Deep Platonism

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According to the bundle theory, particulars are bundles of universals. For example, this blue cup is a bundle of universals including blueness, cuphood, etc. The elements of a bundle are said to be *compresent*, which distinguishes genuine bundles from arbitrary groupings of unrelated universals. Every particular, on this view, is a bundle of compresent universals.[1] Given the plausible claim that all the facts about bundles are grounded in facts about their members, the bundle theory entails the thesis that all the facts about particulars are grounded in facts purely about universals.[2] This thesis is what I call *deep platonism.*

For a variety of reasons, I reject the bundle theory.[3] But I accept deep platonism. I begin by showing how to meet the main objection to deep platonism

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[1] Defenders of the bundle theory include Russell (1940, esp. chaps. VI and VIII), Hochberg (1964), and Casteñeda (1974). For discussion, see Van Cleve (1985), Loux (1978, 1998a, 1998b), and Hawthorne and Sider (2002). These authors use 'universal' in different ways. I will use it as short for 'property or relation', with the understanding that properties and relations are not "tropes", and they can have many instances (*being even*), exactly one instance (*being an even prime*), or even no instances at all (*being an even prime greater than 2*).

[2] The grounding relation has recently received a great deal of attention in the literature. See, for example, Fine (2001, 2010, 2012), Correia (2005, 2010, 2011, 2013, 2014), Schnieder (2006), Cameron (2008), Schaffer (2009, 2010, 2012, forthcoming), Hofweber (2009), Rosen (2010), deRosset (2010, 2013a, 2013b, 2013c), Bennett (2011a, 2011b), Sider (2012), Audi (2012a, 2012b), Daly (2012), Raven (2012, 2013, forthcoming), Jenkins (2013), Trogdon (2013), Dasgupta (2014), Wilson (2014), Bliss and Trogdon (2014), and Skiles (forthcoming).

[3] My main worry concerns the notion of a bundle. In order to accommodate the truism that many particulars change their properties (or could have had different properties than they in fact have), the bundle theorist arguably must understand bundles as something other than sets in the mathematician's sense (since sets in this sense have their members invariably and essentially). By itself, this is not a problem: there is plausibly an ordinary sense of 'bundle' or 'collection', distinct from the mathematician's sense of 'set', in which bundles or collections can change their members. For example, we would ordinarily say that one could have a growing baseball card collection. However, I am skeptical that there are mind-independent collections of abstract objects like universals in the ordinary sense of 'collection'. (Perhaps it

(which is also the main objection to the bundle theory): that it is inconsistent with the possibility of distinct qualitative indiscernibles (section 1). The key to my reply is a non-standard theory of haecceities as non-well-founded properties of a certain sort. Then I will respond to several objections (section 2). Finally, I will argue that we should accept deep platonism on the basis of considerations of parsimony about the fundamental (section 3).

Before proceeding, there are three preliminaries concerning the grounding relation that will be important in what follows. First, I distinguish grounding from ontological dependence in the sense of Fine (1995).[4] In Fine's sense of 'depends', if x depends on y, then it is impossible for x to exist without y. To see why we must distinguish grounding from this notion of dependence, let f = the fact that there is a spy at the party. And suppose that f is grounded in the facts that (i) Ortcutt is a spy, and (ii) Ortcutt is at the party. The fact f does not depend on facts (i) and (ii), and it does not depend upon Ortcutt either. For someone might have known the very same fact f, and so f might have existed, even if Ortcutt had never existed. We may suppose that the relevant spy service would simply have sent a different spy to the party.[5] Thus, since the fact that there is a spy at the party (i.e., the fact f) could have existed without facts (i) and (ii), it does not depend on them in Fine's sense.[6] So grounding is not dependence, and it is not dependence restricted to the domain of facts. Rather, the relationship between grounding and dependence is a difficult question that, to my knowledge, has not yet been satisfactorily answered.[7]

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is possible for someone to collect "pieces of intellectual property"—copyrights for novels, for example—and perhaps *those* are abstract objects. However, such a collection is obviously not mind-independent.) This is because, in the ordinary sense of 'collection', the existence of a mind-independent collection seems to turn on relations that, intuitively, only concrete objects can bear to one another: spatial proximity, forming a natural boundary with respect to the surroundings, and perhaps various causal relations. This is inconsistent with the suggested "ordinary collection" version of the bundle theory, which identifies mind-independent objects (such as a rock, for example) with mind-independent collections of universals, where universals are understood as abstract objects. In any case, I prefer to develop my theory in a way that is independent of these controversies, and indeed independent of the idea that there are collections or bundles of things in any sense.

[4] Henceforth, I use 'dependence' for Fine's relation, though I recognize that the term could be used for other relations. Discussion of this dependence relation appears to go back at least to Aristotle. See the citations in Fine and also Thomasson (1999, chapter 2).

[5] The alternative view is that, if a different individual had been the spy at the party, then a different fact would have been the fact that there is a spy at the party. This view is mistaken for the reason given in the text. Additionally, if this view were correct, parity would lead us to the implausible conclusion that no event could have had a different cause.

[6] Some will react to this example by claiming it only shows that 'dependence' has two senses: grounding and entailment (where p entails q if and only if it is impossible that p is true and q is not true). I believe this is an error. There is *no* sense of 'depends' in which it is correct to say that the fact that I exist depends on the fact that 2 is a prime number. But of course there is entailment here. So we recognize a relation of dependence distinct from entailment. But it is also distinct from grounding for the reasons given in the text.

[7] Correia (2005) argues that x depends on y iff, necessarily, the fact that x exists is partially grounded in some fact about y, where fact f_1 is partially grounded in fact f_2 iff f_2 is among some facts in which f_1 is grounded *simpliciter*. (Schnieder's (2006) account is similar.) One problem with this definition is that it is arguably not true that the grounds for a fact of the

Second, I follow Rosen (2010: §4) in focusing on grounding relations between *facts*. Some philosophers (e.g., Fine and Correia) hold that the concept of grounding should be expressed using a sentential operator, perhaps a particular sense of the word 'because', so that we can express claims about grounding without commitment to an ontology of facts. One would, for example, say that *it is true that the rose is red* because the rose is red, which seems to make no explicit commitment to facts. However, I presuppose an ontology of abundant properties, relations, and propositions in this paper—an ontology for which there are strong arguments—and I allow that facts might simply be true propositions.[8] Given this ontology, if Fine and Correia are entitled to their notion of ground, then there is also a fact-to-fact grounding relation. For anytime that Fine and Correia assert something having the form ⌜φ because ψ⌝, I will say that the grounding relation holds between the facts expressed by the sentences φ and ψ.

Other philosophers (e.g., Schaffer 2009, 2010) oppose the fact-to-fact view of grounding by claiming that the grounding relation can relate not only facts but *objects*, so that it makes sense to say, for example, that Socrates—the man himself—has a ground. Philosophers who talk this way may have the relation that I call 'dependence' in mind: Socrates certainly does ontologically depend on various things. It is also possible that people who say that Socrates has a ground just mean that *the fact that Socrates exists* has a ground. But of course, once we have distinguished grounding and dependence (as above), both of these claims are consistent with my view that facts are the relata of grounding in *my* sense of 'grounding'. Nevertheless, I will officially remain neutral on this score: whether or not there is a grounding relation that relates things other than facts to one another, I want to know about the character of the fundamental facts.

Third, and finally, given that grounding relates facts, the facts in question must be *fine-grained*.[9] For suppose that facts are coarse-grained, so that they're identical if and only if they are necessarily equivalent. In that case, the fact that John is unmarried is identical to the fact *that John is unmarried and 2 is even*. Thus, if the fact that John is a bachelor is (partially) grounded in the fact that John is unmarried, then it is also partially grounded in the *same* fact *that John is unmarried and 2 is even*. But, intuitively, this is an error: the explanation for the fact that John is a bachelor has nothing to do with the number 2. So, if we are going to take a fact-to-fact grounding relation seriously, we must treat facts as fine-grained. And, indeed, this is just what I will do: facts in what follows are just

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form [x exists] always include facts about x, even though x is a constituent of the fact [x exists], and facts plausibly depend on their constituents. For example, suppose that S is a pile of stones, and consider the fact that S exists. This fact seems to be grounded in the existence and arrangement of the stones that compose S, rather than any facts about S itself. Or consider the fact K that Kripke is a philosopher. The fact [K exists] depends on K, since it has K as a constituent. But, one might argue that [K exists] is grounded in the fact that (i) Kripke is a philosopher, together, perhaps, with the general fact that (ii) if p, then there is such a fact as the fact that p. Neither (i) nor (ii) would seem to be *about* the fact K, since (i) is about Kripke, and (ii) is a general principle about facts.

[8] Arguments for this ontology are found in, for example, Lewis (1986), Bealer (1993a), van Inwagen (2004), and my (2010).

[9] Cf. Rosen (2010: §4).

true structured propositions which have properties, relations, and individuals as constituents.[10]

1. Distinct Qualitative Indiscernibles

As I mentioned at the outset, deep platonism must face the standard attack against the traditional bundle theory: that it is inconsistent with the possibility of distinct, qualitatively indiscernible particulars. In what follows, I will explain this objection and show how to meet it using a theory of haecceities that was investigated and rejected—too hastily on my view—by Adams (1981: 12–18).

First the objection. Suppose that there were a pair of qualitatively indiscernible particulars, say two iron spheres, Castor and Pollux.[11] And suppose that deep platonism is true, so that the facts about Castor and Pollux are grounded in facts about the compresence of various universals. One of the facts about Castor is that Castor is distinct from Pollux. What fact purely about universals could ground this fact about particulars? Not facts about the compresence of *qualitative* properties—all the facts relevant to Castor and Pollux that involve only qualitative properties are the same, since Castor and Pollux are qualitatively indiscernible. So the relevant distinguishing facts must be facts involving non-qualitative properties. But critics claim that this is problematic for the theory: they claim that a non-qualitative property of the right sort would have to be an *impure* property such as the identity property for Castor, *being identical to Castor*.[12] The notion of impurity is defined as follows:

F is an impure property $\leftrightarrow_{df}$ F has a particular as a constituent.

The identity property for Castor has a particular (namely, Castor itself) as a constituent. So the identity property for Castor is impure in the defined sense. The problem with this is that facts about an impure property are plausibly grounded in facts about its constituent particulars. Facts about the property of being identical to Castor, for example, are plausibly grounded in facts about Castor. And, specifically, the fact that Castor is distinct from Pollux seems to ground the fact that their identity properties are distinct, rather than vice versa. So facts about the

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[10] I think of constituency as understood in terms of *real definition*: f has x as a constituent iff x is mentioned in the real definition of f. Note that, so defined, constituency is not a mereological notion (cf. my worries about bundles of abstract objects in note 3, which apply just as well to mereological construals of fact constituency). However, I will remain neutral on exactly how the notion is best understood. For defenses of structured propositions, see, for example, Bealer (1982, 1993b, 1998), Soames (1987, 2008), Salmon (1986), King (2007), Chalmers (2011), and my (2010: §3–4).

[11] The source of this example is Black (1962). Hacking (1975) and O'Leary-Hawthorne (1995) question the possibility of such spheres. For a reply to Hacking, see Adams (1979). For a reply to Hawthorne, see Zimmerman (1997).

[12] Here I am assuming for convenience that *direct reference theory* is correct (see Kaplan 1989a, 1989b, Salmon 1986, Soames 2002, and many others), so that the contribution of a proper name to the intensional entity expressed by an expression in which it occurs is just the referent of that name. If one prefers, in place of 'the property of being identical to Castor', one can substitute 'the property of being identical to x, where x = Castor'. The same goes for other references to identity properties.

identity properties of Castor and Pollux cannot play the indicated role in grounding the fact that Castor and Pollux are distinct.[13]

If we are to avoid this problem, we cannot distinguish qualitative indiscernibles by their non-qualitative, impure properties. This leaves just one possibility: we must distinguish qualitative indiscernibles by non-qualitative properties that are *pure*. But what is a non-qualitative, pure property? The property *being identical to Socrates* is impure because it involves a non-property, Socrates. But the property *being identical to redness* is not impure in this sense— it involves nothing that is not a property. Is it qualitative? I claim it is not. Contrast the way that redness is involved in *being identical to redness* to the way in which it is involved in the property of *being red and round*. In the latter case, but not the former, there is an intuitive sense in which redness occurs *predicatively*.[14]

One way to make this distinction precise is to appeal to the algebraic approach to properties, relations, and propositions developed by Bealer (1982, 1993b, 1998), Zalta (1983, 1988), and Menzel (1993).[15] On this approach, properties and relations are analyzed by appeal to primitive logical operations— negation, conjunction, disjunction, predication, and so on—on a domain of properties, relations, propositions, and individuals. Thus, the property of being red and round is the result of applying the conjunction operation to the properties redness and roundness. And the property of being identical to Socrates is the result of applying the predication operation to the identity relation and Socrates (in that order). On this approach, we can say:

> F_1 occurs non-predicatively in a property $F_2 \leftrightarrow_{df}$ F_1 is a constituent of F_2, and, in the analysis of F_2, F_1 does not appear as a subject operand in the application of the predication operation.

Given this notion of a predicative occurrence of a property, my suggestion is that qualitative properties are *purely predicative* properties:

> F is qualitative $\leftrightarrow_{df}$ no constituent of F occurs in F non-predicatively.[16]

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[13] Given that there are in fact no qualitatively indiscernible objects, one could still adhere to the contingent truth of deep platonism. However, I'm inclined to think that deep platonism is necessarily true if it is true at all.

[14] Cf. Russell's (1903: 43–6) distinction between occurring *as term* and *as concept* in a proposition. Russell himself takes the distinction as primitive: "terms [i.e., entities] which are concepts differ from those which are not … in virtue of the fact that, in certain true or false propositions, they occur in a manner which is different in an indefinable way from the manner in which subjects or terms of relations occur" (46).

[15] The distinction can be similarly drawn within the frameworks provided by other approaches to structured propositions, though I will not pursue the various options here.

[16] On this account, every non-qualitative property is structured. For, on this account, being non-qualitative requires having a non-predicative constituent, and so requires being structured from constituents. This runs contrary to Lewis (1986), who regards the unit set of any particular object as an unstructured, non-qualitative property. However, these distinctions are problematic in Lewis's system. Lewis and Langton seem to identify the qualitative/non-qualitative distinction with the pure/impure distinction in their (1998: 334). There they defer

The concept of a qualitative property is closely connected with the intuitive notion of duplication: things which share all of their qualitative properties are perfect (intrinsic and extrinsic) duplicates. Since it is plausibly necessary that any two objects that share their all their purely predicative properties are duplicates in this sense, the above-proposed definition of 'qualitative' looks to be intuitively adequate.

It is clear that there are pure properties, such as *being identical to redness*, in which a property (in this case redness) occurs non-predicatively. So there are non-qualitative properties that are pure. What sort of non-qualitative, pure property must we call upon to distinguish Castor and Pollux? Qualitative indiscernibles cannot be discerned by their qualitative properties: their qualitative properties themselves, the relationships among their qualitative properties, or the relationships among their qualitative properties and other things. This is what it is for two things to be qualitatively indiscernible. (Of course *intrinsic* qualitative duplicates can be distinguished by the relations that they stand in to other objects, but that merely shows that qualitative indiscernibility is not the same as intrinsic qualitative duplication.) As a result, no property built up from the qualitative properties of two qualitative indiscernibles will distinguish them. This means that, if some property distinguishes a pair of qualitative indiscernibles (as I have argued is required by deep platonism), the property which distinguishes them must be a structured property that does not completely decompose into unstructured properties. This is because all unstructured properties are qualities (see note 16) and the property that distinguishes a pair of qualitative indiscernibles cannot completely decompose into qualities. So we need a pure, non-qualitative property that is structured, but does not decompose into unstructured properties. What sort of property could this possibly be?

A proposal of Robert Adams's (1981: 12–18) fits the bill, although he rejects it. Adams's idea is that each particular has a property h, called its *haecceity*, such that h = *the property of having h as a haecceity*.[17] This is a pure property, since it does not involve any non-properties. And it is non-qualitative, since it is a complex property in which h itself occurs non-predicatively. It is thus a pure, non-qualitative property, which is what I have argued is required in order to distinguish qualitative indiscernibles consistently with deep platonism. If we posit such properties, we can stop the objection from the possibility of qualitative indiscernibility by claiming that the fact that Castor and Pollux are distinct would

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to Khamara's (1988) account of the pure/impure distinction. However, Khamara's account of the pure/impure distinction has it that impure properties are those properties P such that having P "consists in" standing in some relation to an individual. Since Lewis holds that properties are sets, the possession of any property whatever presumably "consists in" standing in the membership relation to that set. Thus, if sets are "individuals" in Khamara's sense, then all Lewis's properties are impure, and, if they are not, then all Lewis's properties are pure. Either way, the distinction breaks down in Lewis's system.

[17] Adams seems to stipulate that 'haecceity' should refer to these sorts of non-well-founded properties. I do not mean to stipulate that. See below for my definition of the property of being a haecceity.

be grounded in the fact that they possess distinct haecceities. I now consider objections to this approach.

2. Objections to Haecceities

Adams raises several objections to haecceities in this sense. The first is epistemological: we can have no acquaintance with any haecceity, and we should not accept the existence of properties with which we cannot be acquainted. Adams's denial of non-acquaintable properties is plausible only if acquaintance is understood so that we can be acquainted with properties merely by understanding them (as in Russell 1912: 35). I believe we can be acquainted with haecceities in this sense, as I believe that we can understand them. But one might object to this claim. For one might think that the way we understand a complex property such as, for example, the property of being identical to Socrates, is by being acquainted with its constituents and understanding the way in which they are put together. And, one might claim, we cannot understand a haecceity (of the indicated sort) in this way unless we *already* understand the haecceity, since it is a constituent of itself.

The response is simply to deny the indicated "building up" account of understanding. Consider the following example, due to Gupta (2014):

$$Gx \leftrightarrow_{df} x = \text{Socrates} \lor (x = \text{Plato} \& Gx) \lor (x = \text{Aristotle} \& {\sim}Gx).$$

Gupta points out that, although this definition is circular, it provides us with considerable guidance about how to apply the predicate G. In particular, the definition entails that G applies to Socrates, and that it does not apply to anything that is distinct from Socrates, Plato, and Aristotle. G behaves problematically with respect to Plato and Aristotle. But the definition clearly settles every other case. If we suppose that we may assert G of all and only those objects which are clearly settled by the definition, then the use of the predicate G is fixed by the definition. Fixing the use of the predicate is a key necessary condition for rendering fully understandable the property expressed by the predicate. So this provides some evidence that the definition renders the property expressed by the predicate G understandable, even though the definition is circular.

Gupta and Belnap (1993) suggest an account of understanding that accommodates this sort of case (cf. Gupta 2014). Their idea is that we may think of the above definition as associating with G a *rule of revision*—a rule which takes any arbitrary assignment of extension to G to a revised extension. Thus, for example, if we assign the absolutely general domain to the occurrence of G in the definiens, then the definition assigns the revised extension {Socrates, Plato} to G as it occurs in the definiendum. And, if we assign {Heraclitus}, the definition assigns {Socrates, Aristotle}. Repeated applications of the rule in this second case yield a sequence of revisions:

{Heraclitus}, {Socrates, Aristotle}, {Socrates}, {Socrates, Aristotle}, …

Note that, after one revision, Socrates is always in the subsequent revised extensions, and everything other than Aristotle and Socrates is not in the revised extensions. In this sense, this revision sequence renders a categorical verdict for every object but Aristotle. And, in fact, every revision sequence renders a categorical verdict for every object other than Plato and Aristotle. Grasping this rule of revision thus gives us a good grip on the correct way to apply G for every case other than Plato and Aristotle—the problematic cases. For the rule of revision is constant with respect to everything else: everything other than Plato or Aristotle is either a member or not a member of every revised extension. Grasping this rule of revision can thus be seen as a way of understanding G, despite its circular definition.

The availability of such an account at least shows that there are alternatives to the "building up" view of understanding. However, for my purposes, the Gupta-Belnap account needs to be slightly altered. For, consider my haecceity h. The rule of revision associated with h is going to produce the following sort of revision sequence, for any arbitrary choice {x} of an extension for h:

$$\{x\}, \{x\}, \{x\}, \ldots$$

And, in general, for any distinct x and y, the sequence induced by an initial choice of {x} will stably exclude y from the sequence, whereas the sequence induced by an initial choice of {y} will stably exclude x from the sequence. Thus, no object stably has the same status in every revision sequence for h, so h would not be assertable of anything on the Gupta-Belnap theory.

Let me suggest a way to alter the theory so that we may solve this problem. First, observe that a property can be presented to you in different ways: as Plato's favorite property, as the property of being identical to Socrates, as the property being discussed in this paragraph, etc. Second, among the ways in which a property is presented to you, we may (following Kripke, unpublished and 2008) distinguish the revelatory from the non-revelatory. Let's say that a way w of presenting a property F is revelatory just in case, if F is presented to you in way w, then you *know which* property F is. Thus, if a given property is presented to you as *Plato's favorite property*, you do not know which property it is, and so this way of presenting it is not revelatory. But, if this property is presented as *the property of being identical to Socrates*, then you *do* know which property it is, and so this way of presenting the property *is* revelatory.[18]

With these distinctions in place, we may further distinguish between two sorts of revision sequence. First, we have revision sequences for a circularly defined property F that are generated by an initial assignment of extension to F that is consistent with the revelatory ways (if there are such) in which F can be presented to us. Call those *presentationally consistent revision sequences*, and

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[18]   Kripke points out (2008: 188) that "knowing which" is crucial in understanding the concept of a computable function: a function f such that, one can know which number f(n) is, for each n, by computation. Plausibly, then, computability theory requires a distinction between revelatory and non-revelatory ways of presenting numbers.

contrast them with all the other revision sequences, which we can call *presentationally inconsistent*. In Gupta's toy example of the property G, the definition itself presents the property to us, and so none of the revision sequences is presentationally inconsistent. But that is not always the case. For example, although it is part of my theory that my haecceity is in a metaphysical sense more fundamental than me (facts about me are grounded in facts about my haecceity, but not conversely), it should be clear that, epistemologically, things are the opposite: my haecceity is presented to us as *my haecceity*, and so we identify my haecceity—we *know which* haecceity it is—by way of our ability to identify *me*. Now, given that my haecceity must (by definition of 'haecceity'—see below) uniquely apply to me, it follows that only the sequence generated by the assignment of the extension {me} is consistent with the fact that h is my haecceity. Thus, among the presentationally consistent revision sequences, only one object stably appears in a sequence: me. There is, then, a notion of a presentationally consistent rule of revision—a rule of revision that describes the presentationally consistent revision sequences. According to the original Gupta-Belnap theory, to understand a circularly defined predicate or property was to grasp the associated rule of revision. In place of this, I claim that to understand a circularly defined predicate or property is to grasp the associated *presentationally consistent* rule of revision.

In any case, whether or not one accepts this particular alteration of the Gupta-Belnap theory, the foregoing considerations strongly suggest that the "building up" account of understanding a property is too restrictive, and that we are *at least* owed some further argument against the possibility of some more liberalized notion of understanding and definition.

The second objection that Adams raises against haecceities is that there is no explanation for the fact that haecceities are *incommunicable*, i.e., that they never apply to different objects in different possible worlds. Or, without possible worlds talk:

$$F \text{ is incommunicable} \leftrightarrow_{df} \Box \forall x \ (x \text{ has } F \rightarrow \Box \forall y \ (y \text{ has } F \rightarrow y = x)).$$

Since my haecceity h is incommunicable, it could not have applied to you. Adams wonders what it is about h that makes it incommunicable, and he suggests that there is no good answer, rendering haecceities a source of unacceptable mystery.

Adams is mistaken to suggest that there is no explanation of the incommunicability of haecceities such as my haecceity. For *part of what it is to be a haecceity* is to be incommunicable. Adams admits as much when he says, "no doubt it is an analytic truth that nothing is a haecceity unless it is incommunicable in the indicated sense" (15–16). Here is a definition of the property of being a haecceity:

$F \text{ is a haecceity} \leftrightarrow_{df} F$ is a pure property that is incommunicable and non-qualitative.

It follows that, if h is a haecceity, it is by definition incommunicable. But perhaps the worry is about the claim that h is a haecceity. Why should we believe that? The answer is that, by definition of h, anything which has h has h as its haecceity. And, since I have h, it follows that I have h as a haecceity, and thus that h is a haecceity.[19] So, since the definition of h ensures that h is a haecceity, and haecceities are by definition incommunicable, it follows that h is incommunicable. There is thus a clear explanation for why my haecceity is incommunicable—one that follows from definitions of h and the property of being a haecceity. As a result, Adams's second objection, understood in this way, simply fails.

But perhaps Adams's objection is not that there is no explanation for why my haecceity is incommunicable, but rather that there is no explanation of why my haecceity should apply to *me* (rather than you, for example). In response, I claim that the fact that object x has a property F is generally grounded in the fact that F is compresent with h, where h is the haecceity of x. Thus, my haecceity h applies to me rather than you because h is compresent with h, and not compresent with h*, where h is my haecceity, and h* is yours.

Finally, one might persist in demanding an explanation, this time for the fact that h is compresent with h. In response, I can say that h is compresent with h because h instantiates *compresence with h*. This sets off Bradley's regress: the fact that h is compresent with h is grounded in the fact that h instantiates compresence with h, which is in turn grounded in the fact that h instantiates *instantiating compresence with h*, etc. I do not regard this regress as problematic in any sense (see Loux 1998b: 31–6, for a sympathetic discussion of this point).[20] However, if I'm wrong about Bradley's regress and it does pose a genuine problem, the deep platonist is simply forced to conclude that the fact that h is compresent with h is a fundamental fact with no further ground (which isn't to say that it does not have a cause). Either way, then, the thesis of deep platonism is not threatened.

Here is another objection. I've claimed that my haecceity h is by definition the property of having h as a haecceity. If the fact reported by the definiens always grounds the fact reported by the definiendum, then it follows that the fact that I have h is grounded in the fact that I have h as a haecceity. But this seems to be false. For it seems that the fact that I have h as a haecceity does not ground the fact that I have h; rather, the fact that I have h as a haecceity is grounded in the fact that I have h, together with the fact that h is a haecceity. So it seems that my definition of h, by way of the thesis that the definiens reports the ground of the

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[19]   Does it beg the question to suppose that I have h? No. The objection is that if I (and other particulars) had a haecceity, this would lead to an irresolvable mystery about why our haecceities were incommunicable. In responding to this objection, I am entitled to suppose I have a haecceity. I merely need to show that, on that supposition, there is no mystery of the indicated sort.

[20]   It is only if I embrace Bradley's regress in this way that the theory is committed to the non-well-foundedness of grounding. I see no good reason to believe that the grounding relation is well-founded. (See Schaffer 2003 and Cameron 2008 for helpful discussions of this matter.) But the theory is officially neutral.

fact that is reported by the definiendum, gets the explanatory ordering of these facts wrong.

The reply to this objection is that circular definitions such as the definition of h simply do not conform to the requirement that the definiens must report the ground for the fact reported by the definiendum. Definitions (at least *real* definitions) are traditionally supposed to "formulate the essence" of the thing defined. This is what the circular definition I've provided for h does: it tells us *what* h is, and (as I've explained) even puts us in a position to *understand* h. It does these things despite the fact that the definiens does not report the grounds of the fact reported by the definiendum. As a result, to insist on the requirement that definitions *always* reflect grounding relationships begs the question against deep platonism.

A final objection—one that is somewhat harder to pin down—can be put like this: haecceities are *weird*. Someone might even exhibit an incredulous stare. But notice that the situation here is very different from the situation with respect to, for example, Lewis's (1986) hypothesis of an infinite number of concrete universes. Common sense opinion really does tell against Lewis's view that there exist non-actual golden mountains and non-actual talking donkeys, as he admits. But common sense opinion does not, I claim, tell against haecceities in my sense. For while common sense has something to say about what sorts of mountains there are, it has *nothing* to say about what sorts of highly theoretical abstract objects there are, and particularly about whether there is a property of my dog which is incommunicable, non-qualitative, and pure. Nor does common sense rule out the existence of non-well-founded abstracta. Certainly Aczel's (1988) set theory and the Gupta-Belnap revision theory of truth do not run contrary to common sense.[21] These are places in which common sense is silent—a joyous place for a philosopher to work—and thus it is not true that my view runs contrary to common sense. Incredulous stares are for this reason out of place.

I have been defending haecceities of the sort that Adams considers from the objections he raises, as well as several other objections. Such haecceities solve the main problem with deep platonism: the problem of the possibility of distinct qualitative indiscernibles. Once this problem is solved, I am aware of no serious objection to deep platonism. But even if deep platonism is defensible, what reason is there to accept it? This is the burden of the final section.

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[21]   One difference between Aczel's set theory and the theory of haecceities I have proposed is that Aczel develops his theory in a way that requires that there is exactly one pure singleton set which contains itself and nothing else. (This is the singleton X = {X}.) However, George Bealer (unpublished) has argued that this is an error. The argument proceeds as follows. Imagine (for simplicity) that there are exactly two people, A and B. And imagine that, at time t, A thinks of the set X = {x: exactly two people think of x at t}. Simultaneously, imagine that B thinks of both the set X and the set Y = {x: exactly one person thinks of x at t}. Then X and Y are distinct. For exactly one person thinks of one of them, whereas exactly two people think of the other. At the same time, each one is its own sole member: X is the only thing thought of by exactly two people at t, and so it is the only thing in the set of things that are thought of by exactly two people at t. But that set is X. So X is its own sole member. *Mutatis mutandis* for Y. So X and Y are distinct sets, but they are isomorphic: they're both singletons of themselves. The theory of non-well-founded sets should therefore be developed in a way that is structurally very like the theory of haecceities that I propose here.

3. The Argument for Deep Platonism

There are persuasive arguments for the existence of universals (see the citations in note 8). These arguments, together with the observation that there are particulars, show that our ontology must include at least two categories: universals and particulars. To eliminate one of these categories from the fundamental level would be to provide an otherwise adequate theory according to which all the facts are grounded in facts that are about objects from exactly one of these categories. Parsimony recommends such elimination.[22] My defense of the thesis of deep platonism shows that we can eliminate particulars from the fundamental level. If we cannot instead eliminate universals from the fundamental level, we will have reason to accept deep platonism (on grounds of parsimony about the fundamental).[23]

Let us therefore ask whether it is possible to eliminate universals from the fundamental level. The way to do this would be to argue that facts about each universal are grounded in facts about the objects which instantiate it. For example, the existence of redness might be grounded in facts about all the red things. On this view, universals are a sort of abstraction from their instances.

Here is an argument against this view. First, necessarily, if a given proposition is true, then it exists. So, if the proposition that nothing is red could have been true, then it could have existed in the absence of any red things. But this proposition is (very plausibly) defined in terms of its constituents, among which is the universal redness. And propositions cannot exist in the absence of the things in terms of which they are defined. So redness could have existed without anything being red. Thus, facts about redness would not then be grounded in facts about red things. The existence of redness is grounded in the existence of red things either necessarily or not at all. So the existence of redness is not grounded in the existence of red things, contrary to the view we are presently considering.

One might react to this argument by pointing out that a similar argument can be given for the apparently absurd conclusion that every object exists necessarily.[24] For example, if Kripke had not have existed, then the proposition that Kripke does not exist would have been true. But, had it been true, it would have existed. And, if it had existed, then it would have required the existence of its constituent, Kripke. Thus, it is false that Kripke might not have existed; he is a necessary being. And the same goes for everything else.

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[22] See Thomasson (1999: chap. 9) for an argument that the relevant notion of parsimony involves a reduction of ontological categories. Given the distinction between dependence and grounding, there is a correlative distinction between dependence-parsimony and grounding-parsimony.

[23] I assume here that there isn't some other category—say *stuff* or *events*—which is more fundamental than both universals and particulars. I also assume that either the sorts of non-well-founded haecceities that I rely on do not form an ontological category, or that their existence can be motivated independently of the thesis of deep platonism.

[24] Cf. Plantinga (1983).

Some have simply accepted the conclusion of this argument about Kripke, thereby embracing *necessitism*, the view that everything necessarily exists.[25] To mitigate the apparent absurdity of this view, one would want to maintain that objects like Kripke would have *some* sort of different ontological status with respect to worlds in which we would normally say they do not exist. Thus, Williamson (2013: 8) says that, although Kripke exists in every situation, he is *non-concrete* in worlds where (for example) he was never born. On this approach, there will still be worlds in which nothing is red: they will simply be worlds in which the things which are actually red are either a different color or they are non-concrete (and thus have no color at all). So this approach to the argument about Kripke also embraces the conclusion of the argument about redness, and thereby rejects the view that universals are grounded in their instances.

On the other hand, if one finds necessitism implausible, one might react to the argument about Kripke by denying the premise that Kripke is a constituent of the proposition that Kripke does not exist. One way to make this out is to embrace necessarily existing haecceities (thereby rejecting the proposed grounding of universals in particulars) and let Kripke's haecceity serve as a "proxy" for him in such propositions.[26] The proposition that Kripke exists is then said to be true if and only if there is something in the extension of its subject constituent, and that thing is in the extension of its predicate constituent. In worlds where Kripke does not exist, there will be nothing in the extension of his haecceity, and thus the proposition that Kripke exists will be false in such worlds on the present account. Thus, the negation of this proposition, the proposition that Kripke does not exist, will be true in such worlds, just as desired.

This sort of response to the argument about Kripke cannot be applied to the previous argument for the claim that redness can exist in the absence of red things. For, suppose that, instead of saying that redness occurs as a constituent of the proposition that nothing is red, one were to posit some necessarily existing "proxy" for redness—the concept of being red, perhaps, or the haecceity for the word 'red'. But, if one did this, one would be led to the existence of a universal—"proxy" redness—which seems not to be reducible to particulars, and one would then be conceding the point of the argument.

A third approach to the argument about Kripke appeals to a distinction between being true *in* a world, on the one hand, and being true *at* (or true *of*) a world, on the other. According to proponents of this distinction, a proposition can be true at a possible world by correctly describing that possible world "from the outside" (Fine 1985: 163), without existing in that world.[27] And, if one accepts the distinction, one can claim that the proposition that Kripke does not exist is true at worlds in which he does not exist. One would then deny that the proposition that Kripke does not exist is possibly true, while retaining a sense in

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[25]   Proponents of this view include Linsky and Zalta (1994, 1996) and Williamson (1998, 2002, 2013). Williamson's preferred formulation is: necessarily, everything is necessarily something.

[26]   This is a version of what Bennett (2005, 2006) calls "proxy actualism". Cf. Plantinga (1974, 1976, 1983).

[27]   On the in/at distinction, also see Adams (1981), Plantinga (1985), Turner (2005), Stalnaker (2010), and my (2010).

which it is possible, since it is true *at* some possible world. (One would then, presumably, pursue a similar approach to the proposition that nothing is red with respect to worlds that contain no red objects.)

Making out the in/at distinction in a way that serves this response is a significant theoretical burden. There is a serious problem about iterated modalities. For example, since this hat is red, it is possible for something to be red. And so, by the S5 axiom ($\Diamond p \rightarrow \Box \Diamond p$), it follows that it is necessary that, possibly, something is red. If what it is for it to be possible that something is red is for the proposition that something is red to be true at a possible world, it follows that, necessarily, the proposition that something is red is true at some possible world. So, necessarily, the proposition that something is red has a certain feature—the feature of *being true at a world*. But, if a thing of necessity has a certain feature, then that thing exists necessarily. So the proposition that something is red exists necessarily, and so do its constituents, including the universal *redness*, even in the absence of any red things, contrary to the theory.

In any case, even if this sort of problem can be solved, the resulting theory comes with a bloated ontology: to make it work, one must at least accept an ontology of possible worlds. Of course it might be possible to give an independent argument for this ontology, or to reduce worlds to universals that are grounded in facts about particulars. But the thesis that this approach will be as parsimonious as the thesis of deep platonism is at least cast into significant doubt.[28]

The other possible approaches to the argument about Kripke are to claim that a proposition can exist in the absence of its constituents, or to claim that a proposition can have the feature of being true in a world where it does not exist at all. Both suggestions are implausible, and substantially less plausible than the alternatives discussed above. But the above alternatives either face fatal difficulties or they concede the point of the previous argument about redness: that facts about universals cannot be grounded in facts about particulars. Either way, we should reject the view that universals can be eliminated from the fundamental level.

Here is a second argument against this view. A theory eliminates Fs from the fundamental level if there are, according to the theory, no *facts about Fs* at the fundamental level. A fact about Fs is just a fact that has Fs as constituents (cf. note 10).[29] To eliminate universals from the fundamental level, then, is to eliminate facts about universals from the fundamental level. And to eliminate facts about universals from the fundamental level is to eliminate facts which have universals as constituents from the fundamental level (i.e., to ground all the facts in facts that have no universals as constituents). But (assuming, as throughout, that there are universals at all), it seems clear that universals cannot in this way be

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[28]   Furthermore, one would not be entitled to adopt any of those popular theories of possible worlds (e.g., Stalnaker 1976, Planinga 1976) which identify worlds with platonic entities of one sort or another: properties that exist independently of their instances, states of affairs having such properties as constituents, etc.

[29]   If one were to opt for the "proxy actualist" response to the first argument, one would disagree with this premise, instead claiming that facts can be about an object which does not itself occur as a constituent of the fact, but whose "proxy" occurs instead. However, as explained above, to embrace this approach is already to concede the point.

eliminated from the fundamental level. For what would it be for a fact to contain nothing but particulars as constituents? Certainly atomic predications involve properties and relations as constituents, as do "general" facts (such as the fact that something is red), conjunctions, disjunctions, etc. Given the existence of universals, it is difficult to see what a fact without universals as constituents would be. As a result, it looks as if it is impossible to eliminate universals from the fundamental level.

The same sort of argument can be run even if we do not take my talk of facts seriously, but instead opt to avoid all talk of facts in favor of Fine's view that grounding is best expressed using sentential operator. For example, suppose that we have a claim of the form ⌜ϕ because ψ⌝. Then to say that the sentence ψ is "not about universals" will be to say that no universal is the semantic value of an expression in ψ. But, of course, if we assume abundant realism about universals (as I have been throughout), ψ will of course be about universals in this sense: one cannot form a sentence without invoking a universal (given abundant realism). So whether we take my talk of facts seriously or not, it seems that universals will make it into the fundamental level. This is not true for particulars, however, as I have argued.

One might respond to the foregoing arguments by objecting that deep platonism does not deliver a genuine gain in parsimony, because it trades a simpler ontology for a more complicated ideology: particulars for a primitive notion of compresence. However, this misdescribes the situation. Deep platonists take compresence as a primitive where those who oppose deep platonism have to take *instantiation* as a primitive. Perhaps, following a suggestion of Lewis (1983: 351–55), they should claim that 'instantiates' stands for no relation but is a primitive bit of ideology; perhaps, on the other hand, they should take instantiation as a primitive relation. Either way, opponents of deep platonism are stuck with a primitive that mirrors the deep platonist's primitive notion of compresence.

These two arguments seem to me to make a strong case for the thesis that particulars can be eliminated from the fundamental level. But, if particulars can be eliminated, and universals cannot be, then we should accept the theory that eliminates particulars. That theory is deep platonism. Thus, we should be deep platonists.[30]

References

Aczel, Peter. (1988). *Non-Well-Founded Sets*. CSLI Lecture Notes 14. CSLI Publications.

Adams, Robert. (1979). Primitive Thisness and Primitive Identity. *Journal of Philosophy* 76: 5–26.

————. (1981). Actualism and Thisness. *Synthese* 49: 3–41.

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Audi, Paul. (2012a). Grounding: Toward a Theory of the *In-Virtue-Of* Relation. *Journal of Philosophy* 109: 685–711.

———. (2012b). A Clarification and Defense of the Notion of Grounding. In F. Correia and B. Schnieder, eds., *Metaphysical Grounding: Understanding the Structure of Reality*, Cambridge University Press, 101–21.

Bealer, George. (1982). *Quality and Concept*. Oxford University Press.

———. (1993a). Universals. *Journal of Philosophy* 90: 5–32.

———. (1993b). A Solution to Frege's Puzzle. *Philosophical Perspectives* 7:17–60.

———. (1998). Propositions. *Mind* 107: 1–32.

———. (Unpublished). "In Defense of Abundant, vs. Sparse, Non-Well-Founded Set Theories".

Bennett, Karen. (2005). Two Axes of Actualism. *Philosophical Review* 114: 297–326.

———. (2006). Proxy Actualism. *Philosophical Studies* 129: 263–94.

———. (2011a). By Our Bootstraps. *Philosophical Perspectives* 25: 27–41.

———. (2011b). Construction Area: No Hardhat Required. *Philosophical Studies* 154: 79–104.

Black, Max. (1962). The Identity of Indiscernibles. *Mind* 61: 153–64.

Bliss, Ricki and Kelly Trogdon. (2014). Metaphysical Grounding. In Edward N. Zalta (ed.), *Stanford Encyclopedia of Philosophy* (Winter 2014 edition).

Cameron, Ross. (2008). Turtles all the way Down: Regress, Priority, and Fundamentality. *The Philosophical Quarterly* 58: 1–14.

Carmichael, Chad. (2010). Universals. *Philosophical Studies* 150: 373–89.

Casteñeda, Hector-Neri. (1974). Thinking and the Structure of the World. *Philosophia* 4: 3–40.

Correia, Fabrice. (2005). *Existential Dependence and Cognate Notions*. Philosophia Verlag.

———. (2010). Grounding and Truth-Functions. *Logique et Analyse* 53: 251–79.

———. (2011). From Grounding to Truth-making: Some Thoughts. In A. Reboul, ed., *Philosophical Papers Dedicated to Kevin Mulligan*.

———. (2013). Metaphysical Grounds and Essence. In M. Hoeltje, B. Schnieder & A. Steinberg, eds., *Varieties of Dependence. Ontological Dependence, Grounding, Supervenience, Response-Dependence*, München, Philosophia, 271—96.

———. (2014). Logical Grounds. *The Review of Symbolic Logic* 7: 31–59.

Chalmers, David. (2011). Propositions and Attitude Ascriptions: A Fregean Account. *Nous* 45: 595–639.

Daly, Chris. (2012). Skepticism about Grounding. In F. Correia and B. Schnieder, eds., *Metaphysical Grounding: Understanding the Structure of Reality*, Cambridge University Press, 81–100.

Dasgupta, Shamik. (2014). On the Plurality of Grounds. *Philosophers' Imprint* 14: 1–28.

DeRosset, Louis. (2010). Getting Priority Straight. *Philosophical Studies* 149: 73–97.

————. (2013a). Grounding Explanations. *Philosophers' Imprint* 13: 1–26..

————. (2013b). What is Weak Ground? *Essays in Phiosophy* 14: 33–55.

————. (2013c). No Free Lunch. In M. Hoeltje, B. Schnieder & A. Steinberg, eds., *Varieties of Dependence. Ontological Dependence, Grounding, Supervenience, Response-Dependence*, München, Philosophia, 243–70.

Fine, Kit. (1985). Plantinga on the Reduction of Possibilist Discourse. In J. Tomberlin and P. van Inwagen, eds., *Alvin Plantinga*, Reidel Publishing Company, 145–186.

————. (1995). Ontological Dependence. *Proceedings of the Aristotelian Society* 95: 269–90.

————. (2001). The Question of Realism. *Philosopher's Imprint* 1: 1–30.

————. (2010). Some Puzzles of Ground. *Notre Dame Journal of Formal Logic* 51: 97–118.

————. (2012). A Guide to Ground. In F. Correia and B. Schnieder, eds., *Metaphysical Grounding: Understanding the Structure of Reality*, Cambridge University Press, 37–80.

Gupta, Anil. (2014). Definitions. In Edward N. Zalta (ed.), *Stanford Encyclopedia of Philosophy* (Fall 2014 edition).

Gupta, Anil and Nuel Belnap. (1993). *The Revision Theory of Truth*. MIT Press.

Hacking, Ian. (1975). The Identity of Indiscernibles. *Journal of Philosophy* 72: 249–56.

Hawthorne, John and Theodore Sider. (2002). Locations. *Philosophical Topics* 30: 56–76.

Hochberg, Herbert. (1964). Things and Qualities. In Capitan and Merrill, eds., *Metaphysics and Explanation*, University of Pittsburgh Press.

Hofweber, Thomas. (2009). Ambitious, Yet Modest, Metaphysics. In D. Chalmers, D. Manley, R. Wasserman, eds., *Metametaphysics: New Essays on the Foundations of Ontology*, Oxford University Press, 260–89.

Jenkins, C. S. I. (2013). Explanation and Fundamentality. In M. Hoeltje, B. Schnieder & A. Steinberg, eds., *Varieties of Dependence. Ontological Dependence, Grounding, Supervenience, Response-Dependence*, München, Philosophia, 211–42.

Kaplan, David. (1989a). Demonstratives. In J. Almog, J. Perry, and H. Wettstein, eds., *Themes From Kaplan*, Oxford University Press, 481–563.

————. (1989b). Afterthoughts. In J. Almog, J. Perry, and H. Wettstein, eds., *Themes from Kaplan*, Oxford University Press.

Khamara, E. J. (1988). Indiscernibles and the Absolute Theory of Space and Time. *Studia Leibnitiana* 20: 140–59.

King, Jeffrey. (2007). *The Nature and Structure of Content*. Oxford University Press.

Kripke, Saul. (Unpublished). *Whitehead Lectures: Logicism, Wittgenstein, and De Re Beliefs about Numbers*.

————. (2008). Frege's Theory of Sense and Reference: Some Exegetical Notes. *Theoria* 74: 181–218.

Lewis, David and Rae Langton. (1998). Defining 'Intrinsic'. *Philosophy and Phenomenological Research* 58: 333–45.

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

———. (1986). *On the Plurality of Worlds*. Blackwell.

Linsky, Bernard and Zalta, Edward N. (1994), In Defense of the Simplest Quantified Modal Logic. *Philosophical Perspectives* 8: 431–58.

———. (1996), In Defense of the Contingently Nonconcrete. *Philosophical Studies* 84: 283–94.

Loux, Michael. (1978). *Substance and Attribute*. D. Reidel.

———. (1998a). Beyond Substrata and Bundles: A Prolegomenon to a Substance Ontology. In Laurence and Macdonald, eds., *Contemporary Readings in the Foundations of Metaphysics*, Blackwell.

Loux, Michael. (1998b). *Metaphysics: A Contemporary Introduction*. Routledge.

Menzel, Christopher. (1993). The Proper Treatment of Predication in Fine-Grained Intensional Logic. *Philosophical Perspectives* 7: 61–87.

O'Leary-Hawthorne, John. (1995). The Bundle Theory of Substances and the Identity of Indiscernibles. *Analysis* 55: 191–6.

Plantinga, Alvin. (1974). *The Nature of Necessity*. Clarendon Press.

———. (1976). Actualism and Possible Worlds. *Theoria* 42: 139–60.

———. (1983). On Existentialism. *Philosophical Studies* 44: 1–20.

———. (1985). Replies to my colleagues. In J. Tomberlin & P. van Inwagen (Eds.), *Alvin Plantinga*, D. Reidel, 313–96.

Raven, Michael. (2012). In Defense of Ground. *Australasian Journal of Philosophy* 90: 687–701.

———. (2013). Is Ground a Strict Partial Order? *American Philosophical Quarterly* 50: 191–99.

———. (Forthcoming). Ground. *Philosophy Compass*.

Rosen, Gideon. (2010). Metaphysical Dependence: Grounding and Reduction. In Hoffman and Hale, eds., *Modality: Metaphysics, Logic, and Epistemology*, Oxford University Press, 109–135.

Russell, Bertrand. (1903). *The Principles of Mathematics*. Cambridge University Press.

———. (1912). *The Problems of Philosophy*. Williams & Norgate.

———. (1940). *An Inquiry into Truth and Meaning*. W. W. Norton & Co.

Salmon, Nathan. (1986). *Frege's Puzzle*. MIT Press.Schaffer, Jonathan. (2003). Is there a Fundamental Level? *Nous* 37: 498–517.

Schaffer, Jonathan. (2009). On What Grounds What. In Chalmers, Manley, and Wasserman, eds., *Metametaphysics*, Oxford University Press, 347–83.

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

———. (2012). Grounding, Transitivity, and Contrastivity. In F. Correia and B. Schnieder, eds., *Metaphysical Grounding: Understanding the Structure of Reality*, Cambridge University Press, 122–38.

———. (Forthcoming). Grounding in the Image of Causation. *Philosophical Studies*.

Schnieder, Benjamin. (2006). A Certain Kind of Trinity: Dependence, Substance, Explanation. *Philosophical Studies* 129: 393–419.

Sider, Theodore. (2012). *Writing the Book of the World*. Oxford University Press.

Skiles, Alexander. (Forthcoming). Against Grounding Necessitarianism. *Erkenntnis*.

Soames, Scott. (1987). Direct Reference, Propositional Attitudes, and Semantic Content. *Philosophical Topics* 15: 44–87.

———. (2002). *Beyond Rigidity: The Unfinished Semantic Agenda of 'Naming and Necessity'*. Oxford University Press.

———. (2008). Why Propositions Can't be Sets of Truth-Supporting Circumstances. *Journal of Philosophical Logic* 37:267–76.

Stalnaker, Robert. (1976). Possible Worlds. *Nous* 10: 65–75.

———. (2010). Merely Possible Propositions. In Bob Hale & Aviv Hoffmann (eds.), *Modality: Metaphysics, Logic, and Epistemology*. Oxford University Press. 21—32.

Thomasson, Amie. (1999). *Fiction and Metaphysics*. Cambridge University Press.

Trogdon, Kelly. (2013). An Introduction to Grounding. In M. Hoeltje, B. Schnieder & A. Steinberg, eds., *Varieties of Dependence. Ontological Dependence, Grounding, Supervenience, Response-Dependence*, München, Philosophia, 97–122.

Turner, Jason. (2005). Strong and Weak Possibility. *Philosophical Studies* 125: 191–217.

Van Cleve, James. (1985). Three Versions of the Bundle Theory. *Philosophical Studies* 47: 95–107.

Van Inwagen, Peter. (2004). A Theory of Properties. *Oxford Studies in Metaphysics* I: 107–38.

Williamson, Timothy. (1998). Bare Possibilia. *Erkenntnis* 48: 257–73.

———. (2002). Necessary Existents. In A. O'Hear (ed.), *Logic, Language, and Thought*, Cambridge University Press.

———. (2013). *Modal Logic as Metaphysics*. Oxford University Press.

Wilson, Jessica. (2014). No Work for a Theory of Grounding. *Inquiry* 57: 535–79.

Zalta, Edward N. (1983). *Abstract Objects: An Introduction to Axiomatic Metaphysics*. D. Reidel.

Zalta, Edward N. (1988). *Intensional Logic and the Metaphysics of Intentionality*. MIT Press.

Zimmerman, Dean. (1997). Distinct Indiscernibles and the Bundle Theory. *Mind* 106: 305–9.