Heuristics for Conceptual Grounding

Robert Smithson

Abstract

In this paper, I clarify the relation between two types of grounding: *metaphysical* and *conceptual*. Metaphysical grounding relates entities at more and less fundamental ontological levels. Conceptual grounding relates semantically primitive sentences and semantically derivative sentences. It is important to distinguish these relations given that both types of grounding can underwrite non-causal "in-virtue-of" claims. In this paper, I argue that conceptual and metaphysical grounding are exclusive: if a given in-virtue-of claim involves conceptual grounding, then it does not involve metaphysical grounding. I then present two heuristics for deciding which type of grounding is relevant to a given case. These heuristics suggest that certain proposed cases of metaphysical grounding may not actually involve metaphysical grounding at all.

1 Introduction

Recently, many theorists have claimed that the world has an ordered, hierarchical structure. Entities at lower ontological levels are said to *metaphysically ground* entities at higher ontological levels.[1] It has also recently been claimed that our language has an ordered, hierarchical structure. Semantically primitive sentences are said to *conceptually ground* less primitive sentences.[2] It is often emphasized that metaphysical grounding is a relation between things out in the world, not a relation between our sentences. But I will argue that not enough care has been taken to distinguish these two types of ground-

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[1]See, e.g., Schaffer (2009), Audi (2012a).
[2]See Chalmers (2012, 452-460).

ing. Conflating these relations is easy to do, given that both types of grounding are expressed by non-causal "in-virtue-of" claims.

In section 2, I will argue that there are indeed two distinct grounding relations expressed by non-causal "in-virtue of" claims. In sections 3-4, I will argue that conceptual and metaphysical grounding are exclusive: if a given in-virtue-of claim involves conceptual grounding, then it does not involve metaphysical grounding. In section 5, I will give some heuristics for deciding which type of grounding is relevant in a given case. These heuristics suggest that many proposed cases of metaphysical grounding may not involve metaphysical grounding at all. I will conclude by explaining why these results should interest both supporters and detractors of the study of metaphysical grounding.

2   Distinct types of grounding

I will begin by describing metaphysical and conceptual grounding and the explanatory work each is supposed to perform.

2.1   Metaphysical grounding

I will follow the common strategy of introducing metaphysical grounding with examples:[3]

1. The fact that there are chemicals arranged in a certain way obtains in virtue of the fact that there are particles arranged in a certain way.
2. {Socrates} exists in virtue of the fact that Socrates exists.
3. x is roughly spherical in virtue of its having shape R.[4]
4. x is fragile in virtue of its molecular arrangement and the physical laws.
5. x's action is wrong in virtue of its being done with the sole motive to cause harm.
6. x is in pain in virtue of the fact that x is in brain state P.

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[3]For ease of presentation, I have adjusted these examples to give them a common form. The examples are from (in order): Schaffer (2012, 125), Fine (1995, 271), Schaffer (2012, 126), Rosen (2010, 110), Fine (2012b, 1), and Clark & Liggins (2012, 812).

[4]Here, R is a certain shape falling under the determinable *being roughly spherical In [6]*, P is a brain state realizing conscious state of pain..

For example, [3] is said to correspond to a metaphysical grounding relation between the fact *x's having shape R* and the fact *x's being roughly spherical*.

These examples have an important role in the literature because they are supposed to provide us with an intuitive grip on the notion of metaphysical grounding.[5] They are also used to motivate two types of explanatory work that metaphysical grounding is supposed to perform. First, metaphysical grounding is supposed to underwrite cases of *metaphysical explanation*. For example, in [1], we explain the fact that there are chemicals arranged in a certain way by appealing to the fact that there are particles arranged in a certain way. It is claimed that, just as we need the causal relation to underwrite cases of causal explanation, so too we need metaphysical grounding to underwrite cases of metaphysical explanation.[6]

Second, metaphysical grounding is posited to accommodate intuitions about metaphysical priority.[7] For example, it intuitively seems that the individual Socrates is more fundamental than the singleton set {Socrates}. But we cannot accommodate this intuition using familiar tools like supervenience, since Socrates and {Socrates} supervene on each other. Accordingly, it has been argued that metaphysical grounding is needed to capture the fine-grainedness of metaphysical priority.[8]

For ease of presentation, I will adopt two assumptions about metaphysical grounding. First, I will assume the common view that metaphysical grounding relates facts (i.e., obtaining states of affairs).[9] Facts are individuated by the objects and properties composing them. Second, I will assume that metaphysical grounding is unitary, i.e., that there is a single dependence relation corresponding to all cases of metaphysical expla-

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[5]For discussion, see Schaffer (2009, 375-376).

[6]See Audi (2012a, 687-688) for this view. One might instead say that metaphysical grounding is just *identical* to metaphysical explanation (see Trogdon (2013, section 3) for discussion). The distinction between these views will not be relevant to the arguments ahead.

[7]See Clark & Liggins (2012, 813).

[8]It is commonly supposed that metaphysical grounding straightforwardly implies supervenience. But see Leuenberger (2013) and Skiles (2014) for more nuanced discussion.

[9]See, e.g., Rosen (2010, 114) and Audi (2012a, 693). Other theorists, such as Schaffer (2009, 375-376), claim that metaphysical grounding takes different types of entities as relata. Other theorists, such as Correia (2010) and Fine (2012a), express metaphysical grounding claims using sentential operators.

nation.[10] Of course, there is one sense in which I am a "pluralist" about grounding: I will argue that metaphysical and conceptual grounding are distinct relations. But this is consistent with the assumption that all cases of *metaphysical* dependence are unified. (In this sense, the pluralism I defend differs from the pluralist views of Wilson (2014) and Koslicki (2015).)

2.2 Conceptual grounding

Metaphysical grounding relates items on different ontological levels; it concerns the structure of the *world*. In contrast, conceptual grounding relates items on different semantic levels; it concerns the meanings of our linguistic expressions. I will assume that conceptual grounding takes sentences as its relata.

Just as with metaphysical grounding, instances of conceptual grounding can be expressed by non-causal in-virtue-of claims:

$1'$. x is a vixen in virtue of the fact that x is a female fox.
$2'$. x is a piece of furniture in virtue of the fact that x is a chair.
$3'$. x is bald in virtue of the fact that x has 20 hairs.
$4'$. x is an electron in virtue of the fact that x has nomic role R.[11]

For example, [$1'$] corresponds to a conceptual grounding relation between the sentences 'x is a female fox' and 'x is a vixen'.[12]

Intuitively, a sentence A is conceptually grounded by a sentence B when the expressions in B are semantically prior to those in A and the sentence 'If B, then A' is a conceptual truth.[13] For the purposes of this paper, it will be fine to rely on examples

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[10]See Trogdon (2013, section 2) for discussion.

[11][$4'$] involves conceptual grounding on the common view that natural kind terms like 'electron' refer to whatever item fills a certain nomic role.

[12]Note that [$1'$] is not itself a claim *about* conceptual grounding; it is claim about non-causal explanation. So, speaking strictly, I will say that [$1'$] *corresponds to* a case of conceptual grounding (just as [1] corresponds to a case of metaphysical grounding). But more colloquially, I will speak of [$1'$] as a "case" of conceptual grounding.

[13]The present analysis imples that 'x is a female fox and y is a female fox' conceptually grounds 'x is a vixen'. But this is no real concern. We might simply say that some instances of conceptual grounding

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like $[1']$-$[4']$ to provide a working grip on the notion of conceptual grounding, just as examples [1]-[6] provided a working grip on the notion of metaphysical grounding.

But there are various ways to make the notion of conceptual grounding more precise. For example, Chalmers (2012, 464-465) develops the idea that certain expressions have inferential roles that are constitutive of the meanings of those expressions.[14] For example, it is plausible that the term 'vixen' is individuated by its obvious inferential links to 'female' and 'fox'.[15] With this account, we can say that a term C_1 is semantically prior to a term C_2 when the constitutive inferential role for C_2 involves C_1. We can also say that the sentence 'If B, then A' is a conceptual truth when the constitutive inferential roles of the terms in A and B provide competent speakers with a warrant for asserting A on the supposition that B.

Importantly, conceptual grounding does not require that the terms in the conceptually grounded sentence have explicit definitions. For example, let $\neg S$ be the sentence 'It is not the case that Smith knows that: either Jones owns a Ford or Brown is in Barcelona'. Let D be the conjunction of the following sentences:

> Smith is justified in believing that Jones owns a Ford. Originally, Smith has no beliefs about Brown's location. By making a logical inference from his belief that Jones owns a Ford, Smith forms the belief: *Jones owns a Ford or Brown is in Barcelona.* In fact, Jones does not own a Ford. But in fact, Brown happens to be in Barcelona.

It seems that competent speakers can immediately judge that $\neg S$ is true when presented with D. The same goes for all other cases in the Gettier literature: the entire progress of this literature depended on our ability to make these immediate judgments in response to cases. What can explain our ability to make these judgments? Here's one plausible

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do not correspond to (genuinely explanatory) in-virtue-of claims. Alternatively, we could stipulate as a further condition that B conceptually grounds A just in case the sentence 'A in virtue of the fact that B' is genuinely explanatory. This choice will not affect the discussion ahead.

[14]Constitutive inferential roles have been criticized by, e.g., Williamson (2003). I will set these worries aside.

[15]By contrast, the term 'fox' is not individuated by its inferential links to 'vixen'.

explanation: it is partially constitutive of the meaning of the term 'knows' that one is disposed to judge that $\neg S$ when presented with D (and similarly for other cases). This suggests that, even if the term 'knowledge' cannot be given a definition, there is still a conceptual link between 'knowledge'-sentences and sentences describing subjects' belief states.

Conceptual grounding is supposed to perform analogous theoretical work to metaphysical grounding. First: conceptual grounding is needed to underwrite cases of conceptual explanation.[16] For example, in order to account for the explanatory force of [1′], we might say: "what it *means* for x to be a vixen just is for x to be a female fox"; this explanation seems semantic, not metaphysical or causal.[17] Second, conceptual grounding is needed to accommodate intuitions about semantic priority. For example, even if 'knowledge' cannot be given an explicit definition, there is an intuitive sense in which 'knowledge'-sentences seem semantically derivative from sentences describing beliefs.

To head off any potential confusion, it is worth contrasting the claim that [1′]-[4′] involve conceptual grounding from two other claims encountered in the literature.

First: conceptual grounding is unrelated to the dispute over whether metaphysical grounding claims should be expressed using relational predicates or using sentential operators.[18] This is a debate about the logical form of *metaphysical* dependence claims; in contrast, conceptual grounding concerns the semantic links between our sentences.

Second: proponents of metaphysical grounding sometimes distinguish "conceptual" and "worldly" views of facts; these views disagree over whether, e.g., *x's being water* and *x's being H_2O* are distinct facts.[19] But this is a question about the fine-grainedness of

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[16]For discussion of conceptual explanation, see Schnieder (2006, 405-406).

[17]To see the difference between semantic explanation and metaphysical explanation, contrast [1′] with a case like [1]. We would not say that "what it *means* for there to be chemicals arranged in a certain way just is for there to be particles arranged in a certain way."

[18]See Correia & Schnieder (2012, 3.1) for discussion. Rosen (2010) and Audi (2012b) endorse the predicate view, while Correia (2010) and Fine (2012a) endorse the operator view.

[19]Proponents of worldly facts include Correia (2010, 258-259) and Audi (2012b, 3.5). Rosen (2010) and Fine (2012a) seem to adopt a finer-grained conception of facts.

the *metaphysical* grounding relation, not a question about conceptual grounding.[20] To claim that there is conceptual grounding is not to claim that the metaphysical grounding relation takes conceptual facts (or alternatively: sentences) as its relata.

2.3 Two distinct types of grounding

I have emphasized that metaphysical and conceptual grounding are two distinct relations. One concerns the metaphysical structure of the world while the other concerns the meanings of our sentences. One is commonly thought to take worldly entities as its relata, while the other takes sentences as its relata. In addition, these relations are posited to perform different types of explanatory work.

Nonetheless, some philosophers might still be skeptical that there are two distinct relations underwriting non-causal in-virtue-of claims. For example, such a skeptic might argue that in-virtue-of claims like [1′]-[4′] are merely cases of metaphysical grounding (and not conceptual grounding). To convince such skeptics, it suffices to give examples of such claims that do not involve metaphysical grounding. Here is the simplest example of this type:

5′. x is a bachelor in virtue of the fact that x is an unmarried male.[21]

As it happens, [5′] is sometimes cited as a case of metaphysical grounding in the literature.[22] But I think that, once conceptual grounding is recognized as a live option, this view no longer seems attractive. Here is a simple argument to push this intuition.

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[20]For example, Rosen (2010, section 10) endorses a very fine-grained view of facts, but he emphasizes that metaphysical grounding is not a semantic phenomenon.

[21]I intend for [5′] to be distinguished from the following case of "conjunctive grounding": [5*] ≡ x is unmarried and male in virtue of the fact that x is unmarried and the fact that x is male. [5*] is explicitly distinguished from [5′] in the literature (see, e.g., Chalmers (2012, 454)). This seems appropriate, since [5*] and [5′] have different explanatory force: in [5′] the emphasis is on 'bachelor', while in [5*] the is on 'and'. I claim that, in order to accommodate this distinctive explanatory force, we need to countenance conceptual grounding. This is true even if someone insists on viewing [5′] as a case of conjunctive grounding.

[22]See, e.g., Rosen (2010, 124).

Suppose a community is just like our community except that they do not possess the expression 'bachelor': they always use the expression 'unmarried male'. So these speakers never form the belief that x is a bachelor.[23] Do we think these speakers are missing something about the world's structure insofar as they lack this belief? Of course not: these speakers have just as complete a metaphysical picture as we do. We just have another way of speaking. This suggests that there is nothing metaphysical about [5′].[24] (Of course, [5′] isn't a very interesting case. But for the present, my aim is just to make the weak point that conceptual and metaphysical grounding are distinct.)

Besides failing to respect our intuitions in the above thought experiment, anyone who insists on viewing [5′] as involving metaphysical grounding must either reject (a) the claim that '*being a bachelor*' and '*being an unmarried male*' are just two names for a single property or (b) the claim that metaphysical grounding is irreflexive.[25] But with conceptual grounding on the table, there is no need to accept either of these consequences.[26]

Of course, there is nothing stopping us from using 'metaphysical grounding' as a catch-all term that applies in any case of non-causal explanation. But why try to make room for [5′] under the banner of metaphysical grounding? To insist on grouping these cases together does not somehow unify them; it merely obscures an important distinction between two very different phenomena.[27]

One might wonder: why not just say that conceptual grounding is a form of meta-

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[23]Here, I am assuming a fine-grained categorization of beliefs on which the belief that x is a bachelor is distinct from the belief that x is an unmarried male.

[24]Note: this argument stands even on a deflationary account of facts and of the metaphysical grounding relation. See 4.4.

[25]For an example of the first response, see Rosen (2010, 124). For discussion of the second response, see Jenkins (2011, 169).

[26]This is not to deny that there may be *independent* reasons to deny (say) the irreflexivity of metaphysical grounding. But philosophers who endorse irreflexivity (e.g., Schaffer (2009, 364)) should welcome the distinction between conceptual and metaphysical grounding.

[27]Could this be a verbal dispute? Might theorists who reject (a) or (b) be using the term 'metaphysical grounding' to *include* cases of conceptual grounding? I think the answer is "no". For example, Rosen (2010, section 10) adopts a very fine-grained view of facts, but he explicitly denies that metaphysical grounding involves semantic links.

physical grounding that relates facts *about* sentences? In response: if asked about the metaphysical grounds of facts involving the sentence '*x* is a bachelor', we might have pointed to facts about its constituent expressions, or perhaps facts about our linguistic practices. But we wouldn't have said such facts are metaphysically grounded by facts about another *sentence* (i.e., '*x* is an unmarried male'). These sentences are certainly linked, but the link is semantic, not metaphysical.

(None of this is to say that sentences cannot also stand in *metaphysical* grounding relations. As I mentioned, it is plausible that facts about sentences are metaphysically grounded by facts about sub-sentential expressions. So it is best to say that sentences can be involved in two *different* types of grounding relations.)

3   The relation between metaphysical and conceptual grounding

In the last section, I argued that conceptual grounding is distinct from metaphysical grounding. This shows that we need to distinguish which type(s) of grounding are relevant for a given non-causal in-virtue-of claim. In this section, I will consider whether we can establish any *general* results about the relation between metaphysical and conceptual grounding. I will first briefly consider a proposal from Chalmers (2012) before defending an alternative proposal.

3.1   The Conceptual/Metaphysical Thesis

Chalmers (2012, 453) claims that metaphysical and conceptual grounding correspond over a certain restricted range of cases:

> **Conceptual/Metaphysical (C/M) Thesis**: Suppose an in-virtue-of claim *V* involves only super-rigid expressions. Then *V* involves metaphysical grounding iff it involves conceptual grounding.

Roughly, an expression is *super-rigid* when it takes the same extension across all epistemic and metaphysical possibilities. For example, Chalmers suggests that the expressions 'zero', 'wise', and 'cause' are super-rigid (366-369). In contrast, the expression 'water' is clearly non-super-rigid (since, on the epistemic possibility that the water-like liquid in our environment turned out to be XYZ, 'water' would have referred to XYZ).

Without the super-rigidity restriction, there would be a clear class of counterexamples to C/M. For example, consider [4′]: 'x is an electron in virtue of the fact that x has a property with nomic role R'. Since 'is an electron' expresses whatever property happens to fill a certain nomic role R, the fact *x's being an electron* is plausibly identical to the fact *x's being a property with nomic role R*. So [4′] plausibly involves conceptual but not metaphysical grounding (see 2.3). Speaking more generally: in-virtue-of claims with non-super-rigid terms often involve two different ways of describing the same worldly fact and so do not involve metaphysical grounding.

Because metaphysical grounding is supposed to be independent of our language, many theorists will immediately worry about counterexamples in the left-to-right direction: cases of metaphysical grounding without conceptual grounding. For this reason, Chalmers' defense of C/M focuses on counterexamples of this sort. But upon reflection, we see that there are clear counterexamples in the right-to-left direction: cases of conceptual grounding without metaphysical grounding. For example, the bachelor example from 2.3 is one such case.[28]

3.2   The Grounding Exclusion Thesis

To exclude cases like [5′], one might try to restrict C/M further. But I think that the pressures against viewing [5′] as a case of metaphysical grounding actually extend much more generally. In fact, I will defend the opposite view that conceptual and metaphysical

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[28]This case falls within the scope of C/M because Chalmers (2012) considers 'bachelor', 'unmarried', and 'male' to be super-rigid terms (453-454). I note that [5′] will be a counterexample to C/M even on a deflationary conception of metaphysical grounding — see 3.3.

grounding are exclusive:

> **Grounding Exclusion (GE) Thesis**: If an in-virtue-of claim V involves conceptual grounding, then V does not involve metaphysical grounding.

(Note: in 2.3, I argued that conceptual grounding is distinct from metaphysical grounding and is not merely a specific form of the latter. GE, by contrast, is a claim about the possibility of both grounding relations underwriting the same non-causal in-virtue-of claim.)

3.3 Preliminary notes

Here are three notes on the arguments for GE that I will present in the next section.

Substantive metaphysical grounding: On the standard view, there are substantive truths to discover about what metaphysically grounds what. On an alternative deflationary conception, truths about metaphysical grounding are merely conceptual truths (see Chalmers (2012, 458)). In the arguments ahead, I assume a non-deflationary conception of metaphysical grounding since this is the most common view in the literature. I will consider the alternative deflationary conception in 4.4.

Subject-predicate form: In my arguments, I will restrict attention to cases of conceptual grounding with the form $V \equiv$ 'x is β in virtue of the fact that x is α'. In such cases, we can call the property expressed by 'is β' a *c-grounded property*, and we can call the property expressed by 'is α' a *c-basic property*.[29] So, for example, *being bald* is c-grounded while *having 20 hairs* is c-basic (*n.b.*: one should not read any implications about metaphysical fundamentality into these terms). This restriction will simplify presentation since we can focus on cases where, intuitively, the focus is on properties (as opposed to ontological categories). But later, I will explain why the arguments for GE are extendable to other cases.

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[29]Of course, conceptual grounding is a relation between sentences, not properties. I introduce this term just to keep track of the property corresponding to the predicate in a conceptually grounded sentence. Note that a property's status as c-grounded will be relative to the in-virtue-of claim under consideration.

Restrictions: In the arguments ahead, I will appeal to some implicit restrictions on how we must view the objects and properties involved in metaphysical grounding claims. In this note, I will explain these restrictions. Focusing on properties first, consider the following proposed case of metaphysical grounding:

    3. x is roughly spherical in virtue of the fact that x has shape R

I will use the label "lightweight" to subsume deflationist and (class or predicate) nominalist views of properties. I will now explain why adopting a lightweight view of the property *being roughly spherical* is not compatible with viewing [3] as a case of metaphysical grounding.

(i) Deflationism: According to deflationary theorists, properties are mere "shadows of predicates": there is no more to their metaphysical nature than what is correctly assertible of them in ordinary language.[30] In particular, there are no truths to discover about whether deflationary properties are involved in metaphysical grounding relations. For this reason, a deflationary view of the property *being roughly spherical* is incompatible with viewing [3] as a case of metaphysical grounding (at least as the relation is standardly conceived). (For further discussion, see Schaffer (2009, 360), who also claims that we should reject a deflationary view of the entities involved in grounding relations.)[31]

(ii) Class or predicate nominalism: First considering class nominalism, suppose we identify *being roughly spherical* with a certain set of individuals $\{x_1, x_2, \ldots, x_n\}$.[32] Then to say that [3] involves metaphysical grounding is to say that *x's having a certain shape*

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[30]Says Schiffer (1996, 159): "there's nothing more to the nature of properties ... than is determined by our [property-hypostatizing] linguistic practices. What we can learn about them is what our linguistic practices license us to learn about them."

[31]Some deflationists claim that there is a sense in which properties are derivative from our linguistic practices (see Schiffer (1996, 161)). So one might adopt a view on which deflationary properties are metaphysically grounded in our linguistic practices. But even if this is correct, the deflationist will still deny that *x's being roughly spherical* is metaphysically grounded by *x's having shape R* (which is what is needed for [3] to involve metaphysical grounding).

[32]See, e.g., Lewis' (1983) account of abundant properties.

R metaphysically grounds *x's being a member of the set* $\{x_1, x_2, \ldots, x_n\}$.[33] But this seems wrong. It isn't obvious what metaphysically explains facts about x's membership in sets, but it certainly isn't explained by the fact that x has a certain shape. Of course, the class nominalist can accept *some* instances of metaphysical grounding; my claim is merely that someone who views the property *being roughly spherical* as a mere set will not view [3] itself as a case of metaphysical grounding. Similar remarks apply to other "reductive" versions of nominalism.[34]

I group (i) and (ii) together under the label "lightweight" because of an important feature they have in common. As I discuss in section 4, proponents claim that we can trivially establish that lightweight properties are instantiated simply by reflecting on ordinary language.[35] By contrast, on more standard views of properties, establishing that a property is instantiated is typically thought to require substantive argument.[36] For simplicity, we can use the label "heavyweight" as a catch-all term for any property of this sort (that is: any property not identified with a set, a predicate, or a deflationary item).[37]

Notes (i)-(ii) show that the properties involved in metaphysical grounding claims cannot be lightweight entities. Analogous remarks apply to objects. There are deflationist views of objects, and these views are incompatible with metaphysical grounding for the same reasons given above. In summary: the properties and objects involved in cases like [3] cannot be lightweight if we are to view such cases as involving metaphysical

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[33]Since some nominalists do not countenance facts, we should perhaps view the metaphysical grounding relata in some other way for present purposes. This technicality does not affect the current point.

[34]For example, suppose properties reduce to predicates. We wouldn't say that *x's falling under a certain predicate* metaphysically explains the fact that x falls under some other predicate.

[35]See, e.g., Schiffer (2003, ch. 2)

[36]See Swoyer (1999) for discussion.

[37]So, for example, the heavyweight label will subsume views where properties are identified with tropes, *ante rem* universals, *in re* universals, bundles of causal powers, and so on.

It is worth noting that, in addition to lightweight and heavyweight views, one could also endorse *eliminativism*. But if the property *being roughly spherical* doesn't exist, there are no rough sphericality facts to be related by metaphysical grounding. So eliminativism is incompatible with viewing [3] as a case of metaphysical grounding as well. I will set eliminativism aside in the discussion ahead.

grounding.[38] I will appeal to this result in the arguments that follow.

4 Arguments for Grounding Exclusion

Schaffer (2009, 357-358) claims that metaphysics should focus on fundamentality questions because existence questions are trivial. For example, the following "pleonastic argument" is said to trivially establish the existence of the property *knowing that p*:

1*. John knows that *p*.
2*. John has the property *knowing that p*. ("pleonastic inference" from 1)
3*. Therefore: the property *knowing that p* exists. (generalization from 2)

While this style of argument is controversial, I agree with Schaffer that it successfully establishes the existence of a certain property. But I disagree with Schaffer that the above argument specifically establishes the existence of a *heavyweight* property (see Schaffer (2009, 357-358)). Indeed, a popular view in the literature on properties is that pleonastic arguments support *lightweight* views of properties.[39] It has been said, for example, that we can make sense of the trivial inference from (1*) to (2*) if *knowing that p* is a mere deflationary item (or a mere set, etc.). But if *knowing that p* is something more than this, how could this inference be trivial?

If it is true that pleonastic arguments for an item x support a lightweight view of x, this might threaten the entire project of metaphysical grounding. This is because pleonastic arguments are available for many types of items in our ontology, and lightweight views are incompatible with metaphysical grounding (see 3.3).

But in fact, I think this argument is too quick. This is because certain linguistic expressions may *themselves* carry more substantial ontological commitments. For example, it is at least plausible that 'x has spin 1/2' is only true if x has a certain heavyweight

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[38] Audi (2012a, 708-709) similarly claims that grounded facts must be something "over and above" grounding facts. While Audi's focus is on showing that eliminativism is incompatible with metaphysical grounding, I have argued that deflationism and (class and predicate) nominalism are likewise incompatible.

[39] See, e.g., Thomasson (2001, 320) and Schiffer (2003, ch. 2).

microphysical property. If this is right, then the pleonastic inference from this sentence does not show that *having spin 1/2* is lightweight.

Still: even if we set pleonastic arguments aside, I think that there are specific reasons for thinking that *c-grounded* properties are lightweight. In the next two sub-sections, I give two arguments for this claim. The first is a semantic argument: I claim that names for c-grounded properties refer to lightweight properties. The second is more metaphysical: I argue for lightweight c-grounded properties directly.

4.1   The triviality argument

I will illustrate the triviality argument by considering the case of [6′]. I will assume that [6′] involves conceptual grounding, since there is almost certainly a conceptual link between the sentence $F \equiv$ 'x has the property *having a mass of 2g*' and the sentence F' $\equiv$ 'x has the property *having a mass*'.

   6′. x has a mass in virtue of the fact that x has a mass of 2g.

Let's grant, as is plausible enough, that x's property *having a mass of 2g* is not lightweight (as is required to view [6′] as a case of metaphysical grounding). What about the property *having a mass*?[40] As explained above: if the property *having a mass* is something more than a mere set, predicate, or deflationary item, then its instantiation is thought to require argument.[41] But here is the puzzle: within ordinary language, it is trivial to infer that x has the property *having a mass* from the fact that x has the property *having a mass of 2g*.

This raises an epistemic tension for the theorist who would view [6′] as a case of metaphysical grounding. Given the triviality of the inference from F to F', why would

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[40]*N.b.*: throughout the discussion, I assume that it is possible for some properties to be lightweight while others are not.

[41]See, e.g., Swoyer (1999). I discuss the types of arguments used to establish heavyweight properties in 4.2.

we think that the term '*having a mass*' refers to anything other than a lightweight entity? A more substantial referent would directly conflict with the epistemology of F'.[42]

By contrast, suppose that *having a mass* is identified with the set of things falling under the predicate 'has a mass'. Then there is no puzzle: it is trivial in ordinary language for a subject who knows that x has a mass of 2g to infer that x is a member of the set of things falling under the predicate 'has a mass'. Similar remarks if *having a mass* is viewed as a predicate or a deflationary item.

So, in order to be compatible with ordinary epistemology, it is most plausible to say that '*having a mass*' refers to some kind of lightweight property. And given the discussion of 3.3, this in turn suggests that [6$'$] does not involve metaphysical grounding. Analogous remarks apply for other c-grounded properties.[43]

4.2   The explanatory work argument

The second argument also seeks to establish that c-grounded properties are lightweight. But the emphasis is different: while the triviality argument focused on the semantics of property terms, the explanatory work argument focuses on c-grounded properties themselves.

In order to show that there is a *heavyweight* property P, the standard strategy is to argue that P is needed to perform certain important explanatory work. It is then argued that P could not perform this explanatory work if it were a mere lightweight entity. But

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[42]This is not to suggest that *any* example of a trivial inference suggests conceptual grounding; I clarify which types of trivial inferences are in tension with metaphysical grounding in 5.1.

[43]Of course, the current argument assumes that c-grounded properties are trivially inferable from c-basic properties. While this is true in ordinary cases, it is not true for all c-grounded properties. For example, we might stipulate that 'x is tifleron' is true iff x is composed of more than 40 trillion cells. Then 'x is tifleron' (or 'x is not tifleron') is plausibly conceptually grounded by a sentence S describing the individual positions of all of x's cells. But because of S's enormous complexity, it certainly will not be trivial for a subject to infer 'x is tifleron' from S.

But this kind of case is no real concern. The non-triviality in the tifleron case is explained by, e.g., our limited memory, our limited computational abilities, and so on. If we idealized away from these limitations, the inference to 'x is tifleron' *would* be trivial (since it would merely involve exercising our concepts). But even with such idealizations, only an inference to a *lightweight* property would be trivial. So the triviality argument retains its force even in more complex cases.

in this section, I will argue that this argument fails in the case of c-grounded properties. The upshot will be that there are no reasons to view c-grounded properties as anything more than lightweight entities, which will in turn support GE.

Of course, it is outside the scope of this paper to consider all the types of explanatory work that properties have been posited to perform. For this reason, I have tried to select examples that are representative of the arguments typically given in the literature.

Truthmaking: Properties are sometimes posited to serve in accounts of the truth-makers for our sentences.[44] For example, it has been claimed that we need to posit the property of negative charge in order to explain the truth of sentences like '*X* is negatively charged'. But whatever the status of this argument in general, *c-grounded* properties are not needed for truthmaking. Since sentences expressing c-grounded properties are conceptually entailed by sentences expressing c-basic properties, we only need the corresponding c-basic properties to have truthmakers for the sentences in question.

Scientific practice: Theorists sometimes argue that c-grounded properties are needed to account for various aspects of scientific practice. For example, Wilson (2012, 5) notes that determinable properties like *being in a low entropy state* figure crucially in scientific explanations.[45] Scientists explain the final state of a system by noting that systems naturally proceed from low entropy to high entropy states. Wilson argues that we can only make sense of this practice if we posit properties like *being in a low entropy state* to serve as the "ontological ground" of this explanation.[46]

While Wilson's argument may support the existence of the property *being in a low entropy state*, it doesn't support the claim that this property is anything more than a lightweight entity. In her argument, the reason Wilson posits determinables is so that they can serve as the denotations of certain property terms used in scientific theories

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[44]See, e.g., Armstrong (1997).

[45]While Wilson's argument is directed at determinables in general, I have chosen a specific example of such a property (*being in a low entropy state*) to make her argument concrete.

[46]Note that, because the sentence '*X* is in a low entropy state' is plausibly definitionally entailed by sentences describing the underlying physical state of the system's component particles, *being in a low entropy state* is plausibly a c-grounded property.

and explanations. But here is the problem: within scientific discourse, '*being in a low entropy state*' is a c-grounded property term. And the discussion of 4.1 shows that such terms refer to lightweight entities. For this reason, a more substantial determinable property would not be able to perform the explanatory work Wilson intends for it.

Wilson's argument is just one example of a scientific argument for positing c-grounded properties. But the response given above will be applicable to any argument in which c-grounded properties are posited in order to serve as the denotation of property terms used in scientific theories and explanations.[47]

Resemblance: Properties are often invoked to explain similarity.[48] But even if these arguments are successful in certain cases, we don't need *c-grounded* properties to explain resemblance. To illustrate this, I will continue with the entropy example from before. Suppose that X and Y are both in a low entropy state. How do we best explain this similarity between them? One possible explanation is that X and Y both instantiate some *sui generis* property that explains their similarity. But with conceptual grounding, we have a better explanation. Conceptual grounding suggests that the similarity in virtue of which we apply the predicate 'is in a low entropy state' to both X and Y is a similarity that is "already present" in the facts described by the more basic sentences (i.e., the facts about the relative positions of the particles, etc.). In other words, it is because of a similarity in the c-basic properties of X and Y that we are able to judge to apply 'is in a low entropy state' to both X and Y *on the basis* of the basic sentences. So we don't need to appeal to a c-grounded property to explain this similarity.

Causal powers: Suppose Sophie the pigeon is trained to peck at anything red. Now suppose Sophie pecks at something scarlet. What causes Sophie's pecking: the instance of scarlet or the instance of red? The intuitive answer is supposed to be: the instance of red (since Sophie would have picked at *anything* red). So philosophers have

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[47]Of course, this is not to say that all scientifically indispensable properties are c-grounded. I have only argued that the ones that *are* c-grounded should not be viewed in a heavyweight way.

[48]See Swoyer (1999, 107)

posited c-grounded properties (such as *redness*) in order to serve as the bearers of causal powers.[49]

The response to this argument is the same as the response to Wilson's argument above. Notice that the Sophie example relies on our ordinary intuitions about the cause of the pecking in the described case. In other words: when we judge that redness causes the pecking, we are employing the ordinary expression 'redness'. But if redness is a c-grounded property, then the term 'redness' refers to a lightweight entity (see 4.1). So even if the Sophie case supports the claim that c-grounded properties have causal powers, it does not support the claim that c-grounded properties are anything more than lightweight entities.[50]

In summary: the standard arguments for showing that a property is more than a mere lightweight entity seem to fail in the case of c-grounded properties. While the above arguments do not definitively establish this result, they at least put the burden of proof on the metaphysical grounding theorists invoking such properties to show that c-grounded properties are something more than mere sets or shadows of predicates.

4.3 Summary

I have given two arguments for the lightweight status of c-grounded properties. Given the implicit restrictions on properties involved in metaphysical grounding relations (see 3.3), this supports the GE thesis. (Of course, GE does not imply that there is no metaphysical grounding at all. It simply claims that in-virtue-of claims involving conceptual grounding do not also involve metaphysical grounding.)

For ease of presentation, I have focused on in-virtue-of claims with the form 'x is β in virtue of the fact that x is α'. But analogous arguments should apply to other cases as well. For example, Thomasson (2007, 164-165) claims that the sentence 'There is a

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[49]This argument is from Shoemaker (2001, 78-81). See Swoyer (1999, 107) for relevant discussion.

[50]This might seem puzzling: how can we make sense of redness having causal powers if they are merely lightweight? I suspect that we should view the causal powers in some kind of lightweight sense.

chair' is conceptually entailed by the sentence 'There are particles arranged chairwise'. If she is right, then [7] will be a case of conceptual grounding:

7. There is a chair in virtue of the fact that there are particles arranged chairwise.

Does [7] also involve metaphysical grounding? Thomasson (2009, 467) appeals to the triviality of the above inference to argue that items like chairs have no "real metaphysical nature" for metaphysics to discover (this is just a version of the triviality argument given in 4.1). But if chairs have no real metaphysical nature to discover, then debates about whether parts metaphysically ground wholes or wholes metaphysically ground parts are misguided. So if [7] involves conceptual grounding, then it is not a case of metaphysical grounding.

4.4 Objections

I will now consider two ways a theorist might resist GE. It is possible to adopt a deflationary stance where truths about metaphysical grounding are mere conceptual truths (see Chalmers (2012, 458)). So in arguing for GE, a deflationist may object that I'm trying to deny conceptual truths. My response to this worry is that I intend to use 'metaphysical grounding' in the standard, non-deflationary way it is used in the literature. Typically, theorists who study metaphysical grounding are not deflationists: their stated goal is to *discover* substantive truths about metaphysical dependence.

A second way to resist GE would be to claim that c-grounded properties are more than mere sets or deflationary items, but to insist that their instantiation is trivial nonetheless. For example, Schaffer (2009, 360) says: "I take entities [involved in grounding claims] to be full-blown "heavyweight" entries on the roster of entities, and merely add that their existence is *obvious*".

But in response, I want to re-emphasize that there is nothing in Schaffer's arguments for the trivial existence of (say) properties that suggests that these items are anything

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more than lightweight properties. So anyone who wants to reject GE has the burden of showing that c-grounded property terms do not refer to mere lightweight entities. Similar remarks apply to other items in our ontology.

5 Heuristics

If GE is true, it becomes important to distinguish metaphysical and conceptual grounding. Conflating these relations may lead to mistaken conclusions about metaphysical structure. In this section, I will consider two heuristics for distinguishing each type of case.

5.1 The Scrutability Heuristic

I will illustrate the scrutability heuristic by considering the following alleged case of metaphysical grounding:

> 8. x knows that p in virtue of facts about the causes, evidence, truth, etc. of x's belief that p (Fine 2012a, 53)[51]

In 2.2, I made the following observation: when we are told sufficient information about a subject's belief state, we are (across a variety of ordinary cases) able to trivially judge whether or not that subject has knowledge. With this epistemic result in hand, we can use inference to the best explanation to support conceptual grounding in the case of [8]. What explains the fact that we can often trivially judge whether x knows that p when given a description of x's belief state? If [8] involves conceptual grounding, we have an elegant explanation: it is constitutive of competence with the term 'knows' that one is disposed to make these judgments. This motivates the following heuristic:

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[51]For ease of presentation, I have adjusted the form of this example.

> **_Scrutability heuristic_**: Consider a (genuinely explanatory) in-virtue-of
> claim $V \equiv$ 'S_1 in virtue of the fact that S_2'. If sentences involving the
> same family of vocabulary[52] as S_1 are trivially inferable from sentences
> involving the same family of vocabulary as S_2, this is evidence that V
> involves conceptual grounding.

So, for example, since 'knowledge' sentences are trivially inferable from sentences describing belief states, the scrutability heuristic suggests that, in fact, [8] involves conceptual grounding.

It is worth noting that not *all* trivial inferences suggest conceptual grounding.[53] For example, '2+2=4' is trivially inferable from 'John is tall', but this is only because '2+2=4' is trivial *simpliciter*. The restriction to "genuinely explanatory" in-virtue-of claims helps to exclude such cases. More generally, scrutability evidence should be viewed as defeasible; conceptual grounding may not not provide the best explanation of scrutability in all cases.[54]

5.2   The Vagueness Heuristic

I will illustrate the second heuristic by considering the following alleged case of metaphysical grounding:

  3. x is roughly spherical in virtue of the fact that x has shape R

I will argue that the vagueness of the predicate 'is roughly spherical' supports the view that, in fact, [3] involves conceptual grounding.[55]

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[52]The intuitive distinctions between "families of vocabulary" will directly mirror the distinctions drawn between domains of facts in the literature on metaphysical grounding (i.e., the type of distinction drawn when it is claimed that physical facts metaphysically ground phenomenal facts, etc.).

[53]Contrariwise, there may be some cases of conceptual grounding that do not involve trivial inferences—see fn. 43.

[54]One interesting case to consider is '$\exists x F x$ in virtue of the fact that Fa'. While '$\exists x F x$' is trivially inferable from 'Fa', it is not obvious that conceptual grounding provides the best explanation of scrutability in this case; for example, some theorists have argued that logical inferences are instead justified by rational intuitions (see, e.g., Dogramaci (2013)). On the other hand, '$\exists x F x$' and 'Fa' may involve the same family of vocabulary, so perhaps the scrutability heuristic does not apply to this case.

[55]If [3] is indeed a case of conceptual grounding, it is because the term 'R' (which picks out a certain determinate shape property) is semantically prior to the expression 'is roughly spherical'—see 2.2.

Suppose that it is indeterminate whether x is roughly spherical when x has particular shape R_i. On the standard linguistic theory of vagueness, this indeterminacy is attributable to linguistic imprecision. So to eliminate the indeterminacy, we can *stipulate* whether or not the predicate 'is roughly spherical' applies to shape R_i. But if whether R_i counts as roughly spherical merely depends on this type of semantic decision, this suggests that 'rough-sphericality'-sentences are conceptually linked to 'shape'-sentences. This in turn supports viewing [3] as a case of conceptual grounding, since [3] employs terms from these two families of vocabulary.

The above argument does not show that *all* vagueness indicates conceptual grounding. For example, consider $[6] \equiv$ 'x is in pain in virtue of the fact that x is in brain state P'. In both [6] and [3], we have a claim of the form 'S_1 in virtue of the fact that S_2', with a vague expression in S_1. In both cases, we would precisify S_1 by stipulating its truth value in an indeterminate case meeting description C. What separates [6] and [3] is the vocabulary employed by C. In [3], C (i.e., 'x has shape R_i') employs the same family of vocabulary that S_2 employs. This is why our ability to stipulatively settle S_1 in the case described by C is relevant to whether [3] involves conceptual grounding.

Contrast this with [6]. The normal way to precisify 'pain' would not be to stipulate which specific brain states count as painful. Instead, we would stipulate which specific phenomenal states count as painful.[56] In other words, in case [6], C would employ *phenomenal* vocabulary: terms that pick out conscious states directly in terms of their intrinsic phenomenal character. But if this is right, then our ability to stipulate the truth of S_2 given description C has no bearing on whether [6] involves conceptual grounding, since the right side of [6] *doesn't* employ phenomenal vocabulary.

Of course, if we know that subjects in a certain borderline pain state are in brain state P_i, we *could* precisify 'is in pain' by stipulating that P_i is a case of pain. But

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[56]Here, I remain neutral whether physical and phenomenal states are identical. If they are identical, the present point is that, on the normal way of precisifying 'is in pain', we would refer to these states using phenomenal descriptions, not neuroscientific descriptions.

this stipulation is only possible if we possess empirical knowledge about the connections between brain states and conscious states. For this reason, the possibility of such stipulations doesn't suggest conceptual grounding in [6].

The above discussion motivates the following heuristic:

> ***Vagueness heuristic***: Consider a (genuinely explanatory) in-virtue-of claim $V \equiv$ 'S_1 in virtue of the fact that S_2'. If:
>   (a) S_1 is indeterminate in some situation L due to a vague expression in S_1 and
>   (b) a subject with no further empirical information could precisify S_1 by stipulating its truth when given a description of L that only employs vocabulary from the same family as in S_2,
> then this is evidence that V involves conceptual grounding.

For example, in [3], S_1 is indeterminate in the situation described by $C \equiv$ 'x has shape R_i'. Since a subject can simply stipulate that R_i is roughly spherical without needing any further empirical information, the vagueness heuristic suggests that [3] involves conceptual grounding. In contrast, the vagueness in [6] does not suggest conceptual grounding because of condition (b).

5.3   A test case

I will illustrate the heuristics with the following case:

> 9. x causes y in virtue of facts about the Humean mosaic and laws of nature.[57]

There have been many attempts to analyze the term 'cause'. But every proposal seems to face counterexamples. These failures have led certain philosophers to suggest that we reorient our approach to theorizing about causation. Instead of focusing on the term 'cause', we should instead focus on the causal relation *itself*, investigating its patterns of metaphysical dependence. Here is a representative quotation from Schaffer (2007):

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[57]Schaffer (2007, 873-874) considers this possible example of metaphysical grounding (although he doesn't endorse it).

> I suspect that many philosophers have really been interested in a conceptual analysis of causation because they thought the issue was of ontological moment. ... [But the] conceptual order — the order of definitions in our minds — need not match the ontological order — the order of dependencies in nature. (873)

But the move from the failure of conceptual analysis to the study of the metaphysical grounds of causation may be premature. This is because, even if 'cause' cannot be given a definition, there is still strong support for the claim that causal sentences are conceptually grounded. I will support this claim with the scrutability and vagueness heuristics.

Scrutability heuristic: The very counterexamples that tell against the analyzability of the term 'cause' actually support the claim that 'cause' stands in trivial inferential connections to more basic terms. For example, let E be the sentence 'Suzie's throw caused the bottle to shatter'. Let F be the conjunction of the following sentences:

> "Billy and Suzy throw rocks at a bottle. Suzy throws first, or maybe she throws harder. Her rock arrives first. The bottle shatters. When Billy's rock gets to where the bottle used to be, there is nothing there but flying shards of glass. Without Suzy's throw, the impact of Billy's rock on the intact bottle would have [shattered the bottle]. But, thanks to Suzy's preempting throw, that impact never happens." (Lewis (2004, 82))

It seems that competent speakers can trivially judge that E is true when presented with F. The same goes for other cases in the literature on causation (e.g., preemption cases, overdetermination cases, etc.). The entire progress of this literature depended on our ability to make trivial judgments about what causes what when presented with descriptions of cases. Taken together, these cases suggest that: when we are told sufficient information about a situation without using the term 'cause', we can often trivially judge whether x causes y.

What explains our ability to make these trivial judgments? With conceptual grounding, we have an elegant explanation: it is constitutive of competence with the term 'cause'

that one is disposed to make these judgments.

Vagueness heuristic: There are many cases where we lack firm intuitions about whether x causes y. For example, let G be the conjunction of the following sentences: 'Two assassins, Captain and Assistant, are on a mission to kill Victim. Upon spotting Victim, Captain yells "Fire!", and Assistant fires. Overhearing the order, Victim ducks and survives unscathed.'[58] In the case described by G, we lack firm intuitions about P ≡ 'The captain's yelling "Fire!" caused Victim to survive'.

One might think that there is still an objective fact about the truth of P in this case. But this can be resisted with a thought experiment. Imagine two communities A and B that agree with us on almost all of our ordinary causal judgments. But, while we are undecided about P, A-speakers have robust intuitions that P is true while B-speakers have robust intuitions that P is false. What should we say about the dispute between A-speakers and B-speakers over P? It seems most plausible to say that this dispute is merely verbal: A-speakers and B-speakers simply use the term 'cause' in slightly different ways, such that P is true for A-speakers and false for B-speakers. But if this is right, it suggests that P is indeterminate on *our* use of the term 'cause'. So condition (a) of the vagueness heuristic is met.

To precisify P, we would simply stipulate its truth given the description G of the case; no further empirical information would be required. So it is plausible that condition (b) is also met and that the vagueness heuristic supports viewing [9] as a case of conceptual grounding.

Summary: Both heuristics suggest that, if [9] involves grounding at all, the grounding in question is conceptual. So metaphysical grounding isn't the proper methodological approach for theorizing about causation.

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[58]This example is from Hitchcock (2003, 10), who discusses many similar cases.

5.4   How widespread is conceptual grounding?

It is outside the scope of this paper to apply the heuristics to further cases. But my own view is that many other alleged cases of metaphysical grounding are better interpreted as involving conceptual grounding. Examples I have discussed in this paper include [3], [8], and [9]. From the original list of examples, I'm inclined to say that [4] and [5] involve conceptual grounding as well. In contrast, the best candidates for metaphysical grounding are [1], [6], and perhaps [2]. But these examples are controversial and deserve fuller discussion.

6   Conclusion: philosophical payoffs

In this paper, I have argued that metaphysical and conceptual grounding are exclusive and have offered two heuristics to identify which type of grounding is operative in a given case. I will now mention some payoffs of the above discussion.

First, and most importantly, I have argued that metaphysical grounding is not the only way to make sense of non-causal in-virtue-of claims. Deflationist and reductionist views can equally well account for cases of non-causal explanation by appealing to conceptual grounding.

Second, the above discussion shows that before we ask questions of the form 'Does X ground Y?', we first need to ask: 'Is there a semantic link between the expressions 'X' and 'Y'? In answering this question, we find that many alleged cases of metaphysical grounding actually involve conceptual grounding.

Finally, the above discussion should be of interest to theorists who are skeptical of metaphysical grounding. One way to object to metaphysical grounding is to challenge proposed examples of it.[59] And with the GE thesis, we have a general strategy for challenging such cases: use the heuristics to show that a given in-virtue-of claim actually

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[59]See Hofweber (2009) for an example of this strategy. Raven (2012) defends certain alleged examples of metaphysical grounding.

involves conceptual grounding. It has been outside the scope of this paper to apply these heuristics to a wide variety of cases. But my own view is that *most* proposed cases of metaphysical grounding are actually cases of conceptual grounding. If this is correct, the heuristics may help justify skepticism about the notion of metaphysical grounding itself.

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