A paper about grounding (title coming soon)

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Abstract: I argue that there is a dependence relation, *semantic dependence*, that is distinct from metaphysical grounding. Semantic dependence cannot be a species of metaphysical grounding, because (a) it is not genuinely metaphysical; (b) it is non-factive; and (c) it sometimes runs in the opposite direction of (purported) metaphysical grounding. Semantic dependence is present in cases of purported logical grounding, which are often held up as paradigmatic cases of grounding. If "logical grounding" is semantic dependence, then either "logical grounding" is not grounding at all, or semantic dependence is a species of grounding. If the latter, though, my arguments show that grounding is a very weak relation that is not particularly theoretically useful to us. One upshot is that Fine's (2010) puzzles of ground are dissolved. I further claim that we may be confusing metaphysical grounding and semantic dependence in many cases. This may be fuel for the anti-grounder's fire.

1. Introduction

Discussion of *grounding* and what it might do for us is, for better or worse, rampant in philosophy. Grounding is often taken either to be, or to back, some kind of non-causal metaphysical explanation.

Purportedly *logical* cases of grounding, like the following (adapted from Fine (2012), are often taken to be paradigmatic cases:

[The ball is red and round] is grounded in [the ball is red] and [the ball is round].

[It is either raining or snowing] is grounded in [it is raining].

[Someone is a philosopher] is grounded in [Elizabeth Anscombe is a philosopher].

But what is this purported logical grounding? Hofweber says, about cases like these:

> Consider the case of a true disjunction and its true disjunct. One might hold that the true disjunct is metaphysically more basic than the true disjunction. But it seems to be rather a simple case of an asymmetrical logical relationship between them: the disjunction implies the disjunct, but not the other way round. That the disjunct is in some sense more basic than the disjunction can be accepted by all. What is controversial is whether this is in a metaphysical sense, or some other sense. I think it is simply a logical sense (Hofweber 2009, p. 269).

The pro-grounder's intuition in the case of the disjunction is not just that the disjunct is "more basic" than the disjunction, but that the disjunction depends in some important way on its true disjunct.[1]

I share Hofweber's view that the kinds of dependence relations invoked in these cases are not metaphysical. The primary goal of this paper is to begin to answer the question of what "logical grounding" is.

To see that we must say more about logical dependence, consider a conjunction. The conjuncts together entail the conjunction, and the conjunction entails its conjuncts. Logical entailment taken in this sense is a symmetrical dependence relation; and yet, a conjunction being grounded in its two conjuncts is often held up as a paradigmatic (asymmetric) case of grounding. Given that the logical entailment here is symmetrical, what explains our intuition that the conjunct is grounded in its conjuncts, and not vice-versa? The simple "logical sense" needs expansion.[2]

I think there is no unified logical dependence relation. There are multiple relations, each present in at least some cases. But I focus here on motivating just one of

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[1] An additional worry here is that it's unclear how Hofweber's notion of "more basic than" is any less esoteric than metaphysical dependence or grounding is.

[2] Granted, logical entailment is not *always* symmetrical (but it is always reflexive!), but it's enough to consider the case of the relationship between 'A&B' and 'A', 'B' to show that logical entailment doesn't always get us a direction of dependence.

them, semantic dependence. I will argue that semantic dependence is not metaphysically explanatory, that it is not factive, and that it often runs in the opposite direction of purported metaphysical grounding (hereafter '**m-grounding**'). The most paradigmatic cases of grounding are cases of m-grounding. We are left with two options: either semantic dependence is *not* a species of grounding (I'll call this '**eliminativism**'), or semantic dependence *is* a species of grounding (I'll call this '**strong separatism**'). The thesis of this paper is hence disjunctive: If semantic dependence is present in cases of purported logical grounding, then eliminativists should reject that logical grounding is genuine grounding (unless they can also show that m-grounding is present). Strong separatists should instead conclude that logical grounding is genuine grounding, but that grounding is a much weaker umbrella notion than they might have previously thought. One upshot is that Fine's (2010) "puzzles of ground" are dissolved.

I will suggest that semantic dependence is present in many more cases than just those of purportedly logical grounding. I will not give a complete, nor even a unified, account of what semantic dependence *is*, but rather will offer some examples of a dependence relation (or perhaps a cluster of dependence relations) that is (a) clearly not m-grounding; (b) could plausibly be described as 'semantic'; and (c) is present in logical cases. This is enough to accomplish the goals of this paper; but there is, of course, still more work to do in clarifying what this relation *is*, whether it is indeed a single relation or many, etc.; and also on settling the eliminativism vs. strong separatism issue.

Central to this paper is the claim that, if grounding is to be rescued, we must hold onto *genuinely metaphysical* cases of grounding as paradigmatic ones. And, I claim, semantic dependence is not genuinely metaphysical.

So, I should say something about what it is to be genuinely metaphysical. Assume for a moment that 'grounds' is a sentential operator. If grounding is irreflexive, as many

have assumed, then a m-grounding claim must relate two sentences that don't *say the same thing about the world by the world's lights:* that aren't just two different conceptual or linguistic descriptions of the same worldly underlying state of affairs, fact, or way the world is. For example, if 'Naomi is taller than Kareem' and 'Kareem is shorter than Naomi' are just descriptions of the same *worldly* state of affairs, *and* m-grounding is irreflexive, then, perhaps, it is not possible for one to m-ground the other, because there is no worldly distinction between the two. This is just one approach to illuminating what is distinctively metaphysical about m-grounding. We needn't think that the right way to do so is by talking about language at all. We might instead treat m-grounding as a relation between facts, and say "if [A] metaphysically grounds [B] then [A] and [B] must be metaphysically, and not just conceptually, or epistemically, or meaning-wise distinct". Or we might, to put things much more bluntly, just say: if A grounds B, then A can't be identical to B. (And, assuming that the relata of grounding are worldly in some sense, then it follows that there must be some *worldly* difference between A and B.)[3]

One approach to testing whether a given question is genuinely metaphysical is to ask whether it can be settled by examining semantics and facts about the way language works. If it can, it is not genuinely metaphysical. I'm partial to this as a potential test (necessary, not sufficient) for being genuinely metaphysical. That is not to say that this is the right way to *analyze* what it is to be metaphysical, since as an analysis, it mistakenly ties questions of what is genuinely metaphysical to questions about language.[4]

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[3] This issue is related to the question of how *fine-grained* grounding is. Correia makes the following remark about a case similar to that of Naomi and Kareem: "one feels that (the difference between the two descriptions) does not correspond to a relevant metaphysical distinction" (2010, p. 259). Also, this generalizes to fact grounding: the equivalent thing for the fact grounder would be to say that [Naomi is taller than Kareem] and [Kareem is shorter than Naomi] are actually the same fact, picked out two different ways, and so we can't say that one is grounded in the other.

[4] This way of thinking about what it is to be genuinely metaphysical seems to involve a meaty commitment that rules out "easy ontology" views like that of Thomasson (2014). I don't so much mind ruling out such views as genuinely metaphysical, because they seem to me to be views that are, in fact,

I haven't given a full account of what I mean by "genuinely metaphysical", and am taking it as, in some sense, primitive. But I have given enough of a gloss to show that the relation I will argue for--semantic dependence--is not genuinely metaphysical. Its relata are often *metaphysically equivalent*—there is no difference in their metaphysical commitments. And we can determine when these relations are present, and in which way they run, purely by examining facts about semantics, without querying the language-independent world at all.

I take this to demonstrate that we need additional reasons—reasons that must depend on our commitments in fundamental and non-fundamental metaphysics—for believing in strong separatism. Do we want grounding to include non-metaphysical dependence relations? If so, semantic dependence is a species of grounding. If not, it is not. *If* we choose to endorse strong separatism instead of eliminativism, then we can no longer assume that grounding runs in a single direction in each case in which it is present, and we can no longer assume it is factive, and we can no longer assume that it is metaphysically explanatory. This significantly weakens the theoretical work that grounding can do.

Anti-grounders can take either eliminativism or strong separatism as fuel for their

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claiming that ontology is not a matter of genuine metaphysics in the sense I have in mind. Nothing I say in what follows is incompatible with easy ontology or other deflationary views, since I am motivating dependence relations that *aren't* genuinely metaphysical, not ones that are. My notion of being genuinely metaphysical is one that Thomasson and perhaps other deflationists would not like, but that that is fine: I mean to be focusing on distinguishing between the (admittedly slippery) thing that I mean by 'genuinely metaphysical' and something "easier", something that can be read off natural language, for example. If it turns out that there *are no* genuinely metaphysical questions, or none about ontology, or that there are fewer than we thought, I don't think that will negatively affect the argument here, since I am merely trying to show that there are a host of non-metaphysical dependence relations at stake in purported cases of Grounding, which is consistent with there being no genuinely metaphysical dependence relation present in any case of Grounding, and indeed with there being no genuinely metaphysical questions or facts at all.

fire: eliminativism explains away grounding in a certain class of cases, which supports the aims (though in different ways) of, e.g., Hofweber (2009), Koslicki (2015), and Wilson (2014). Strong separatism weakens the theoretical work that grounding can do. Though I am sympathetic to anti-grounders, this is not an anti-grounding paper. My goal is simply to challenge the idea that purported cases of logical grounding are easy to assimilate into standard ways of thinking about grounding.

In section 2, I will say a bit more about grounding and set up Fine's puzzles of ground. In section 3, I introduce three different ways of thinking about *semantic dependence,* argue that none of them are m-grounding, and show how semantic dependence resolves Fine's puzzles.

2. Grounding

First, a few preliminaries that are important for what is to come. Grounding *unionists* think that there is a single, unified grounding relation. Grounding *separatists* think that there are multiple dependence relations, all perhaps species of an umbrella relation.[5]

In what follows, I use 'Grounding' (with a "big G") to refer to the umbrella relation that all species of Grounding are supposed (by non-skeptical separatists) to belong to. I will use 'grounding' to refer to individual candidate species of Grounding. It is commonly claimed that there can be no *analysis* of Grounding.[6] Even so, pro-

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[5] For discussion of unionism vs. separatism, see e.g. Trogdon (2013), sec. 2. Pro-unionists include (among others) Schaffer (2009), Rosen (2010), Raven (2012), Leuenberger (2014). Anti-unionists might include Hofweber (2009), Fine (2012), Wilson (2014), Koslicki (2013), but some of these might not like being labeled as such, as there is a range of positions available here. Wilson, for example, could be categorized as a grounding separatist, even though she is a Grounding skeptic: she believes in "small g" dependence relations, but not in a further, general notion of Ground. Koslicki also thinks that the focus on a unified relation is misguided, but is not a skeptic about distinctively metaphysical explanatory relations (or relations that back explanation). Neither should be lumped in with one another, nor with Grounding theorists like Fine, despite the fact that he admits a variety of dependence relations.

[6] Though see e.g. Poggiolesi (2016) for a proposed analysis.

grounders claim, we can say many things about it. Grounding is a non-causal metaphysical dependence relation. It is explanatory in an important respect.[7] But now we have some choice points. Fine (2012) and Dasgupta (2014) take Grounding to be *operational*: 'grounds' is an operator on sentences. Schaffer (2009) takes Grounding to be a relation between *entities*. I'll follow Rosen (2010) in taking Grounding to be a relation between *facts*. This will (mostly) generalize to the sentential operator approach.

I take facts to be something like Armstrongian obtaining states of affairs (the *heavyweight* view), but in what follows I try to stay somewhat neutral about what facts are—we might treat them as just identical to true propositions (the *lightweight* view, depending on what one takes propositions to be).

Grounding is also many-one. So, then, the form of Grounding claims is:

[F1] is grounded in [F2], [F3], [F4]...

where '[F1]' stands for 'the fact that F1'. I assume that Grounding is *factive;* if [A] grounds [B], then (for the lightweighter) both the proposition that A and the proposition that B are true, or (for the heavyweighter) both [A] and [B] obtain. Grounding is also often taken to be asymmetric, irreflexive, and transitive, though some have denied this, and some have used that denial to resolve Fine's puzzles of ground. Nothing I say immediately assumes a view about whether Grounding has these properties. While I conclude that if semantic dependence is a species of Grounding, then Grounding is sometimes symmetric,

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[7] Schaffer (see e.g. 2009) thinks not that grounding is an explanatory relation, but that it 'backs' explanation —as does causation, conceptual definition, etc. (this is part of why it makes sense on the Schafferian view for grounding to relate *entities* of various types, despite the fact that there are many sorts of entities (e.g. concrete objects) that don't seem to have explanatory relations that hold between them). Note that Schaffer takes such obtaining states of affairs to be entities; hence everything said about 'heavyweight' views should apply to his view, on which heavyweight facts are among the relata of grounding but do not exhaust that category.

this is not the way in which I resolve Fine's puzzles.[8]

Semantic dependence plausibly relates either *sentences* or *propositions*. And I treat Grounding as relating *facts*. Suppose we take the heavyweight view of facts. How could semantic dependence be a species of Grounding, if they have distinct relata?

I do not argue that there is a non- metaphysical dependence relation that holds between (heavyweight) facts, which explains away the purported m-grounding relations between those facts. Rather, I argue that there is a non-metaphysical dependence relation that holds between our representations of the world, and which misleads us, in logical cases (and surely other cases as well) into thinking that there are corresponding m-grounding relations *in the world*.

For the friend of heavyweight facts, there is an obvious kind of dependence in logical cases, but it is plausible that it holds between representational entities and not worldly ones; and we need further reason to even believe that there *are* distinct heavyweight facts in question in these cases. So, for the friend of heavyweight facts as the relata of Grounding (the "coarse-grained" conception), strong separatism is, I think, a non-starter. Heavyweighters, if they buy the arguments here, should be eliminativists.

However, the friend of lightweight facts, or of operational ground, might be able to accommodate semantic dependence as a species of Grounding, and instead embrace strong separatism.

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[8] For objections to ascribing these properties to grounding (or ontological dependence), see, e.g., Barnes (2018), Fine (2010), Schaffer (2012), Jenkins (2011). For replies, see, e.g., Raven (2013), Litland (2013). I am *not* claiming that the solution I give here is better than (or in competition with) those that reject one of the formal properties (and indeed, if strong separatism is true, then asymmetry is false). I am happy to let a thousand flowers bloom here—I take the view I argue for here to be independently motivated, and view it as simply an interesting upshot that it dissolves the puzzle.

2.1 Fine's Puzzles of Ground

One advantage of pointing out that "logical" cases of Grounding might actually be cases of semantic dependence is that puzzles about Grounding raised by Fine (2010) are resolved. To stay neutral about whether to interpret these puzzles as being about big-G Ground, or about m-ground, I use the lowercase 'ground' in this section. In section 3.3, I will discuss this issue in detail.

Two simple versions of the puzzles are:

1. Let f_0 be the fact that everything exists. Then everything exists partly in virtue of f_0's existing. But f_0 exists partly in virtue of everything existing, since f_0 is the fact that everything exists, and so everything exists partly in virtue of everything existing (Fine 2010, p. 98).

2. Let f_1 be the fact that something exists. Then something exists partly in virtue of f_1's existing. But f_1 exists partly in virtue of something existing, and so something exists partly in virtue of something existing (Fine 2010, p. 98).

To spell out what is going on in the second case, think about the fact: [something exists]. [[something exists] exists] is partly grounded in [something exists]. And [something exists] is partly grounded in [[something exists] exists], since the former is an instance of the latter. But this violates asymmetry and, if we assume transitivity, also violates irreflexivity.

How might the pro-grounder respond? first, she might deny one of the 'general' ground-theoretic assumptions, such as irreflexivity or asymmetry, or second, she might deny one of the 'special' Ground-theoretic assumptions that generate the puzzles. I go the second route, and deny *all* of these special assumptions, which are:

Disjunction Grounding: Given the truth of any disjunct, it will help ground a disjunction.

Existential Grounding: Given that A(y) and that y exists, then y's being an A helps ground that something is an A.

Universal Grounding: Given that everything is an A and that y exists, then y's being an

A helps ground that everything is an A (Fine 2010).

Each assumption does important work in at least one of Fine's puzzles. For example, the claim that [something exists] is partly grounded in [[something exists] exists] rests on the claim that existentially quantified facts (or propositions, if we prefer) are (always) partly grounded by each of their instances.

I will show, in section 3.3, that either (if eliminativism is true) we should not accept *Disjunction Grounding* or *Universal Grounding,* or (if strong separatism is true) we should not accept that asymmetry is true. (I think that a similar argument could be run against *Existential Grounding,* but I do not produce one here.) Since at least one of these assumptions plays a role in each of Fine's puzzles, we can hence avoid the puzzles entirely.

3. Semantic Dependence

Semantic dependence is a kind of *meaning* dependence (so semantic dependence claims might properly be answers to questions like 'what is it in virtue of which s *means* p?'). I will argue that semantic dependence exists, and obtains in many cases, and will show that it can't be m-grounding, since it's not metaphysically explanatory. It might be that in most cases the m-grounding facts align with the semantic dependence facts—but again, we need an argument for this claim, and I'll show that there are positive reasons for rejecting it. Indeed, even if one doesn't like the idea that semantic dependence is not properly *metaphysical,* one should still find some of what is said here compelling; part of what I will show is that there are cases where it is extremely plausible that semantic dependence and m-grounding run in opposite directions. This is problematic even for the Grounding separatist.

Let me start with a warm up case: consider the claim 'Fido barks'. We might think

that there is a real sense in which the *semantics* of 'Fido barks' is *explained* by the thing denoted by 'Fido' being in the extension of the thing denoted by 'barks'. But this semantic explanation is neutral about what (if anything!) metaphysically grounds Fido's barking (e.g. Fido's being a bundle of tropes including a barking trope, Fido being an individual instantiating the universal *barking,* etc.). Many people think there is nothing wrong with endorsing a semantics that commits us to there being a thing denoted by 'Fido' and an extension of 'barks', regardless of what our metaphysical commitments are. For example, we can endorse this semantic explanation without even believing in the (metaphysical) property of *barking.* I won't take a stand on whether doing this is philosophically acceptable; I just want to note that it is very common.

I'll suggest multiple ways we might cash out semantic dependence. In 3.1, I suggest that semantic dependence might be involved in (or "back") explanatory appeals to models that cannot back *metaphysical* explanation. In 3.2, I show that adopting a two-dimensional semantics gives us a strong reason to think that *meaning dependence* questions come apart from *metaphysical dependence* questions. (This is closely related to Chalmers' "conceptual grounding" (2012 p. 452).) Even if one objects to both ways of cashing out semantic dependence, one may well be swayed by what I say in section 3.3, where I'll show that (perhaps a third kind of!) semantic dependence is present specifically in logical cases, and that this helps resolve Fine's puzzles. It may well be that 3.1, 3.2, and 3.3 are about different kinds of dependence relations (though my view is that they are at least closely related). This doesn't matter to my overall goal: what matters is that none of them is a distinctively *metaphysical* dependence relation. My hope is that each reader will be moved by at least one of these subsections; and that is enough to at least motivate a re-thinking of whether there is Grounding in each of these cases. Only the discussion in 3.3, though, will focus on logical cases.

3.1. Possible Worlds

We regularly intentionally appeal to false explanations. We might take the false explanation to be standing in for whatever the true explanation is, either because it is convenient, or it is unifying, or because it clearly works well where another explanation—perhaps the correct one—might be too complex to package neatly. Or we might appeal to features of *models* in explanation, even though we don't think that it's actually true that a feature of a model genuinely explains something, but rather think that the corresponding feature of whatever the model models is the genuine explanans.

When we give these kinds of explanations, we are in some sense giving *false explanations;* we are using an explanation because it is convenient, or reflects reality well enough to get things right, even while maintaining that it isn't factive. Philosophers do this, for example, in using possible worlds semantics without committing themselves to the existence of (genuine, concrete) possible worlds. Philosophers who don't think that possible worlds *exist,* at least in any sense robust enough for them to play a metaphysically explanatory role, still appeal to possible worlds semantics.

There is one sense (this convenient semantic sense) in which the fact that Pedro Martinez could have been a ballet dancer is explained by there being some possible world in which Pedro (or his counterpart) is a ballet dancer. But it can't be (unless we are modal realists) that what *grounds* [Pedro could have been a ballet dancer] is [in some possible world, Pedro/his counterpart is a ballet dancer].[9]

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[9] I am *not* claiming that everyone will endorse this grounding claim. Fine, for example, would take the possible world fact to be grounded in an irreducibly modal fact. If one wanted to do this and still endorse possible worlds semantics, then it would be completely straightforward how semantic dependence and grounding come apart: they run in opposite directions! If one wants to do this and not use possible worlds semantics, one won't be convinced here. That's okay—this is merely supposed to be an *example* of the way semantic dependence and grounding might come apart. More examples to come, but it is relatively easy to see that what I am saying here will generalize to any case where our semantics involves

First, Grounding is supposed to be *factive*. This follows from its relata being facts; for the lightweighter, facts are identical to true propositions, so Grounding must be factive; for the heavyweighter, facts are identical to something like obtaining states of affairs, so grounding relates only obtaining, and not non-obtaining, states of affairs. So perhaps, if we don't believe in the existence of genuine possible worlds, then we simply can't say that [Pedro could have been a ballet dancer] is grounded in [in some possible world, Pedro/his counterpart is a ballet dancer], since there is no such fact [in some possible world, Pedro/his counterpart is a ballet dancer].

This is on the right track, but is too quick. Anyone who appeals to possible worlds semantics at least believes in the existence of models, or abstract objects, that we call possible worlds, e.g., that the 'possible worlds' we refer to in the context of possible worlds semantics are *sets* or *mathematical structures*. Many philosophers take their possible worlds talk to be about these sorts of things. But this doesn't threaten my claim: it isn't in any way the *model* that grounds—metaphysically grounds—that Pedro could have been a ballet dancer. It might be that whatever the model is supposed to be *a model of* grounds the possibility. But then we have the following: when we give the semantic explanation, we never appeal to whatever the model is modeling (at least in this case); we just appeal to the model itself. But m-grounding explanations shouldn't appeal to these models. M-grounding bypasses the model, and holds directly between whatever it is that the model is a model *of*, and whatever we are using the model to *explain*. For if the m-grounding chain between the groundee and its ultimate grounder involved the model, we would be making what many would take to be a bizarre metaphysical claim: that the explanation for why Pedro could have been a ballet dancer runs through a *more fundamental fact* that is

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commitments to *models* playing a role in explanation.

about a mathematical object. I claim: that Pedro could have been a ballet dancer might semantically depend on some abstract possible world, or some mathematical object, that we are treating as a model. But that Pedro could have been a ballet dancer couldn't be m-grounded in that abstract possible world. Modal semantics and modal metaphysics come apart.

Alternatively, we might think that what the ersatzist is doing is really something akin to appealing to a *useful fiction* that helps serve as a unifying, simplifying explanation when we are doing semantics. But if this is right, then semantic dependence is (or backs) a kind of *non-factive* explanation. It follows that either semantic dependence is not Grounding, or that Grounding is not always factive.[10]

I want to set aside the (important) question of whether we are *justified* in using possible worlds semantics without being committed to robust possible worlds.[11] I merely want to point out that (a) many philosophers do this, and that (b) it seems to me to be an instance of a common way that we reason about the world: we appeal to models, and features of models, to explain things, when we really don't mean that it is *in fact* the features of the models that are doing the metaphysically deep explanatory work; rather, the model is a convenient intermediary between the features of the *world* that are doing that work (which might be messy, disunified, and hard to talk about/theorize about) and what it is we are trying to explain. So even if one disagrees with the claims I've made in this section, one can see that they might generalize to other domains where one might find the claim less objectionable.

To sum up: sometimes, semantic explanations that are useful, and that perhaps

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[10] Which is not to say that useful fictions can't genuinely explain; I think they can, and even can *scientifically* explain, following Bokulich (2011). But they don't provide *factive* explanations.

[11] See Lewis (1986), Plantinga (1979), Gregory (2005) for some discussion of these issues.

are backed by genuine *semantic dependence relations,* aren't backed by metaphysical dependence relations, because the explanatory chain runs through a model that isn't involved in the m-grounding chain. I am inclined to think that this kind of semantic dependence, e.g., that in which modal claims depend on possible worlds, is not Grounding. It is not factive (if we think about models as "useful fictions"), or at least, it is not metaphysically explanatory. However, the strong separatist can instead choose to accept that these relations *are* Grounding. But then, she must accept that Grounding is not factive.

Readers might wonder whether we are right to call the kind of dependence I have gestured at here *semantic;* while I agree that we appeal to models in a broader range of explanations than just meaning explanations, it does seem that appealing to possible worlds to cash out modal claims *is* a case of invoking a semantically explanatory (but not metaphysically explanatory) model. It doesn't matter to the overall purposes of this paper if my reader agrees that there is a kind of dependence here, but disagrees that it should be called 'semantic'—so long as she agrees that it is not metaphysical. But even this is not necessary, if she is willing to grant one of the two central claims I make in sections 3.2 and 3.3.

3.2 Two-Dimensional Semantics

There is another way we might distinguish between semantic dependence and m-grounding. We might think that (at least part of) the semantics for *water* don't have anything at all to do with H_2O; children know what 'water' *means,* at least in part, without knowing what water *is* or what grounds facts about water. But now suppose we think about the following fact: [there is a glass of water sitting on the table in front of Laura]. What grounds this fact? Presumably all sorts of facts about glasses, tables, the particular

molecules and the particular arrangement of molecules that make up the glass and the table, facts about Laura, etc. But what grounds that it is *water* that is in my glass? Is it facts like [water is wet], [water quenches thirst], [water flows in lakes and streams]? Presumably not; nor is it facts like [there is wet stuff in the glass], [there is thirst- quenching stuff in the glass], and so on. Rather, it is facts like [there are H_2O molecules arranged in a particular fashion in the glass] that fully ground [there is water in the glass]. But the facts about the *meaning* of 'there is a glass of water sitting on the table in front of Laura' are at best only partly determined by facts about H_2O molecules, because, e.g., the facts like [there is thirst-quenching stuff in the glass] and [there is wet stuff in the glass] are relevant to the meaning question without playing a role in the grounding question.

In other words, following Chalmers (2004, 2006), we might think that questions about the meanings of sentences depend on both the 1-intension (in the case of 'water': something like: *the watery wet thirst-quenching stuff that flows in our lakes and streams*) and the 2-intension (in the case of 'water': something like: *H_2O*, or perhaps: *H_2O molecules arranged in such-and-such a fashion*) of the terms in those sentences. But questions about what m-grounds propositions (or facts, for the heavyweighter) depend only on facts about the 2-intensions of terms in the sentences that express those propositions. This will depend on how *fine-grained* one thinks the relata of grounding are; it might be the case that for, e.g., Rosen (2010), grounding is fine-grained enough that it involves 1-intensions, and so may not apply to all views. But those who are committed to a *worldly* rather than *conceptual* account of grounding, at least, should endorse it.

Call the actual 2-intension of a given term '2i'. The m-grounding facts about a proposition involving a constituent that can be expressed by 2i are usually only going to be about 2i and the 2-intensions of the other terms in the sentences that express those propositions. But in those same cases, semantic dependence—what the meanings of our

expressions depend on--will involve 1-intensions. I suspect that few will want to maintain that [there is water in the glass] is grounded in [there is wet stuff that quenches thirst in the glass], but we should think that [there is water in the glass] at least partially *semantically depends* on [there is wet stuff that quenches thirst in the glass]. Hence, semantic dependence is a different relation from m-grounding.

Chalmers himself proposes something similar, *conceptual grounding*:

To get a rough grip on (conceptual grounding), we can work with the approximate definition picture, so that when E is approximately definable as D (under criteria of adequacy that include conceptual priority), truths involving E are conceptually grounded in truths without E involving the terms in D. So truths about bachelors will be conceptually grounded in truths about gender and about marriage, while truths about electrons will be conceptually grounded in truths about playing the electron role. I will also take it that standard logical grounding relations yield conceptual grounding: so A and B jointly ground A & B, A or B separately ground A ∨ B, and so on. (2012, p. 459.)

While I used two-dimensional semantics to motivate the distinction between m-grounding and semantic dependence in this section, it is merely a particularly clear example of the way in which what *meaning* depends on can come apart from (and often does come apart from) m-grounding. One needn't buy into two-dimensional semantics to see that there is a distinction here.

In what follows, I'll show that m-grounding and semantic dependence come apart specifically in cases of logically complex facts and the logically simpler facts that entail them. But note that if I am right here and in section 3.1, semantic dependence comes apart from m-grounding in a much broader range of cases than just logical ones.

3.3 Application to Logically Complex Facts

I've argued that there are semantic dependence that comes apart from m-grounding, because semantic dependence chains involve models that can't possibly enter into m-grounding chains, and because meaning questions might involve multiple dimensions,

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only one of which might properly involve m-grounding. How might the distinction between semantic dependence and m-grounding come into play in logical cases? Here, I will give some examples of its relevance specifically to Fine's assumptions.

First, suppose that some kind of governing, anti-Humean conception of laws is correct (that the laws are "robust", that they aren't just summaries of similarity patterns, etc.). Assuming this, presumably there will be some universal facts which are fully m-grounded by laws. Suppose that [All Fs are Gs] is one of these. (Note that [All Fs are Gs] can't itself be such a law, since it's not bound by any kind of model operator, and it could just as easily been grounded in some accidental features of the world [Fa & Ga], [Fb & Gb], and so on, perhaps along with a totality fact.) By stipulation, [All Fs are Gs] is fully m-grounded by a law-fact, [L]. But the *meaning* of [All Fs are Gs] isn't dependent on [L]. There are both Humeans and anti-Humeans in the philosophical community. Do the Humeans and the anti-Humeans disagree about the meaning of [All Fs are Gs] (or, for the lightweighter, the meaning of the proposition that all Fs are Gs)? It seems to me that they don't, or at least (and this is all I need), that there's some sense in which they don't.

But the Humean and the anti-Humean clearly disagree about what m-grounds [All Fs are Gs]. Indeed, if we assume that they are both pro-grounders, what m-grounds [All Fs are Gs] might be the very locus of their disagreement. Hence, there is a distinction between the question of what m-grounds (at least some) universal generalizations and the question of what those generalizations semantically depend on, and the answers to these questions can be distinct. And we don't need the assumption that anti-Humeanism is correct to show that semantic dependence and m-grounding are two distinct relations, since the Humean will agree that her disagreement with the anti-Humean is about m-grounding and not (at least, not in some sense) about *meaning*.

To lay my cards on the table, I think that the talk about "m-grounding" in this

section should just be talk of Grounding. I think that Grounding is metaphysical, and semantic dependence is not. But I will not argue for that here. However, I do want to point out that in the above disagreement, it seems somewhat unnatural for the Humean and the anti-Humean to conclude that there are simply two different Grounding relations at work. It seems to me that what they would instead conclude is that Grounding *comes apart* from semantic dependence.

Now let's return to Fine's puzzles. The anti-Humean should think that there are universally quantified facts that *aren't even partially m-grounded* in any of their instances; for in the case at hand, it seems to be that an instance of [All Fs are Gs], e.g. [If Erica the electron is an F, she is a G] is metaphysically grounded, for the anti- Humean, in [All Fs are Gs], which is in turn metaphysically grounded in [L]. Whereas the Humean ought to think that [If Erica the electron is an F, she is a G] helps ground [All Fs are Gs], which in turn grounds [L].

Now consider one of Fine's principles, *Universal Grounding,* which says that instances of universals always help ground those universals. Should we read 'ground' as m-ground, or as Ground? If we read 'ground' as m-ground, I have at least shown that Universal Grounding requires commitment to a highly contentious metaphysics, on which strong forms of anti-humeanism (where laws are primitives, or laws "make" their instances) must be false. If we assume that semantic dependence is a species of Ground, and read 'ground' as Ground, *Universal Grounding* might be true, but Ground is no longer asymmetric: there are cases in which two different species of Ground, m-ground and semantic dependence, run in different directions. This falsifies a different principle, asymmetry, required to get the puzzles off the ground.

Consider a second example: an instance of the Law of Excluded Middle, say [Fa v ~Fa]. All anyone needs to know to know what 'Fa v ~Fa' means is to know what 'Fa'

means, what 'v' means, and what '~' means. No doubt not everyone has a mastery of these concepts, as we learn when we teach introductory logic. But once we are equipped with such knowledge, we know exactly what 'Fa v ~Fa' means. However, we haven't learned anything about the *m-grounds* of [Fa v ~Fa] when we learn what 'Fa', 'v', and '~' mean. It could be that [Fa v ~Fa] is grounded by either [Fa] or [~Fa] (or both), and indeed, the meaning of 'Fa v ~Fa' seems to depend on the meanings of 'Fa' and '~Fa'. But it could also be that [Fa v ~Fa] is (either fully or partly) m-grounded in something like [it's a law of logic that ∀x(Fx v ~Fx)]. And the meaning of 'Fa v ~Fa' doesn't depend in any way on it being a law of logic that ∀x(Fx v ~Fx). Hence, if we treat LEM as an anti-humean law, then what the meaning of the sentence 'Fa v ~Fa' depends on comes apart from what m-grounds [Fa v ~Fa].

Even if we don't like the idea that LEM is a governing law, we can see that there must be two distinct questions here, about two distinct relations, since the defender of LEM-qua-governing-law only disagrees with her opponent about the m-grounds of [Fa v ~Fa], and not about the meaning of the proposition that Fa v ~Fa.

Now consider another of Fine's principles, *Disjunction Grounding* (which says that true disjuncts always help ground disjunctions). Again, if we understand 'ground' here as m-ground, *Disjunction Grounding* is either false, or, at least, turns on a very strong metaphysical assumption. And, again, If we assume that semantic dependence is a species of Ground, and read 'ground', then *Disjunction Grounding* might be true, but m-grounding and semantic dependence can plausibly run in opposite directions in some cases, which means that Ground is not always asymmetric, falsifying a different assumption of Fine's (that Ground is asymmetric).

Is there a more general moral here? Yes. While we might be able to settle the semantic dependence question without doing deep metaphysics—we can perhaps settle

it with some philosophy of language, philosophy of mind, and some empirical facts about how our language and our logic works—we *cannot* settle the m-grounding question without doing deep metaphysics.

Have I resolved Fine's puzzles of ground? I think so. I have shown that there is good reason to think that two of his three "special" ground-theoretic assumptions are false—or that, if they are true, then Ground is not asymmetric. One potential objection is that I have merely introduced a new kind of dependence relation. This dependence relation—semantic dependence—plausibly has the same kinds of properties (e.g. irreflexivity, transitivity, asymmetry) that m-grounding does; so perhaps we can re-create the puzzles for semantic dependence. This is wrong for two reasons: first, it's not obvious to me that semantic dependence *is* irreflexive, transitive, and asymmetric (we would need to do much more work to even say what semantic dependence was, or whether *it* was a unified dependence relation, before we could figure this out); second, there may be equivocation in which *kind* of dependence relation is being invoked in each step of each puzzle. But I don't think the burden is on me here to show this.

I had two goals in this paper. One was to generally argue that there is a dependence relation, semantic dependence, that is distinct from m-grounding (and to suggest that it follows that we are either mistaken to call it 'Grounding', or we must adopt a fairly radical separatism about Grounding); the second was to show that the principles that Fine relies on are problematic. I think I have succeeded in both. If the puzzles can be reformulated, or more narrow versions of the principles can be constructed, so be it.

4. Conclusion

I have argued that at least some cases of purported Grounding are cases of *semantic dependence*. It follows that either eliminativism is true, and semantic dependence is not

Grounding, or that strong separatism is true, and Grounding is not distinctively related to metaphysical explanation, sometimes semantic dependence and m-grounding run in opposing directions in the same cases, and sometimes semantic dependence is non-factive.

There is dependence between logically complex facts and the logically simpler facts that entail those complex facts; it is semantic dependence. If there is also m-grounding that holds between those facts, this needs to be argued for and motivated. While I have not argued that there is no m-grounding in these cases, I have provided some independent motivation for the claim that at least in some cases, there is either not m-grounding between logically complex facts and the logically simpler facts that entail them, or that if there is, we have no reason to think it runs in the same direction as semantic dependence does. Along the way, I have given a solution to Fine's puzzles of ground.

Even if my reader is not convinced by each of my cases and arguments, I hope she is at least convinced by my broadest claim: that semantic dependence is a distinctive notion, and that either it is not Grounding, or we must be strong separatists about Grounding. Perhaps Hofweber and Wilson are right, and we can explain away *all* of the cases of grounding by appealing to more familiar, less esoteric notions of dependence. (I certainly think semantic dependence is less esoteric than grounding.) Or perhaps there is still room for a genuine relation of grounding— metaphysical, non-causal dependence. But if so, it seems to me, it is present in fewer cases than many pro-grounders seem to think.

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