms of truths. A possible remedy is to reformulate completeness according to Schaffer's theory. Completeness comes out as: *every nonfundamental entity is grounded in some fundamental entity (or entities)*. Is this formulation permitted? If not, why not? If 'it is natural to assume that the fundamental must be complete' and so 'responsible for everything' else and that it 'would be a non-starter to say the fundamental consists solely of *one electron*' (Sider 2011, 105, my italics),[35] then why can't completeness be cashed out in terms of *entities*? What independent reason do we have for saying that fundamentality cannot be solely understood in terms of entities? Is not the fundamental at least for some just objects in our ontology?[36] I raise these problems in the form of questions to show that while our adequacy conditions are supposed to be universal constraints on competing theories, their content is understood in terms of how a theory formulates the requisite condition. In addition, the discussion is confronted with differing senses of the word 'fundamental', and this too is partly a cause of metaphysicians operating with different metaphysical systems. Having said that, let us accept all three adequacy conditions.

In what follows, I focus on articulating and assessing two differing accounts of truthmaking as theories of fundamentality. First, I present a recent account by Cameron (forthcoming). According to Cameron, the list of fundamental truths contains only the truths that are true in virtue of no other truths. The truths that are not true in virtue of any further truths are labelled as brute. All other truths are true in virtue of the brute truths. I then discuss some objections to Cameron's view (§4.2). I articulate the second account which has been hinted at by Forrest and

[35] My italics here are meant to highlight that the paraphrasing of Sider is *only* alluding to talk of entities and not talk of truths.
[36] When I say 'objects' here I mean entities of every ontological category; so a property counts as an object.

Drew Khlentzos (2000) and further developed by Mellor (2009) and highlight some of its advantages over Cameron's view (§4.3). According to the second view, as I articulate it here, only certain truths have truthmakers. The truths that have truthmakers are called primary truths. All other truths, i.e., the truths that are not primary (following Sider) have a metaphysical semantics. The second account is very similar to Sider's theory of fundamentality. The difference between the views is that where Sider posits an unanalysable 'structure' operator the proponent of the second truthmaking account posits an unanalysable two-place 'makes true' predicate (or operator). In the final section of this chapter I compare Sider's account with the second truthmaking view and defend the second truthmaking account against some objections. My overall claim is *if* we adopt truthmaking as a theory of fundamentality, we should adopt the second account.

4.2 Cameron on Truthmaking

Cameron (2008c, forthcoming) defends a theory of truthmaking that can properly be said to count as a 'truthmaking theory of fundamentality'.[37] On his view the locution 'in virtue of'[38] is taken as a piece of primitive ideology (forthcoming, 3). This locution is meant to express the idea that one truth is true in virtue of some other truth or plurality of truths.[39] The locution 'in virtue of' only applies to truths; it does not relate entities and truths.[40] For Cameron, truthmaking

[37] Other truthmaker theorists, such as, Armstrong do not load their truthmaking with heavy talk of fundamentality.
[38] Cameron takes the converse of 'in virtue of' to be 'grounds'. I take this use of 'grounds' to be 'truth-grounds' since the use of 'in virtue of' is really 'is true in virtue of'. The locution 'truth-grounds' is to be distinguished from 'entity-grounds'. Cameron writes 'in virtue of' claims using '⇒' such that 'q⇒p' means '<q> grounds <p>' or '<p> is true in virtue of <q>'.
[39] I ignore the complication of one truth being true in virtue of many truths.
[40] Cameron does not say anything about the constituents of propositions. It seems he is silent on this issue. I do not think it affects any part of his theory.

literally encapsulates the idea that truth is grounded in ontology; what is the case depends on *what there is*. He writes, 'explanation only bottoms out at existence facts: for God to give a complete plan of the world He needs [sic] only make an inventory of what is to exist' (2008c, 112-3). Why is this account beneficial? According to Cameron, it provides us with a small class of brute truths. Brute truths are truths that have 'no ground', or rather are not true in virtue of anything. Every other truth is true in virtue of some truth. The latter truths he calls 'derivative'. He now writes:

> Call the set containing all and only the brute propositions Π. If Π is empty then every proposition is derivative, in which case no proposition has an ultimate ground.
>
> Consider also the set – call it Σ – of propositions whose entire content is that some thing, or some things, exist(s): call these propositions *pure existence claims*. E.g., 'a exists'.
>
> ...
>
> <u>Truthmaking</u>: A proposition $<p>$ is made true by X, or the Xs, just in case *either* (i) $<p>\in\Pi$ & $<p>\in\Sigma$ & $<p>$ says that X (or the Xs) exist(s) *or* (ii) $\exists x(x \Rightarrow p$ & $x\in\Pi$ & $x\in\Sigma$ & x says that X (or the Xs) exist(s)).
>
> That is: a proposition is made true by some things, the Xs, if and only if it is the brutely true pure existence claim that the Xs exist or it is true in virtue of the brutely true pure existence claim that the Xs exist. (forthcoming, 5)

The brute truths, he further states, are a subset of the existential sentences, e.g., 'a exists'. But, if we add the claim that every truth is either brute or is true in virtue of some brute proposition (perhaps through some chain of 'in virtue of' statements), then we have arrived at the

idea, according to Cameron, that each and every truth has some truthmaker or truthmakers (Cameron forthcoming, 6). This is the doctrine of truthmaker maximalism.

Another part of Cameron's account is his commitment to TM-N (see Cameron forthcoming, §3). Although this extra condition is not entailed by his definition of truthmaking he seems happy to add it to his account, and it seems at first glance that his definition of truthmaking is not incompatible with TM-N.

Cameron's truthmaker theory of fundamentality is attractive. As Sider describes the view, 'the realm of the fundamental is exceedingly sparse' (2011, 157). In addition, the fundamental ideology of the theory does not involve primitive negation, primitive tense operators, or primitive modal operators. Brute truths need only be stated using quantification, names and the identity predicate, e.g., 'there is an x such that $x = a$'. In addition, the 'in virtue of' connection connects the fundamental and the nonfundamental. Thus we have an account of fundamentality in terms of truthmaking. The realm of the fundamental is the collection of truths that are true in virtue of nothing and they relate to the nonfundamental just because the nonfundamental truths hold in virtue of the fundamental truths. On this view, completeness is understood as follows: *every nonfundamental truth holds in virtue some (brute) truth*. From completeness we can formulate purity and satisfy the propositional constraint.[41]

For the rest of this section I evaluate some problems and objections against Cameron's view. Although I do not think all the objections are decisive we will see in the next section how the second account of truthmaking can respond to the objections that pose a genuine problem for Cameron's account.

[41] It is possible to formulate completeness in terms of purity. But I leave this to one side here.

The first problem comes from a well-known consequence of truthmaker-maximalism. Consider the proposition <there are no bunyips>.[42] If each and every truth has a truthmaker, then there must be a truthmaker for this truth. The project of finding truths for negative existentials usually leads to postulating a totality state of affairs that tells us which first-order states of affairs there are and that they are the only first-order states of affairs that exist (see Armstrong 2004b). But if we introduce a totality state of affairs into our ontology, we will presumably introduce some accompanying ideology.[43] According to Sider, this requires introducing the functor 'the state of affairs of *x*' that 'turns a sentence into a singular term naming a state of affairs' (2011, 157). If the functor is not analysed in terms of anything else, then it will have to be taken as primitive. Hence, if this kind of truthmaking advertises itself as a theory of fundamentality that purports to consist in fundamental facts that are purely existential, then it has (following Sider) 'smuggled in' extra primitive ideology.

The second objection concerns the viability of truthmaking as an explanatory theory. Given that the fundamental truths are solely existential truths, it seems we are denied any explanatorily satisfying explanations of the complexity of the world we experience or the patterns and mechanisms found in nature. An 'ultimate' or fundamental explanation, one that only involves the fundamental truths of our theory, can only be explanatorily satisfactory (according to Sider) just in case we cite 'detailed general laws or patterns or mechanisms' (Sider 2011, 159). Cameron's theory of truthmaking cannot provide this kind of structured fundamental explanation. As Sider concludes:

[42] Bunyips are mythical creatures that are said to lurk in billabongs and creeks throughout Australia.
[43] Elsewhere Cameron (2010a) takes states of affairs as ontologically basic.

> 'Ultimate explanations [on Cameron's view] always terminate in the citation of entities; but since a mere list of entities is so unstructured, these "explanations" cannot be systematized with detailed general laws, patterns, or mechanisms' (2011, 160).

Given that we require 'ultimate' or fundamental explanations to be more illuminating, we should reject Cameron's account of truthmaking. But, what exactly does an illuminating explanation look like? What is required to satisfy 'general laws, patterns and mechanisms'? We need, it seems, 'structured and plentiful fundamental truths' and 'detailed stories' about how nonfundamental truths hold in virtue of fundamental truths (Sider 2011, 161). The structured and plentiful fundamental truths will be truths with predicational and quantificational structure. Such truths will allow us to properly explain the complexity of the world that we think needs to be accounted for in a fundamental explanation.

I think this objection has *some* force. But on Cameron's behalf we can question the assumption that fundamental truths need to explain the 'complexity of the world we experience' and the 'detailed patterns and mechanisms found in nature'. The detailed patterns and mechanisms 'found in nature' for all we know may not themselves be fundamental. If they are not fundamental, why do they require a fundamental explanation? It would be like demanding an *economist* to provide fundamental explanations of the fluctuation of the price of crude oil solely in terms of micro-physical facts. If the patterns of the fluctuation of the price of crude oil are nonfundamental, why must we demand a fundamental explanation of *this* pattern? It is possible that the world fundamentally has the kind of existential structure posited by Cameron's theory of truthmaking and that the relevant patterns and mechanisms are nonfundamental. So, I do not see why a requisite explanation needs to account for them *using only fundamental truths*. However, Sider can insist that given completeness everything needs a fundamental explanation. So

although we may accept that, for instance, the complexity we experience is not fundamental, it nonetheless needs a fundamental explanation.

The last objection that remains is the centrepiece of Sider's sweeping critique not only of truthmaking but of many other theories of fundamentality. This is the objection from purity. The main move in the argument is: if a theory violates purity, the theory should be rejected. A theory violates purity just when the theory contains a fundamental fact that involves nonfundamental notions. In other words, a fact which should be nonfundamental is really fundamental according to the theory in question. But recall that if each competing theory can fill out its own conception of completeness, then it should be able to fill out its own conception of purity. This should be uncontroversial if completeness can entail purity. We will come back to this point.

First, let us attempt to mount the objection from purity against Cameron's view. The constraint says that fundamental truths must not involve nonfundamental notions/entities/terms, etc. But what we need to find is a fact that is said to be fundamental according to Cameron that involves a nonfundamental notion. Let us consider the following:

(B1) <there exists a city> is made true by the Xs

On Cameron's view, (B1) is equivalent to:

(B2) <there exists a city> is true in virtue of <there exist the Xs>[44]

(B1) is equivalent to (B2) because all nonfundamental truths (such as <there exists a city>) are truths that involve an 'in virtue of' connection between *propositions*. This holds for (B2) as well. (B2) is also nonfundamental. In fact, any fundamental truths will be of the form:

[44] There might be a longer chain of 'in virtue of' statements that I am suppressing here.

(B3) <the Xs exist> is made true by the Xs.

Thus, we cannot say according to Cameron's view that the nonfundamental notion of a city is involved in a truth that is said to be fundamental. So let us consider (B3). Does it involve any nonfundamental notions? Indeed it does, for 'is made true by' is nonfundamental. It is analysed in terms of 'in virtue of'. So, (B3) is not purported to be a fundamental fact according to Cameron. Given that 'is made true by' is analysed in terms of 'in virtue of', (B3) is equivalent to:

(B4) <the Xs exists> is true in virtue of nothing.[45]

Does (B4) violate purity? <the Xs exists> is a fundamental truth and 'in virtue of' is fundamental. So it appears (B4) is pure. There is no violation of purity here since this fundamental fact does not involve any nonfundamental notions. What Sider's objection from purity is designed to banish is connecting truths that are fundamental. Purity requires that connecting truths should be nonfundamental. But on Cameron's view there are no fundamental connecting truths. What would be connecting fundamental truths such as (B4) are truths that are negatively defined as some truth (i.e., <the Xs exists>) that is true in virtue of nothing. I conclude that Cameron's theory has some problems but the violation of purity is not amongst them.

[45] The extra condition I left out is <the Xs exist> say that the Xs exist. This should not matter here.

4.3 Moderate Truthmaking

Let us attempt to construct a more moderate theory of truthmaking, one that will in part be a reaction to the problems Cameron faces and the concerns Sider raises, but also with an eye towards providing a theory of fundamentality.

First, recall that Cameron endorses TM-N. In the previous chapter I argued that TM-N should be rejected. I suggested that one possible alternative is ideological primitivism about truthmaking.[46] This view was given two interpretations. On the first interpretation 'makes true' is a piece of primitive ideology that applies to truthmaker (entity) and truth. On the second interpretation, 'makes true' is understood as a non-truth-functional operator that produces sentences of the form 'TM(T, S)' where the ontological commitments of 'T' are whatever 'T' refers to and 'S' is just a sentence (Melia 2005, 79). On both views 'makes true' captures the intuition that truth depends on reality in an intimate way, it expresses the notion of a more intimate connection than supervenience, necessitation or entailment. It is also cross-categorial and thus better captures the intuition of truthmaking than Cameron's view. An entity makes true a proposition not because the proposition is true in virtue of nothing (or better in virtue of no other proposition), but precisely the opposite. I take this to be one of its advantages over Cameron's approach for we have upheld the intuition that the world *makes* propositions true. Moreover, the moderate truthmaking account, as I will develop it, is not committed to truthmaker-maximalism (or TM-M for short). As we saw above, TM-M forces us to introduce ontological oddities we are better off without. Such ontological oddities include the totality state of affairs which forces us to include an extra piece of ideology that Cameron at least initially is

[46] However, ideological primitivism about truthmaking is not built into moderate truthmaking. And necessitation is not precluded from being a necessary condition of truthmaking.

not willing to countenance. On the moderate view such primitive ideology need not be foisted upon us.[47]

In what follows, we will be up front about our ontological and ideological commitments.[48] I outline moderate truthmaking with an ontology of universals and particulars. As a result, I depart from Melia's nominalist truthmaking and adopt the 'makes true' predicate view. But where appropriate I mention Melia's variant. Let us begin. States of affairs are concrete entities that are composed of universals[49] and particulars.[50] For example, *Jim's being late* and *this pen's being red*. These states of affairs have as constituents universals and particulars. The particular component of *Jim's being late* is *Jim* and the universal component is *being late*. Likewise, the particular component of *this pen's being red* is *this pen* and the universal component is *being red*. Users of states of affairs have numbered high. Such philosophers include: (Armstrong, Forrest, Mellor, Russell, and Wittgenstein). In this tradition, states of affairs are often called facts.[51] Mellor introduces the novel term 'facta' for states of affairs. Whereas Armstrong thinks 'states of affairs' is a more appropriate term since it properly captures the fact that 'states of affairs' is a technical term of philosophical art. The word 'fact' and the locution 'the fact that' are all too common in ordinary language and have a variety of differing senses, ranging from

---

[47] It will not be foisted upon us in the sense that we won't advertise our theory as such-and-such and then later admit that other entities need to be introduced into our ontology. We are up front with our ontological and ideological commitments (which I discuss shortly).
[48] One caveat: the ontology I develop here may not be accepted by all moderate truthmaker theorists.
[49] The use of the word 'universal' here includes relations.
[50] Since they are concrete they exist in space and time. But how states of affairs exist in space and time and questions about their exact relationship to space and time are not relevant in what follows. But see (Armstrong 1997b, 137) who claims that states of affairs constitute spacetime. In other places he says that spacetime points can instantiate universals (1989, 99). It might be helpful to simply say that states of affairs are spatio-temporal entities and leave it at that.
[51] To make matters worse, some people use the word 'fact' as 'true proposition' as I have been doing. When there is an ambiguity between understanding fact *qua* true proposition and fact *qua* state of affairs, I will make it explicit what use of the term 'fact' I have in mind.

'something is the case' to 'an event that has passed'.[52] I will use the term 'states of affairs' and regard states of affairs as concrete entities. Such entities are also contingent and causally efficacious. Jim may have shown up on time, so it is contingent that *Jim's being late* exists.[53] *Jim's being late* however caused me to have the universal *being upset*. So, *Jim's being late* caused *Anthony's being upset*. So, states of affairs can enter into causal relations. Indeed this is one role they have been signed up for in a theory of states of affairs (see Armstrong 1997b, ch. 14; Mellor 1995). I also assume that the postulation of universals is well motivated and appeal to the work of others who have argued for this claim.

On the view I adopt there are only sparse universals and particulars, only the entities that are required to play whatever roles are needed to be played. To illustrate, one refined property role that needs to be filled is the role of objective similarity. Intuitively, it seems that two Higgs bosons go together in a different way than two Higgs bosons and a bison. The two bosons resemble each other in a way that is distinct from the bosons and the bison. Of course the bosons and the bison share many properties. But the bosons exactly resemble each other in virtue of sharing a universal. They go together in this ontologically important way. The fact that the bosons exactly resemble each other is explained by the fact that they both share a universal. The bosons and the bison do not share this unique universal and this is why they do not exactly resemble each other.[54] Universals therefore fill the refined property role of objective similarity.

---

[52] See (Olson 1987, ch. 1) on the origin of the term 'fact'. One of Olson's interesting claims is that the term 'fact' preceded the locution 'the fact that' rather than the other way round.

[53] We might also say that *Jim's being late* obtains. But the obtaining/non-obtaining distinction is only *useful* if we further suppose that states of affairs are necessarily existing abstracta of the Chisholm-Plantinga variety. However, I am supposing that states of affairs are not of this variety. So, all existing states of affairs obtain according to the Armstrongian tradition, whereas only some existing states of affairs obtain according to the Chisholm-Plantinga tradition. The latter believe that there exist states of affairs that do not obtain.

[54] Of course, the bosons and the bison might share other 'properties' but the specified role here is about exact or perfect resemblance. It is about *properties* not 'properties', that is, about properties which carve at reality's joints.

The nature of a state of affairs is usually understood in one of two ways. On one view, states of affairs are more basic than universals and particulars. According to Armstrong, universals are actually 'gutted' states of affairs, where *a's being F* is the state of affairs and the universal is __*'s being F* (Armstrong 1997, 29). Armstrong further claims that universals are 'abstractions from' states of affairs. On the second view we have the reverse: universals and particulars are the more basic entities that ground states of affairs. In what follows, I adopt the latter position. States of affairs ontologically depend on particulars and universals. As a result, there are two ontological costs: two fundamental ontological categories.[55] The category of states of affairs is however derivative, it depends on the more fundamental categories of universals and particulars. For this reason it is not considered an ontological cost.[56]

The metaphysics of universals and particulars has corresponding ideological costs, which are just as important as the ontological costs of a theory and so ought to be recognised. This was one of the main points established in chapters 1 and 2. The main ideological commitment of the theory is the 'instantiation' predicate. It is a piece of primitive ideology that figures in sentences that express fundamental facts about instantiation. The fact that particular *a* instantiates *F* is a fundamental fact. If states of affairs are taken as ontologically basic, then facts about instantiation have a good chance of being reduced (see Nolan 2008). But since I am taking universals and particulars to be ontologically fundamental entities, this route is unavailable.

The perils of vicious regress are close at hand if universals and particulars are taken as distinct categories. If *a* instantiates *F*, it seems that some further relation is required between a and the relation of instantiation; call it instantiates*. But another relation will be required

[55] We will see later that we might be able to get away with one fundamental category of entities.
[56] I am attracted to Cian Dorr's (2004) simple account of states of affairs, which I discuss below.

between instantiates, instantiates* and *a*, ... , and so on.[57] Again, if we invoke states of affairs as fundamental, the regress can be stopped (see Armstrong 1997b, 118; Hossack 2007, 41-5; Olson 1987, ch. 3). But, I submit, the regress can be stopped without taking states of affairs as fundamental entities. First, we realise that *there is* no relation of instantiation between particular *a* and *F*. If there is no relation, there is no regress of relations (cf. Quine 1980, 451). The predicate '... instantiates ...' as a piece of primitive ideology suffices to state that *a* instantiates *F* and nothing more is to be said about the matter. If we attempted to state the regress in terms of predicates, we might get the question: why does 'instantiates' apply to *a* and *F*? A regress ensues if we reply by saying 'instantiates*' applies to 'instantiates', *a* and *F*. But, the correct answer to the initial question is to say it is in virtue of nothing that 'instantiates' applies to *a* and *F*. This might sound inadequate, but that is just the view. It is recognised as a cost.[58]

The items of the ontology are truthmakers.[59] The 'truthmaking' predicate applies to an entity and some truth. Truthmakers need not be identified with states of affairs. For example, <Socrates exists> can be made true by Socrates,[60] yet <the paper is white> can be made true by a fusion of fundamental states of affairs.[61] A universal may be a truthmaker, but it simply depends on whether we need universals to directly play such a role.

On the moderate account, the only truths that are made true by truthmakers are the 'primary' truths. A truth is primary just in case it requires a truthmaker or some plurality of truthmakers.

---

[57] There are several ways to run the regress. I am glossing over them here.
[58] There are more things to say about instantiation that we could explore. But I do not have time to address them here. But see Armstrong's (2004a) treatment of instantiation as the 'intersection' of universals and particulars, and Don Baxter's (2001) view of instantiation as partial identity.
[59] I have articulated an ontology containing only universals, particulars, and states of affairs. You might think I should not rule out tropes, events or other candidate truthmaking entities. I assume here that universals, particulars and states of affairs can do the work other candidate entities are said to do.
[60] As was noted in the previous chapter, this example is controversial.
[61] These are simply illustrative examples. On the moderate view, we will see that the only truths that have truthmakers are primary propositions.

All other truths are derived from primary truths using a suitable notion of metaphysical semantics that we can adopt from Sider. What particulars and universals exist determines which truths are primary, for primary truths are the truths that have truthmakers. So, if a certain set of universals and particulars does not exist, then the corresponding set of truthmakers does not exist. If a *truth* has no truthmaker, then it is not a primary truth. Moderate truthmaking has its advocates. For instance, Forrest and Khlentzos state that,

> ... God knows only the primary truths and that the truths derivable from these by semantics are human truths. Extraterrestrials, nay postmodernists, could then have a different semantics from ordinary human beings and provided it was grounded on the same primary truths it would be as true but not necessarily as good as ours (2000, 6).

Mellor (2009) develops the moderate account by specifying the ways in which we are to determine which propositions are primary and therefore which propositions are to have truthmakers. On his view, whatever our first-order quantifiers range over will determine which particulars exists, while whatever our second-order quantifiers range over in relation to the laws of nature will determine which properties exist (see Mellor 2009, 286; cf. Mellor 2012). For our purposes, we can interpret this as the fundamental sense of first-order and second-order quantification.[62] Primary truths include <Fa>, <Gb>, <Rab>, <a exists>, <b exists>, etc. Negative, conjunctive and disjunctive truths will be excluded along with necessary truths (Mellor 2009, §8). Some molecular truths such as counterfactuals may be primary and so require truthmakers if it is true that the only world that exists is our own (Mellor 2009, 288). I won't discuss these matters further.

[62] The fact that second-order quantification is required to state that properties exist is a further ideological cost. I doubt second-order quantification can be reduced to other pieces of primitive ideology.

According to moderate truthmaking, the relationship between fundamental truths and nonfundamental truths is accounted for by a suitably undefined but nonfundamental notion of metaphysical semantics. Following Sider, metaphysical semantics can take the form of a truth-theory, and so become a project of providing metaphysical truth-conditions for statements in a nonfundamental language. This approach, as Sider admits, is 'vague' and 'perhaps not even uniquely correct' (2011, 115). But let us proceed anyway to the formulation of the moderate conception of completeness. But first, recall completeness in its theory-neutral form: every nonfundamental truth holds in virtue of some fundamental truth. Moderates presumably state completeness as: *every non-primary proposition (or statement) has a metaphysical semantics.* We will come back to completeness shortly.

Moderate truthmaking also has the benefit of directly confronting the objection that fundamental explanations are not explanatorily satisfying. Earlier we raised the objection against Cameron's theory that fundamental existential truths cannot provide a satisfactory explanation of the complexity of the world we experience and the patterns and mechanisms found in nature. A long list of existential truths is glaringly inadequate. According to moderate truthmaking we have two responses available. First, fundamental truths are not purely existential. The list of fundamental truths involves predicational truths, quantificational truths, perhaps truths concerning the laws of nature, etc. These types of fundamental truths are sufficient to provide satisfying explanations. Second, the truth-conditions for nonfundamental truths—aping Sider—can tell us the detailed stories about how nonfundamental truths hold because of fundamental truths. If metaphysical semantics is able to secure satisfying explanations, then the moderate truthmaker just as much as Sider can dodge this objection.

A possible reply: 'the truthmaker theorist in general cites entities as the explainers of truths. Entities however lack the appropriate structure to provide adequate explanations. Since the moderate conception is just another version of truthmaker theory, it cannot provide adequate explanations'. This objection, however, is misplaced. We need only consider the fundamental truths to realise that *they* have the requisite structure for adequate explanations. But let us set this aside and assume that truthmakers (i.e., entities) are the ultimate explainers.[63] They do after all make true the primary propositions. Suppose it is true that *a* is F and further suppose that it is made true by T. It seems that merely citing T or saying 'T exists' to explain that *a* is F is wholly unsatisfactory. Moderate truthmaking agrees with this verdict. Moderate truthmaking, as spelled out above, does not have an ontology of Ts, it has an ontology of universals and particulars. The universals, when instantiated by particulars, provide truthmakers capable of bridging the gap between mere entities and the propositions we need explained. As Sider admits, such an ontology plays a 'structural role' that can be used to provide satisfying explanations (Sider 2011, 164). Mere entities are not the right explainers, but entities, such as particulars that are instantiated by universals and stand in various fundamental relations to one another in a vast array distributed across spacetime are pretty good candidates for adequate explanations. This is the sort of complexity that is endorsed by moderate truthmaking.

4.4 In Defence of Moderate Truthmaking

Let us begin with the objection from purity. Purity, in its general terms, tells us that every fundamental truth must involve only fundamental notions. It is important to note that the test of

[63] Some moderates will reject this claim because they think explanations only have propositions as *relata*. Hence, the primary propositions are the ultimate explainers.

purity is operating at the level of *notions*. As Sider rightly points out, purity concerns 'the concept of a fundamental *notion*' (2011, 106, his italics). Some of the discussion becomes difficult to follow when differing metaphysical theories employ differing senses of the word 'fundamental'. I think that thinking of purity as operating at the level of notions helps with this worry about shifting senses of 'fundamental'.

Now, if <there exists a city> is made true by some plurality of truthmakers, then the truth that

(A1) '<there exists a city> is made true by some plurality of truthmakers'

involves the nonfundamental notion of a city. So, (A1) is nonfundamental. The moderate truthmaker can accept this result since the moderate's conception of completeness entails that the truths that involve nonfundamental notions do not have truthmakers. They instead have a metaphysical semantics. This is a similar move to Sider's conception of completeness where every expression that involves non-joint-carving notions requires a metaphysical semantics. Thus, moderate truthmaking does not claim that (A1) is fundamental. Mounting the objection from purity against moderate truthmaking in this way misses the target (as it did against Cameron's view). The notion of metaphysical semantics accounts for the relationship between the fundamental (the fundamental truths of the fundamental language) and the nonfundamental (the truths of the nonfundamental language).

Perhaps we should apply the objection from purity directly at truths that have truthmakers. Let us single out <Fa>. <Fa> is fundamental given that it involves the notion of a particular and the notion of a universal and nothing more. <Fa> is also made true by a truthmaker or plurality of truthmakers. Let us suppose <Fa> is made true by *a's being F*—written as [Fa]. Now, consider the following:

(A2) '[Fa] makes true <Fa>'.

Is (A2) fundamental? (A2) is a connecting truth. It connects a truthmaker (an element of fundamental ontology) to a truth. Purity requires that fundamental truths only involve fundamental notions. If a truth is said to be fundamental according to some theory and we can show that this purported fundamental truth involves a nonfundamental notion, then the theory violates purity. Supposing that (A2) is a fundamental connecting truth, does it involve a nonfundamental notion that would lead to a violation of purity? My first reaction is to say no, since it is plausible to suggest that, according to moderate truthmaking, the notion of a fundamental truthmaker, the notion of a fundamental truth,[64] and the notion of 'makes true' are all fundamental in the sense of being unanalysable notions in a theory. Therefore, purity is not violated even though (A2) is a fundamental connecting truth.

I think this response has its greatest chance of success on Melia's nominalist truthmaking approach.[65] Let us revisit Melia's nominalist truthmaking which invokes the 'TM' operator. Consider the following:

(A3) 'T makes true the sentence S'

We can write this as: 'TM(T, S)'. If 'T' and 'S' are fundamental and 'TM' is fundamental, then (A3) is pure. We can compare (A3) with other cases that involve fundamental operators such as:

(A4) '□ (all sounds have timbre)'

[64] We can further suppose that the content of <Fa> is fundamental.
[65] I am leaning towards saying that this response only works on Melia's view.

If the notion of 'sound' and 'timbre' are fundamental and '□' is fundamental in the sense of being primitive or unanalysable notions in the theory, then (A4) is pure. If (A3) is analogous to (A4), then it is equally harmless. The most likely reply is to reject that 'S' is fundamental. But what motivation do we have for saying that? It is true that in the case of (A1) (viz., '<there exists a city> is made true by some plurality of truthmakers') we have the intuitive reaction that if (A1) is said to be fundamental, then something has gone wrong. (A1) should not be fundamental on anyone's account of fundamentality. We lose this intuition, I say, or at least the degree to which it is made vivid when we consider fundamental truthmakers connected to fundamental truths using a fundamental relation, two-place predicate, operator, or whatever.[66]

The purity objection was meant to show that connecting truths for the truthmaker theorist must be by definition fundamental in the sense that connecting truths do not hold in virtue of other truths. But a connecting truth such as (A1) involves a nonfundamental notion (i.e., a non-primitive notion). Thus, if (A1) is a fundamental truth, then it violates purity. Another possible response on behalf of the moderate truthmaker is to say that connecting truths do not have to be by definition fundamental. We could question Sider's insistence that the 'method of posit' by definition makes connecting truths fundamental and show that the moderate truthmaker has resources to account for truthmaking facts as being nonfundamental. I consider two possibilities with the added note that there may well be more.[67]

First, (A2) is nonfundamental because it is not a primary truth and hence does not require a truthmaker. (A2) is after all about some proposition being made true and it has some proposition as a constituent or at least contains the notion of a proposition. (A2) is not a primary truth on this

[66] We should remind ourselves that Sider in mounting the objection from purity against truthmaker theorists only charges them with violating purity based on cases like (A1) and not (A2).
[67] If we accepted that there is a relation of truthmaking and said it is internal, then truthmaking facts could supervene on their *relata*. See (Armstrong 2004b, 50).

proposal because <Fa> is derivable from the conjunction of <[Fa] exists> and some statement <L> of a law of nature L. The first conjunct let us suppose is made true by [Fa] and the second conjunct is equivalent to a negative existential and thus needs no truthmaker. Likewise, the conjunction is not primary and does not require a truthmaker. (This response relies on independent theses about the laws of nature, which I do not have space to discuss here.)

Second, given that (A2) is about some proposition, we can attempt to explain why <Fa> refers to the truthmaker that makes it true, supposing now of course that (A2) does in fact need a truthmaker. The following strategy I take it is similar to what Sider calls 'entrenching', where the truthmaker theorist when asked about the truthmaker for (A2) provides the answer: [Fa]. However, instead of simply saying [Fa], we say the sum of [Fa], whatever makes it true that 'a' refers to *a* and whatever makes it true that 'F' applies to the *Fs*. If this sounds trivial, consider '[Fa] makes true <Gc>'. This is made true by [Fa], whatever makes it true that 'c' refers to *a*, and whatever makes it true that 'G' applies to the *Fs*. The latter truthmakers will require some further story about reference, which might be filled in by a theory of reference borrowings or the doctrine of reference magnetism. Whatever the further details, I do not see why the moderate truthmaker does not have something to say in response to purity on this score. They have the resources of semantics at their disposal.

Let us consider some other objections, for example, the charge of smuggling in unadvertised ideology. First, we need to be clear on what is being advertised and what is not. For one thing, the ontology of universals and particulars involves primitive predication of some kind. We require at least the 'instantiation' predicate. So, unlike Cameron's theory we are not advertising a truthmaking theory of fundamentality that solely consists of existential truths. Thus moderate truthmaking is closer to Sider's conception of fundamentality.

This raises the question of how controversial the moderate theory really is. Let us revisit the comparison between the moderate truthmaker and Sider. Sider's view of fundamentality has two main components: 1) 'structure' and 2) 'metaphysical semantics'. The moderate truthmaker theory of fundamentality also has two main components: 1) 'makes true' and 2) 'metaphysical semantics'. If we restrict the word 'fundamental' to truths, then Sider and the moderate truthmaker have almost the same accounts of the relation between nonfundamental and fundamental truths. The real difference lies in the ideology of structure versus the ideology of truthmaking. The former characterises fundamental truths in terms of truths involving non-joint-carving or non-structural expressions, while the latter characterises fundamental truths as primary propositions.

The real debate between Sider and the moderate truthmaker will come down to the disagreement over the first component, and hence a dispute between 'structure' and 'makes true'. This debate is unfortunately beyond the scope of this chapter and dissertation. I leave it for future work that will no doubt be discussed in the literature over the coming years.

I will say however one thing in favour of moderate truthmaking in this context. Moderate truthmaking accounts for at least two differing senses of the word 'fundamental' where other theories of fundamentality only account for one. The moderate truthmaker gets at the intuition of fundamentality as something about entities in the world. These entities are the truthmakers, universals instantiated by particulars. But at the same time the moderate truthmaker captures the intuition that there is something important about the description of the world that is given by the truths that are made true by truthmakers. Therefore, moderate truthmaking nicely captures these two senses of 'fundamental' at the same time. Given the shifting sense of the word 'fundamental' throughout the entire discussion, I take this to be an advantage on some level over theories such

as Sider's that accounts for fundamentality solely in terms of truths and Schaffer's that accounts for fundamentality solely in terms of entities. As noted at the outset, the truthmaking approach is an attractive mix of the linguistic and ontological accounts of fundamentality.

There are two more objections to consider. Moderate truthmaking, as advertised above, does not claim that states of affairs are part of the fundamental ontology. Hence, states of affairs are not fundamental truthmakers. Yet (A2) involves the notion of a state of affairs. Have we smuggled in the ideology of states of affairs? This is one accusation Sider directs towards Cameron-like theories of fundamentality, since they claim to have an ideology of 'identity', quantification and names. Although (A2) involves the notion of a state of affairs, talk of states of affairs can be reduced to particulars instantiating universals. After all, we took the categories of universals and particulars as fundamental. Dorr (2004) has put forth a useful hypothesis that is relevant here. He calls it the simple theory of states of affairs. On this view we have the two primitive predicates '... is a particular component of ...' and '... is a universal component of ...' and we analyse 'the state of affairs of a's being F' as 'there is an s such that a is the only particular component of s and F is the only universal component of s' (see Dorr 2004, 158).[68] This seems to be one way for the moderate conception to respond to the charge of smuggling unchecked ideology.

There is one last objection I want to address concerning the ontology that was used in defending the moderate truthmaking conception of fundamentality. The objection is levelled against the precise nature of the entities in question. Recall that particulars instantiate universals and universals are instantiated by particulars. For instance, the Higgs boson instantiates the universal *being 125 giga-electron volts*. Presumably, universals and particulars obey modal

[68] Cf. (Dorr 2004, 188-9). We are also quantifying over a and F.

principles, such as, 'particulars can only instantiate universals', and 'universals can only instantiate universals of higher orders'. It is not possible for Plato to instantiate Socrates and it is not possible for *being red* to instantiate *being purple* (see MacBride 1999, 487). Plato can only instantiate universals such as *being wise*, and *being red* can only instantiate *being a colour*. In addition, since the categories of universals and particulars are taken as fundamental, the entities that are members of one category cannot become a member of the other category. It is not possible for Plato to suddenly become the universal *being wise*.

Fraser MacBride (1999) argues that given these kinds of modal principles the concept of a universal and the concept of a particular are riddled with modal notions.[69] If the concept of a universal and the concept of a particular are modal, then the ideology of the theory involves primitive modal notions and thereby ideologically commits us to some collection of fundamental modal facts. This type of ideological commitment, however, ought to be avoided (cf. Sider 2011, ch. 12). There should not be any pieces of primitive ideology that are modal in any way, whether they are modal operators or modal predicates.

Our first reaction is to say that although there are modal truths that must hold for an entity to be a universal, it simply does not follow that the relevant modal notions are themselves part of the notion of a universal or particular.[70] Therefore, we can deny that necessity is part of the concept of a universal and the concept of a particular.

---

[69] MacBride (1999) further argues that a reductive account of modality cannot be based on universals and particulars. This objection is irrelevant here since I am not offering an account of modality. What is of interest is the major premise of his argument.

[70] André has said in correspondence: "It would be like saying if a person is necessarily conscious, it follows that necessity is part of the concept of a person." Or that the concept of a person is modal. Thanks to André Gallois for comments.

However, we have another response available. It is not the case that the concept of a universal and the concept of a particular are taken as primitive in the theory.[71] Let us now say there are entities and some instantiate others and this is taken as a fundamental fact. Since the two-place predicate '… instantiates …' is taken as a piece of primitive ideology it is a brute fact that some things instantiate others. Thus, there is really one fundamental category of entities. But amongst the instantiated entities are items that we can call universals and amongst the uninstantiated entities are items that we can call particulars (cf. Sider 2011, 292).[72] (I assume that there are no uninstantiated universals. If there were uninstantiated universals, then amongst some of the uninstantiated entities there would be uninstantiated universals.) The type of fundamental story, as told now, does not require the principle that particulars can only instantiate universals or that universals can only instantiate universals of a higher-order. Thus, our ideology does not contain any primitive modal notions.

In summary of the main points of this chapter, I claim that if we are to adopt a theory of truthmaking, then we should accept the moderate truthmaker theory of fundamentality. Although Cameron's theory can meet the purity objection, I find that the lack of structured truths results in a fundamental description of reality that is too unstructured. In addition, the objection that Cameron's account smuggles in extra primitive ideology by introducing a totality state of affairs via truthmaker-maximalism is an extra ideological cost that goes unadvertised in his theory. Without some deeper explanation of the structure of totality states of affairs, Cameron should explicitly admit into his ideology expressions that help describe facts about states of affairs. By

[71] I adopt this response from (Forrest 1986a, 91).
[72] Compare this to Sider's 'worldview' which contains an ontology of sets and points of spacetime with an ideology of set-membership, physical predicates e.g., '... is open', and first-order logic. Notice that Sider does not include the primitive predicate '... is a set'. He writes: There is exactly one thing that has no members but is not a member of any open thing [this is the null set]; everything else either has a member [and so is a set], or is a member of some open thing [and so is a point of spacetime] (2011, 292).

contrast, moderate truthmaker gets around the worries concerning smuggled ideology and gets around the problem of not having unstructured truths to explain laws and patterns in nature. In both cases, moderate truthmaker explicitly highlights the ontological and ideological costs of his view. The ontological costs are an ontology of universals and particulars and the ideological costs are an 'instantiation' and 'makes true' predicate. In the end I think the real debate will be between Sider and moderate truthmaking. The disagreement will arise between the ideology of 'structure' versus the ideology of 'truthmaking'. This is an ideological disagreement between Sider's 'S' operator and the moderate truthmaker's 'makes true' predicate, or using Melia's nominalist variant the 'TM' operator. This debate however must wait for another day.

To conclude the dissertation as a whole, I have established that metaphysics should take ideology seriously in metaphysical theorising and in particular metaphysical debates. In chapter 1 we saw how ideology was important to understanding the debate between realism about universals and nominalism. In chapter 2 we saw how ideology made a difference to the debate between mereological nihilism and anti-nihilism. In chapter 3 I applied the methodological conclusions of chapter 1 and 2 to theories of truthmaking to show that primitivism about truthmaking is a serious contender alongside Schaffer's grounding theory of truthmaking. And in chapter 4 we have seen that the real disagreement between Sider and the moderate truthmaker concerns some piece of primitive ideology that helps describe reality in some fundamental way. Ideological realism explains why disagreements about ideology should not be taken lightly. In fact, in many cases the ideology matters more than what the theory quantifies over.

Bibliography

Alston, William. 1958. Ontological Commitments. *Philosophical Studies* 9(1-2): 8-16.

Armstrong, D. M. 1978a. *Nominalism and Realism*. Cambridge: Cambridge University Press.

—. 1978b. *A Theory of Universals*. Cambridge: Cambridge University Press.

—. 1989. *Universals: an opinionated introduction*. Boulder: Westview Press.

—. 1997a. Properties. In *Properties*, ed. D. H. Mellor and A. Oliver. New York: Oxford University Press.

—. 1997b. *A world of states of affairs*. Cambridge ; New York: Cambridge University Press.

—. 2004a. How Do Particulars Stand to Universals? In *Oxford Studies in Metaphysics vol. 1*, ed. D. Zimmerman. Oxford: Clarendon Press.

—. 2004b. *Truth and Truthmakers*. Cambridge: Cambridge University Press.

Armstrong, D. M., Martin, C. B., and Place, U. T. 1996. *Dispositions: A Debate*. London: Routledge.

Azzouni, Jody. 1998. On 'On What There Is'. *Pacific Philosophical Quarterly* 79: 1-18.

Bar-Elli, G. 1980. Ontology and Ontological Commitment. *Scientia* 115: 301-20.

Baxter, Donald L. M. 2001. Instantiation as Partial Identity. *Australasian Journal of Philosophy* 79(4): 449-64.

Beebee, Helen, and Dodd, Julian. 2005. Introduction. In *Truthmakers: The Contemporary Debate*, ed. H. Beebee and J. Dodd. Oxford: Clarendon Press.

Benardete, José A. 2002. Logic and Ontology: Numbers and Sets. In *A Companion to Philosophical Logic*, ed. D. Jacquette. Malden: Blackwell.

Bennett, Karen. 2009. Composition, Colocation, and Metaontology. In *Metametaphysics: New Essays on the Foundations of Ontology*, ed. D. Chalmers, D. Manley and R. Wasserman. Oxford: Clarendon Press.

Bigelow, John. 1988. *The Reality of Numbers: A Physicalist's Philosophy of Mathematics*. Oxford: Clarendon Press.

Bird, Alexander. 2007. *Nature's Metaphysics: Laws and Properties*. Oxford: Clarendon Press.

Bricker, Phillip. 2008. Concrete Possible Worlds. In *Contemporary Debates in Metaphysics*, ed. T. Sider, J. Hawthorne and D. Zimmerman. Oxford: Blackwell.

Brogaard, Brit. 2008. Inscrutability and Ontological Commitment. *Philosophical Studies* 141(1): 21-41.

Cameron, Ross P. 2005. Truthmaker Necessitarianism and Maximalism. *Logique et Analyse* 48: 43-56.

—. 2008a. Comments on Merricks' Truth and Ontology. *Philosophical Books* 49(4): 292-301.

—. 2008b. Truthmakers and ontological commitment: or how to deal with complex objects and mathematical ontology without getting into trouble. *Philosophical Studies* 140: 1-18.

—. 2008c. Truthmakers, Realism and Ontology. In *Being: Developments in Contemporary Metaphysics*, ed. R. Le Poidevin. Cambridge: Cambridge University Press.

—. 2010a. From Humean Truthmaker Theory to Priority Monism. *Noûs* 44(1): 178-98.

—. 2010b. On the Source of Necessity. In *Modality: Metaphysics, Logic, and Epistemology*, ed. B. Hale and A. Hoffman. Oxford: Clarendon Press.

—. forthcoming. Truthmakers. In *The Oxford Handbook of Truth*, ed. M. Glanzberg. Oxford: Oxford University Press.

Campbell, Keith. 1990. *Abstract particulars*. Oxford, UK ; Cambridge, Mass., USA: B. Blackwell.

Chihara, Charles S. 1990. *Constructibility and mathematical existence*. Oxford
New York: Clarendon Press ;
Oxford University Press.

Crane, Tim. 1991. All God has To Do. *Analysis* 51(4): 235-44.

Daly, Chris. 2005. So, Where's the Explanation? In *Truthmakers: The Contemporary Debate*, ed. H. Beebee and J. Dodd. Oxford: Clarendon Press.

David, Marian. 2005. Armstrong on Truthmaking. In *Truthmakers: The Contemporary Debate*, ed. H. Beebee and J. Dodd. Oxford: Clarendon Press.

Dodd, Julian. 1999. Farewell to states of affairs. *Australasian Journal of Philosophy* 77(2): 146-60.

Dorr, Cian. 2002. *The Simplicity of Everything.* Dissertation, Princeton University.

—. 2004. Non-symmetric Relations. In *Oxford Studies in Metaphysics vol. 1*, ed. D. Zimmerman. Oxford: Clarendon Press.

—. 2005. What we Disagree about when we disagree about Ontology. In *Fictionalism in Metaphysics*, ed. M. Kalderon. Oxford: Clarendon Press.

Dyke, Heather. 2008. *Metaphysics and the representational fallacy*. New York: Routledge.

Field, Hartry H. 1980. *Science without numbers : a defence of nominalism*. Princeton, N.J.: Princeton University Press.

Fine, Kit. 2010. Towards a Theory of Part. *Journal of Philosophy* 107(11): 559-89.

Forrest, Peter. 1986a. Neither Magic nor Mereology: A reply to Lewis. *Australasian Journal of Philosophy* 64(1): 89-91.

—. 1986b. Ways worlds could be. *Australasian Journal of Philosophy* 64(1): 15-24.

—. 1993. Just Like Quarks? The Status of Repeatables. In *Ontology, Causality and Mind*, ed. J. Bacon, K. Campbell and L. Reinhardt. Cambridge: Cambridge University Press.

—. 2006. The Operator Theory of Instantiation. *Australasian Journal of Philosophy* 84(2): 213-28.

Forrest, Peter, and Khlentzos, Drew. 2000. Introduction: Truth Maker and Its Variants. *Logique et Analyse* 43: 3-15.

Fox, John. 1987. Truthmaker. *Australasian Journal of Philosophy* 65(2): 188-207.

Gettier, Edmund. 1963. Is Justified True Belief Knowledge? *Analysis* 23: 121-3.

Gottlieb, D. 1980. *Ontological Economy: Substitutional Quantification and Mathematics*. Oxford: Oxford University Press.

Gregory, Dominic. 2001. Smith on Truthmakers. *Australasian Journal of Philosophy* 79(3): 422-7.

Heil, John. 2000. Truth-making and Entailment. *Logique et Analyse* 43: 231-42.

—. 2003. *From an ontological point of view*. Oxford: Clarendon Press.

Heller, Mark. 1996. Against Metaphysical Vagueness. *Noûs* 30: 177-85.

Hirsch, Eli. 2011. *Quantifier variance and realism : essays in metaontology*. New York: Oxford University Press.

Hodges, M. 1972. Quine on 'Ontological Commitment'. *Philosophical Studies* 23: 105-10.

Hofweber, Thomas. 2009. Ambitious, Yet Modest, Metaphysics. In *Metametaphysics: New Essays on the Foundations of Ontology*, ed. D. Chalmers, D. Manley and R. Wasserman. Oxford: Clarendon Press.

Hossack, Keith. 2007. *The metaphysics of knowledge*. Oxford ; New York: Oxford University Press.

Hudson, Hud. 2005. *The Metaphysics of Hyperspace*. Oxford: Oxford University Press.

Humphries, Jill. 1980. Quine's Ontological Commitment. *Southern Journal of Philosophy* 18(2): 159-67.

Jackson, Frank. 1998. *From metaphysics to ethics : a defence of conceptual analysis*. Oxford: Clarendon Press.

Jubien, M. 1972. The Intensionality of Ontological Commitment. *Noûs* 6: 378-87.

Kriegel, Uriah. 2008. Composition as a secondary quality. *Pacific Philosophical Quarterly* 89: 359-83.

Lewis, David. 1983. New Work for a Theory of Universals. *Australasian Journal of Philosophy* 61(4): 343-77.

—. 1986a. Against Structural Universals. *Australasian Journal of Philosophy* 64(1): 25-46.

—. 1986b. *On the plurality of worlds*. Oxford, UK ; New York, NY, USA: B. Blackwell.

—. 1991. *Parts of classes*. Oxford, UK ; Cambridge, Mass., USA: B. Blackwell.

—. 1992. Armstrong on combinatorial possibility. *Australasian Journal of Philosophy* 70(2): 211-24.

—. 2001. Truthmaking and Difference-Making. *Noûs* 35(4): 602-15.

—. 2002. Tensing the Copula. *Mind* 111(441): 1-14.

—. 2003. Things qua truthmakers. In *Real Metaphysics: Essays in Honour of D. H. Mellor*, ed. H. Lillehammer and G. Rodríguez Pereyra. London: Routledge.

Lewis, David, and Lewis, Stephanie. 1970. Holes. *Australasian Journal of Philosophy* 48(2): 206-12.

Liggins, David. 2008. Nihilism without Self-Contradiction. In *Being: Developments in Contemporary Metaphysics*, ed. R. Le Poidevin. Cambridge: Cambridge University Press.

MacBride, Fraser. 1999. Could Armstrong Have Been a Universal? *Mind* 108(431): 471-501.

McDaniel, Kris. 2009. Structure-Making. *Australasian Journal of Philosophy* 87(2): 251-74.

Melia, Joseph. 1995. On What There's Not. *Analysis* 55(4): 223-29.

—. 2005. Truthmaking without truthmakers. In *Truthmakers: A Contemporary Debate*, ed. H. Beebee and J. Dodd. Oxford: Oxford University Press.

—. 2008. A World of Concrete Particulars. In *Oxford Studies in Metaphysics vol. 4*, ed. D. Zimmerman. Oxford: Oxford University Press.

Mellor, D. H. 1991. Properties and Predicates. In *Matters of Metaphysics*, ed. D. H. Mellor. Cambridge: Cambridge University Press.

—. 1995. *The Facts of Causation*. London: Routledge.

—. 2003. Replies. In *Real Metaphysics: Essays in Honour of D. H. Mellor*, ed. H. Lillehammer and G. Rodríguez Pereyra. London: Routledge.

—. 2009. Truthmakers for What? In *From Truth to Reality: New Essays in Logic and Metaphysics*, ed. H. Dyke. London: Routledge.

—. 2012. Nature's Joints: a Realistic Defence of Natural Properties. In *Classifying Reality*, ed. D. S. Oderberg. Oxford: Wiley-Blackwell.

Merricks, Trenton. 2001. *Objects and Persons*. Oxford: Clarendon Press.

—. 2007. *Truth and Ontology*. Oxford: Clarendon Press.

Mill, John Stuart. 1843. *A System of Logic, Ratiocinative and Inductive*. London: John W. Parker, West Strand.

Milne, Peter. 2005. Not every truth has a truthmaker. *Analysis* 65(3): 221-4.

Mumford, S. 2005. The true and the false. *Australasian Journal of Philosophy* 83(2): 263-9.

Nolan, Daniel. 2008. Truthmakers and Predication. In *Oxford Studies in Metaphysics vol. 4*, ed. D. Zimmerman. Oxford: Oxford University Press.

Oliver, Alex. 1996. The Metaphysics of Properties. *Mind* 105(417): 1-80.

Olson, Kenneth Russell. 1987. *An Essay on Facts*. Stanford: CSLI.

Orenstein, A. 1990. Is Existence What Existential Quantification Expresses? In *Perspectives on Quine*, ed. R. Barrett and R. Gibson. Oxford: Blackwell.

Parsons, C. 1970. Various Extensional Notions of Ontological Commitment. *Philosophical Studies* 21: 65-74.

Parsons, Josh. 1999. There is No "Truthmaker" Argument against Nominalism. *Australasian Journal of Philosophy* 77(3): 325-34.

Putnam, Hilary. 1975. The Refutation of Conventionalism. In *Mind, Language and Reality*, ed. H. Putnam. Cambridge: Cambridge University Press.

Quine, W. V. 1939. Designation and Existence. *Journal of Philosophy* 36(26): 701-9.

—. 1951. Ontology and Ideology. *Philosophical Studies* 2(1): 11-15.

—. 1953a. Notes on the Theory of Reference. In *From a Logical Point of View*, ed. W. V. O. Quine. (revised [1980] 2nd ed.)Cambridge, MA: Harvard University Press.

—. 1953b. On what there is. In *From a Logical Point of View*, ed. W. V. O. Quine. (revised [1980] 2nd ed.)Cambridge, MA: Harvard University Press.

—. 1953c. Two Dogmas of Empiricism. In *From a Logical Point of View*, ed. W. V. O. Quine. (revised [1980] 2nd ed.)Cambridge, MA: Harvard University Press.

—. 1960. *Word and Object*. Cambridge, MA: MIT Press.

—. 1966a. A Logistical Approach to the Ontological Problem. In *The Ways of Paradox and Other Essays*, ed. W. V. O. Quine. New York: Random House.

—. 1966b. Ontological Reduction and the World of Numbers. In *The Ways of Paradox and Other Essays*, ed. W. V. O. Quine. New York: Random House.

—. 1966c. The Scope and Language of Science. In *The Ways of Paradox and Other Essays*, ed. W. V. O. Quine. New York: Random House.

—. 1969. Reply to Hintikka. In *Words and Objections*, ed. D. Davidson and J. Hintikka. Dordrecht: Reidel.

—. 1976. Whither Physical Objects. In *Essays in Memory of Imre Lakatos*, ed. R. S. Cohen, P. Feyerabend and M. Wartofsky. Dordrecht: D. Reidel.

—. 1980. Soft Impeachment Disowned. *Pacific Philosophical Quarterly* 61: 450-1.

—. 1983. Ontology and Ideology Revisited. *Journal of Philosophy* 80(9): 499-502.

—. 1990. *Pursuit of Truth*. Cambridge, MA: Harvard University Press.

Rami, Adolf. 2009. Introduction: truth and truth-making. In *Truth and Truth-Making*, ed. E. Lowe and A. Rami. Kingston & Montreal: McGill-Queen's University Press.

Reicher, M. E., ed. 2009. *States of Affairs*. Frankfurt: Ontos Verlag.

Restall, Greg. 1996. Truthmakers, entailment and necessity. *Australasian Journal of Philosophy* 74(2): 331-40.

Rodriguez-Pereyra, Gonzalo. 2002. *Resemblance Nominalism*. Oxford: Clarendon Press.

—. 2005. Why Truthmakers. In *Truthmakers: The Contemporary Debate*, ed. H. Beebee and J. Dodd. Oxford: Clarendon Press.

Schaffer, Jonathan. 2008. Truthmaker Commitments. *Philosophical Studies* 141(1): 7-19.

—. 2009. On What Grounds What. In *Metametaphysics: New Essays on the Foundations of Ontology*, ed. D. Chalmers, D. Manley and R. Wasserman. Oxford: Clarendon Press.

—. 2010a. The Least Discerning and Most Promiscuous Truthmaker. *Philosophical Quarterly* 60(239): 307-24.

—. 2010b. Monism: The Priority of the Whole. *Philosophical Review* 119(1): 31-76.

Shapiro, S. 1997. *Philosophy of Mathematics: Structure and Ontology*. Oxford: Oxford University Press.

Sider, Theodore. 2003. Reductive Theories of Modality. In *The Oxford Handbook of Metaphysics*, ed. M. Loux and D. Zimmerman. Oxford: Oxford University Press.

—. 2011. *Writing the Book of the World*. Oxford: Clarendon Press.

—. ms. Against Parthood. Available at http://tedsider.org/papers/nihilism.pdf

Simons, Peter. 2010. Relations and Truthmaking. *Aristotelian Society Supplementary Volume* 84(1): 199-213.

Skidmore, A. 1973. Existence and the Existential Quantifier. *International Logic Review* 4: 280-3.

Szabo, Z. 2003. Believing in Things. *Philosophy and Phenomenological Research* 66(3): 584-611.

Thomasson, Amie L. 2007. *Ordinary objects*. New York: Oxford University Press.

van Inwagen, Peter. 1990. *Material Beings*. Ithaca, NY: Cornell University Press.

—. 2006. Can Mereological Sums Change Their Parts? *Journal of Philosophy* 103(12): 614-30.

Wilson, Mark. 1981. The Double Standard in Ontology. *Philosophical Studies* 39(4): 409-27.

—. 1982. Predicate Meets Property. *Philosophical Review* 91(4): 549-89.

VITA

Anthony Robert James Fisher

Place of Birth: Cape Town, RSA

Date of Birth: 19th October 1983

2012 PhD in Philosophy, Syracuse University, New York, USA

2006 B.A. (Honours, First Class, University Medal) in Philosophy, University of New England, New South Wales, AUS

2000 Graduated from Mount Isa State High School, Queensland, AUS

2009-2012 Instructor, Philosophy Department, Syracuse University

2007-2009 Teaching Assistant, Philosophy Department, Syracuse University

2006-2007 Research Assistant, Philosophy Department, University of New England

2006 Tutor, Philosophy Department, University of New England

2012 Pure Hypocrisy. *Philosophy in the Contemporary World* 19(1): 32-43 (with Tony Lynch).

2011 Causal and Logical Necessity in Malebranche's Occasionalism. *Canadian Journal of Philosophy* 41(4): 523-48.