

# Are Skeptical Doubts about Ground Warranted?

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The recent groundswell of interest in the theory of grounding has been met in some quarters with a skeptical reaction. There are two kinds of skepticism that should be distinguished. Relatively local skeptical doubts concern the appropriateness of applying grounding to this or that particular theoretical purpose. Consider, for instance, Bader’s proposal to use the notion of ground to characterize the distinction between a reason for doing something and conditions that enable that consideration to be a reason [Bader, 2016]. One might martial ethical considerations against this particular application without casting doubt on the utility of ground more generally for doing other theoretical work. The kind of skepticism that is our focus here is more ambitious. *Global skepticism* about ground is the view that the attempt to develop a theory of ground is generally and in principle defective, and attempts to apply such a theory will be fruitless. There are several global skeptics in the literature [Daly, 2012], [Hofweber, 2009, pp. 269-72], [Koslicki, 2015], [Thompson, 2016a], [Turner, 2016], [Wilson, 2014]. Are their doubts warranted? In this chapter, I review both the reasons that seem to favor global skepticism and the responses to those reasons by defenders of ground. I suspect that the number of published global skeptics is a tiny fraction of the total population of global skeptics. So, rather than merely offering a piecemeal enumeration of skeptical arguments and responses in the literature, I will attempt to fit them into a more general scheme.

## 1 Varieties of Skepticism

Claims of ground are canonically expressed by sentences of the form

- (1)  $\phi$  in virtue of the following facts:  $\psi_0, \psi_1, \dots$

[CROSS-REF! Raven Introduction. There needs to be a discussion of the fact that we are artificially narrowing “in virtue of,” on the assumption that there are claims of the relevant form that report merely causal dependence and determination. May I assume there will be such a discussion in the intro?] There are, then, three varieties of global skepticism.

**HARD ELIMINATIVISM** No claim of the form (1) is true;

**SOFT ELIMINATIVISM** (Even) if some instances of (1) are true, these sentences are generally unfit for theorizing because the notion of grounding which they deploy is junk.

**REVOLUTIONARY REDUCTIONISM** (Even) if some instances of (1) are true and fit for theorizing, the theoretical work they do can be done better by sentences that do not employ any notion of grounding.

It is easy to see that this taxonomy is exhaustive, in the sense that global skepticism requires the truth of at least one of the three claims. For, if each is false, then there are true claims of ground that are useful in theorizing, and the theoretical work that they do is done no better by any sentences that deploy notions other than grounding. In other words, if each of hard eliminativism, soft eliminativism, and revolutionary reductionism are false, then the project of theorizing by appeal to truths of the form (1) is not generally and in principle defective, and there is no reason to doubt that the theory can be applied fruitfully. A given consideration favors global skepticism, then, only if it provides reason to think that one or more of the three skeptical claims is true.

Theorists of ground have marshalled three sources of insight into the nature of ground. These sources of insight appear to establish a presumption against global skepticism. The first source of insight concerns ongoing investigations into questions of ground. Most areas of philosophical inquiry regularly truck in the idea. Ethicists wonder, for instance, what made Oswald's assassination of Kennedy morally wrong. Opinions on this question differ. Kantian ethicists propose one sort of answer, utilitarians another, and other theorists still others. Similarly, a central question in epistemology concerns what it is in virtue of which I am justified in believing that I am not dreaming. In metaphysics, we sometimes wonder what it is in virtue of which things have the modal or temporal properties that they do. These examples could be multiplied.[CROSS-REF! Introduction.]<sup>1</sup>

Investigations into what grounds what are not limited to philosophy. Organic chemists, for instance, can tell us what makes ethyl alcohol miscible in water. Physical chemists can tell us, in a general way, what makes the fluid in one system hotter than the fluid in another. I once heard a theoretical physicist characterize her research on the radio as an investigation into what makes gravity so weak. [CROSS-REF! Raven introduction] As the chemical examples demonstrate, some investigations into questions of ground have already met with success.

A second source of insight concerns claims of ground which are easy to evaluate. The weather today is sunny. So, it's either sunny or snowy. It is overwhelmingly plausible to think that these two circumstances are related: the weather is either sunny or snowy in virtue of being sunny. It is overwhelmingly implausible to think that it is sunny in virtue of being either sunny or snowy.

<sup>1</sup>The fact that these ongoing philosophical investigations provide paradigms of the deployment of the notion of ground is noted by [Rosen, 2010], [Fine, 2012a], [Raven, 2012], and [deRosset, 2013].

Aristotle plausibly held that the statement that there are human beings is true in virtue of there being human beings (*Categories*, 14b14-22). It is even more plausible to deny the converse grounding claim, that there are humans in virtue of the truth of the statement. So, we have a large class of grounding claims and denials of grounding claims that enjoy a high degree of plausibility.<sup>2</sup>

The third source of insight is that we are familiar in practice with the constraints governing such explanations, since we liberally indulge in constructing and criticizing them, at least in our professional lives. I trust, for instance, that you are intimately familiar with at least some of the metaphysical, ethical, epistemological, and scientific investigations I have mentioned above. You have participated in some of these debates. You have proposed or objected to arguments for or against the grounding claims which characterize them. We will encounter particular examples of such constraints when we discuss skeptical arguments in detail below.

So, we have a large class of ongoing inquiries into what grounds what. Some of these inquiries have met with success, yielding well-established conclusions about what grounds what. We have a large class of paradigmatic truths and paradigmatic falsehoods concerning what grounds what. And we fluently participate in the practice of proposing and criticizing grounding claims, giving us intimate familiarity with the constraints that govern their assessment. These facts establish a defeasible presumption in favor of the theoretical utility of at least some grounding claims. Global skeptics claim that the inquiries are misbegotten or mischaracterized, the successes illusory or mischaracterized, the paradigms chimerical or mischaracterized, and the practices ill-founded. We will need an argument to establish the skeptic's conclusions.

## 2 Direct Skepticism

Some global skeptics have been happy to supply arguments. These arguments rarely explicitly connect the dots between the considerations advanced and the three varieties of skepticism we have specified above. In this chapter, then, I will distinguish between *direct skepticism*, where it is not at all difficult to see how the considerations in question yield global skepticism, and *indirect skepticism*, where the skeptical implications are somewhat harder to discern. Let's start with direct skeptical challenges. We will discuss in particular charges that claims of ground are unintelligible, or impossible to assess. These challenges are generally held by enthusiasts of ground to be met by one or more of our three sources of insight.

[I like Kathrin's terminology of "Old-School" vs. "New Model" skepticism. The suggested timeline is, I think broadly accurate, though it may have exceptions. I avoided the terminology here only because I don't want to burn words apologizing for the false suggestion regarding any more recent "Old-School" skeptics. Advice?]

<sup>2</sup>For more examples, see [Fine, 2012a, §1.7]; see also [CROSS-REF! McSweeney chapter] for doubts about some of these cases.

## 2.1 Unintelligible?

A skeptic might contend that the notion of ground is unintelligible [Daly, 2012]. If so, then clearly hard eliminativism is correct, since claims that are unintelligible are not also true. Daly has explored this form of skepticism. Following Nelson Goodman [Goodman, 1954] (quoted at [Daly, 2012, pp. 89-90]), Daly's skeptic contends that, though we have no criterion for a notion's intelligibility that we may apply to the notion of ground, that we do not need one. We have the capacity to discern intelligible notions, and we should take seriously judgments of unintelligibility that issue from its exercise. Daly's skeptic judges that the notion of ground is unintelligible.<sup>3</sup>

The charge of unintelligibility is difficult to square with our three sources of insight. There are cases in which it is very easy to assess claims about what grounds what. The claim that it is not the case that it is sunny in virtue of being either sunny or snowy is highly plausible. If the notion of ground were unintelligible, it should not be so. The claim that it is either sunny or snowy in virtue of being sunny is also highly plausible. If the notion of ground were unintelligible, it should not be so. The fact that some inquiries into what grounds what have been successful also entails that the notion of ground is intelligible. Chemical investigations have discovered that the fact that one fluid has a higher temperature than another is grounded in the facts concerning the kinetic energies of their constituent molecules. If the notion of ground were unintelligible, this success would not have occurred.

In light of these facts, what are we to make of Daly's skeptic's judgment of unintelligibility? I do not doubt that many philosophers judge that they do not understand the grounding talk that is filling the journals these days. And, I think, those judgments are to be taken very seriously indeed. But, grounding enthusiasts will deny that those judgments, taken with full seriousness, merit a skeptical conclusion. First, there is a difference between judging that I do not understand something and judging that nobody does or could understand it. I, personally, do not understand

(2) every elliptical equation can be correlated with a modular form.

This is the Taniyama-Shimura conjecture, proved by Andrew Wiles in the course of his proof of Fermat's Last Theorem. This does not show that Wiles's proof is unintelligible. It shows that the limits of intelligibility extend far beyond my own capacities. Still, Daly suggests that the skeptic does make a further judgment, to the effect that grounding locutions are unintelligible, and we ought to take that further judgment seriously. This brings us to the second point: Daly's argument requires us to weigh the skeptic's unsupported judgment of

<sup>3</sup>Hofweber [2009, pp. 268-70] suggests that, though there are all sorts of relations other than ground that induce priority orders, there is no notion of ground for any claim of the form (1) to deploy [Hofweber, 2009, p. 271]. Attempts to suggest that there is such a notion, but that it is "esoteric" in the sense that it is available only to those with training in metaphysics, are bound to fail. This is a form of hard eliminativism that is closely related to Daly's, though Hofweber, unlike Daly, appeals to the empirical fact (if it is a fact) that the history of esoteric metaphysical research is littered with failure.

unintelligibility against chemists', epistemologists', *etc.* (perhaps unsupported) judgments that they do understand grounding locutions. Grounding enthusiasts contend that the balance of considerations favors intelligibility. So, we should take very seriously Daly's skeptic's unsupported judgment of unintelligibility. But we should also take seriously other theorists' (unsupported) judgments of intelligibility and even more seriously their judgment that they themselves understand the grounding claims they are considering. This is not to deny that people may be confused without realizing it. Instead, it is to suggest that we should seek to understand them unless and until independent evidence of unintelligibility emerges.

## 2.2 Impossible to Assess?

A second kind of direct skepticism accedes to the intelligibility in principle of grounding claims of the form (1). Nevertheless, it holds that such claims are impossible to assess, for one reason or another.<sup>4</sup> Perhaps the notion of ground is simply too unclear for serious theorizing. One might have the same attitude toward grounding locutions, for instance, as one does toward Dr. Martin Luther King, Jr.'s famous claim that the moral arc of the universe is long, but that it bends towards justice. We might reasonably think that this claim is true so far as it goes, but that the notion of the moral arc of the universe is too unclear to have a place in moral theory. Alternatively, one might think grounding claims are clear enough but that dispositive evidence concerning their truth is inaccessible to us. So, like claims about exactly how many human beings were born in the year 17 C.E., the truth about what grounds what will forever elude us.

However such a view might be motivated, it immediately encounters difficulty accommodating the three sources of insight highlighted by grounding enthusiasts. As we have noted, there are claims about what grounds what that are easy to assess. As we have also noted, even where the questions are more interesting and the assessment is more difficult, some of our investigations into grounds have yielded firm, affirmative verdicts. Finally, even where our investigations have not yielded firm results, our ongoing, robust practice of assessing grounding claims imposes constraints. Consider, for instance the utilitarian claim

- (3) Oswald's assassination of Kennedy was wrong in virtue of failing to maximize utility.

Critics have objected that there are cases in which actions that fail to maximize utility are not morally wrong. It has been held, for instance, that framing and punishing an innocent person to stop a crime wave might fail to maximize utility without being wrong [Carritt, 1950]. It is not clear that these objections succeed. The utilitarian may dispute the premise, arguing, for instance, that failing to frame the innocent in such circumstances is wrong after all. The utilitarian

<sup>4</sup>This is one of the grounds for skepticism suggested by Wilson [2014, p. 540]. She links this criticism to the further claim that grounding claims are uninformative, taken on their own. We will discuss that further claim in §3.2 below.

may amend the original explanatory proposal, arguing, for instance, that the assassination is wrong in virtue of being prohibited by a rule whose adoption would maximize utility.<sup>5</sup> But this much is clear: the utilitarian may *not* blithely accept the premise and stick with her explanatory proposal. This is because her original grounding claim commits her to there being no possible cases in which an act fails to maximize utility but is not morally wrong. These commitments facilitate the assessment of grounding claims in certain circumstances. In some cases, as in the dispute over utilitarianism, it is difficult to ascertain whether we are in those circumstances. But whatever difficulties we may encounter are not due to any difficulty in principle in assessing grounding claims.

### 2.3 Have we Mischaracterized the Cases?

Global skeptics are, of course, aware of the pervasive phenomena that provide the grounding enthusiasts' three sources of insight. But, the skeptics contend, the cases in question are not best characterized as involving ground. Skeptics have contended that grounding enthusiasts are correct to think that these are sensible inquiries being pursued by philosophers and scientists, we have made progress on some of them, and there are genuine insights expressed by certain claims which encapsulate the progress. But, skeptics contend, none of the questions which are the subject of the investigations, and none of the answers we have found involve the notion of grounding. Grounding enthusiasts have simply mischaracterized the cases.

This rejoinder would be unreasonable if there were no plausible alternative characterization of the cases, on which they involve some phenomenon other than ground. Global skeptics have suggested alternative construals. So, for instance, Daly [2012, pp. 96, 98] has suggested that the cases in question all involve identity, supervenience, or entailment by laws of nature. The idea is that the supposed examples of grounding are just inaptly expressed examples of claims of supervenience, identity, or entailment by laws of nature.

To illustrate each of the strategies, consider the physical chemist's claim that what makes one fluid hotter than another is the kinetic energies of their molecules. Daly's skeptic might suggest that this is an inapt or unclear way of saying something true: that the former's being hotter than the latter is identical to the molecules of the former having a higher mean kinetic energy than the molecules of the latter. This doesn't quite handle the case, since the chemist tells us that the molecules' having a certain *specific* mean kinetic energy is what makes the first fluid hotter than the other. The claim is that the fluid in system *A* is hotter than the fluid in system *B* in virtue of either some fact expressible by a long conjunction of the form

- (4) System *A* contains exactly particles  $a_0, a_1, \dots, a_i \wedge a_0$  has a kinetic energy of  $n_0$  joules  $\wedge a_1$  has a kinetic energy of  $n_1$  joules  $\wedge \dots, \wedge$  system *B* contains exactly particles  $b_0, b_1, \dots, b_i \wedge b_0$  has a kinetic energy of  $m_0$  joules  $\wedge b_1$  has a kinetic energy of  $m_1$  joules, ....

<sup>5</sup>See the discussion in [Smart, 1973].

or (collectively) the facts expressed by its conjuncts. It would be implausible to suggest that the fluids' having just those molecules with just those energies is identical to  $A$ 's being hotter. In response, the skeptic might suggest that the clearest way to state the claim in question is that the *hotter than* relation among fluids supervenes on the facts concerning the kinetic energies of particles together with the facts concerning which molecules are in each fluid. Again, this doesn't quite handle the case, since the supervenience claim is general, and the claim to which the physical chemist alludes concerns the specific kinetic energies of specific molecules. So, the skeptic might finally suggest here that it is a law of mathematics, and so, presumably, a law of nature, that any two systems  $A$  and  $B$  whose ingredient molecules have just those kinetic energies are such that the mean kinetic energy of the molecules in  $A$ 's fluid is greater than that of the molecules in  $B$ 's.

A persistent theme of the literature on ground is that such proposed surrogates for grounding cannot plausibly characterize these cases [CROSS-REF! Raven Introduction]. As we have seen above, in many – perhaps all – of the cases, identity claims will not capture the force of the erstwhile grounding claims. This leaves supervenience and laws of nature as skeptical-friendly alternatives to accommodating the paradigms. Both of the alternatives share a defect: they are not plausible surrogates for grounding because they are insensitive to the relative fundamentality ordering – the order of dependence and determination – implicit in such cases [Berker, 2017], [deRosset, 2011], [Fine, 2012a, pp. 38-9], [CROSS-REF! Raven introduction], [Rosen, 2010], [Schaffer, 2009], [Trogon, 2009], [Wilson, 2014, §IV].

Let's consider laws of nature first. It is a law of logic, and so, presumably, a law of nature, that if the desk at which I write is both brown and wooden, then it is brown. And yet it would be utterly implausible to summarize this insight by saying that the desk's being both brown and wooden makes it brown, or that it is brown in virtue of the fact that it is both brown and wooden. So, it is implausible to think that the grain of truth in what we are trying inartfully to express when we use grounding locutions is expressed instead by the claim that there is a law of nature to the effect that, if the alleged grounds obtain, then the alleged grounded circumstance also obtains. In particular, physical chemists are not plausibly characterized as suggesting that the relation between the relative temperature of  $A$  and  $B$  and the particular kinetic energies of their particles is relevantly similar to the relation between the color of the desk and the fact that it both has that color and is wooden. Identity obviously also won't serve as a proxy for grounding in the chemical case. That leaves supervenience as the last refuge offered by Daly as a surrogate for the notion of ground. And, arguments against the idea that supervenience can serve in place of grounding are common [Berker, 2017], [deRosset, 2011], [Fine, 2012a, pp. 38-9], [CROSS-REF! Raven introduction], [Rosen, 2010], [Schaffer, 2009], [Trogon, 2009], [Wilson, 2014, §IV].

Hofweber [2009, pp. 268-70] suggests *conceptual*, *causal*, or *counterfactual* priority as surrogates. It is not at all obvious that the particular kinetic energies of the molecules in the case at hand are counterfactually prior to  $A$ 's being hot-

ter than  $B$ , since they could very easily have been slightly different in a way that does not affect  $A$  and  $B$ 's relative temperature. Similarly, it is highly dubious that their kinetic energies are *causally* prior to the relative temperatures of  $A$  and  $B$ , and, moreover, many cases of causal priority are not plausibly mischaracterized as cases of ground [CROSS-REF! Raven intro dist'ing causation and ground; Wang chapter on causation]. That leaves conceptual priority. Again, the proposed surrogate is often present in cases that aren't cases of apparent ground. Any instance of  $(\phi \vee (\psi \wedge \chi))$  contains  $\psi$  as a constituent, and thus, presumably,  $\psi$  is conceptually prior to  $(\phi \vee (\psi \wedge \chi))$ . If  $\phi$  is itself a conceptual truth, then  $(\phi \vee (\psi \wedge \chi))$  is even conceptually entailed by  $\psi$ . But, for many choices of  $\phi$ ,  $\psi$ , and  $\chi$ , in a case in which  $\psi$  is true but  $\chi$  is not,  $\psi$  does not appear to ground  $(\phi \vee (\psi \wedge \chi))$ .

[QUERY: Is someone else holding down all of these angles? If so, I can condense this entire subsection into a footnote and cross-reference that discussion.]

Grounding enthusiasts contend that some of the proposed surrogates that we have discussed *undergenerate*, by failing to apply in cases in which ground appears to be at issue. So, for instance, identity clearly does not cover all of the cases. They also contend that the other proposed surrogates we have discussed *overgenerate*, by falsely predicting the appearance of ground in cases in which there is no such appearance. Naturally, different surrogates might be proposed and variations on the proposals we have briefly consider might be advanced. Grounding enthusiasts doubt that the results will plausibly characterize the sorts of cases that provide their putative sources of insight into grounding: the proposed surrogates will either undergenerate or overgenerate.

### 3 Indirect Skepticism

Direct skeptics propose views that are difficult to reconcile with the three alleged sources of insight on which grounding enthusiasts draw. Indirect skeptics, instead, propose views that accommodate the sources of insight. So, they avoid the difficulties faced by direct skeptics. But, grounding enthusiasts contend, they encounter other difficulties. Among the principal difficulties indirect skeptical arguments face is the very thing that makes them indirect: it is hard to see how the claims at issue, even if true, engender skepticism. In particular, it is hard to see how the claims in question support hard eliminativism, soft eliminativism, or revolutionary reductionism. We will discuss two varieties of indirect skepticism. One is based on a claim that there is no unified kind of dependence and determination that falls under the notion of grounding, and the other is based on the idea that grounding claims on their own do not give us theoretically useful information.



### 3.1 Disunified?

One form of indirect skepticism appeals to the idea that the phenomena at issue in cases in which grounding claims are true are very disparate.<sup>6</sup> Because the phenomena are so disparate, the skeptic argues, theorizing about them under a single label is bound to end in failure. Sometimes the complaint is couched in terms of the metaphor of *fineness of grain* [Koslicki, 2015], [Wilson, 2014]: it is alleged that grounding is not fine-grained enough to appropriately characterize the immense variety of situations in which grounding claims are true. Thus, the skeptic argues, other notions are needed to take proper account of the variety we find.<sup>7</sup>

This form of skepticism faces three challenges from enthusiasts of ground. The first challenge concerns whether the diversity to which the skeptic appeals indicates that ground itself is disunified in any interesting way. Some enthusiasts of ground agree that we find a wide diversity of phenomena in cases in which grounding claims are true, but argue that the diversity at issue is due to diversity in the things connected by ground, rather than to diversity in the mode of connection [Raven, 2017]. To illustrate, no one thinks it problematic or indicative of global skepticism that some grounded facts involve the Pope and others do not. There are certainly two kinds of cases, the Pope-involving and non-Pope-involving cases. The two kinds of cases are disparate, but the differences trace to differences in the grounded facts, rather than the mode of ground. We simply have two independent dimensions of variation: there are congeries of facts that involve the Pope, and congeries that do not; and there are congeries of facts connected by ground and congeries that are not. Grounding enthusiasts suggest that the diversity highlighted by skeptics has a similar character. Thus, the alleged disunity of the phenomena is not good reason on its own to conclude that the grounding connections themselves are disunified in a way that precludes sensibly theorizing in terms of the notion of ground.

Jason Turner, for instance, has worried that putative instances of ground differ importantly [Turner, 2016]. In some cases, Turner notes, grounding is accompanied by *counterfactual determination*. A circumstance  $\phi$  counterfactually determines a circumstance  $\psi$  iff  $\phi$  and  $\psi$  both obtain, but if  $\phi$  had not obtained, neither would  $\psi$ . For convenience, let's abbreviate the 'would' counterfactual connective using ' $\Box\rightarrow$ ', so that 'it is sunny  $\Box\rightarrow$  it is not raining' abbreviates the counterfactual 'if it had been sunny, then it would not have been raining.' It is commonplace to claim

- (5) Socrates exists  $<$  {Socrates} exists.

Assuming this grounding claim is true, it is accompanied by counterfactual determination:

- (6)  $\neg$ Socrates exists  $\Box\rightarrow \neg$ {Socrates} exists.

<sup>6</sup>Koslicki [2015], Turner [2016], and Wilson [2014] suggest skeptical conclusions on this basis; the claim of disunity is disputed by Berker [2017] and Schaffer [2016].

<sup>7</sup>This last claim is related to the charge that grounding claims on their own are uninformative, which we will discuss below.

The closest worlds in which Socrates fails to exist are also worlds in which his singleton set fails to exist. On the other hand, the truth of

(7) it is sunny  $<$  it is either sunny or cloudy

is not accompanied by counterfactual determination, since

(8)  $\neg$ it is sunny  $\Box \rightarrow \neg$ (it is either sunny or cloudy)

is not true. The closest worlds in which it isn't sunny are ones in which it is cloudy instead.<sup>8</sup>

The first challenge, in this case, requires one who would infer the disunity of ground from this sort of diversity to say why we shouldn't infer instead that counterfactual determination is simply an independent dimension of variation, like involving the Pope. Turner has offered a case of ground with counterfactual determination, and a case of ground without counterfactual determination. Cases in which there is neither a connection of ground nor counterfactual determination are very common. My child's height is neither grounded in nor counterfactually determined by the price of tea in China. And, it is fairly easy to come up with cases of counterfactual determination that are not also cases of ground. Consider the claim that I wore blue jeans today. This claim is in fact true, but could very easily have been false, since I might easily have worn shorts instead. Now consider some "stickier" truth that could not so easily have been false. For concreteness, let ' $P$ ' abbreviate the truth that there are fewer than seven refrigerator-sized perpetual motion machines packed into your kitchen. Then the grounding claim

(9) (I wore blue jeans  $\wedge P$ )  $<$  I wore blue jeans

is clearly false. However, the conjunction does counterfactually determine its left-hand conjunct:

(10)  $\neg$ (I wore blue jeans  $\wedge P$ )  $\Box \rightarrow \neg$ I wore blue jeans.

If the conjunction had been false, it would have been its left-hand conjunct that was false, since the right-hand conjunct could not so easily have failed. The closest worlds in which the conjunction fails are not ones in which you have to pick your way past perpetual motion machines while puttering around your kitchen. So, counterfactual determination of the sort to which Turner appeals seems like a completely independent phenomenon from grounding. There is diversity among these cases, but there is no reason to infer from that diversity that the notion of ground itself bifurcates in any interesting way.

The second challenge that this form of skepticism faces is to counter arguments by some enthusiasts of ground that the cases of ground exhibit striking commonalities that indicate the presence of a common form of dependence and

<sup>8</sup>To be clear, Turner does not explicitly avow global skepticism on the basis of this sort of diversity. He does offer a few locally skeptical considerations concerning certain applications of grounding, though it is not clear what connection those considerations have to the diversity he highlights.

determination. Schaffer, for instance, has argued that the truth of grounding claims always indicates some explanatory relation between the grounds and what they ground.<sup>9</sup> Moreover, Schaffer claims, ground can be regimented using the apparatus of structural equation models [Schaffer, 2016] [CROSS-REF! section on grounding and causation.] Similarly, grounding enthusiasts contend that grounding claims indicate relations of relative fundamentality, unlike causation, counterfactual dependence, or other relations of dependence and determination [Berker, 2017], [Schaffer, 2016], [Raven, 2017], [Rosen, 2010], [deRosset, 2013]; [CROSS-REF! the section on ground and fundamentality.] Similarly, enthusiasts of ground contend that it has certain formal features, including (a generalization to the multi-grade case of) transitivity and asymmetry [Berker, 2017], [Fine, 2012a], [Litland, 2015], [Raven, 2017], [Rosen, 2010]; [CROSS-REF! Thompson chapter on strict partial order], and have developed logics to characterize these formal features [Fine, 2012a,b], [Correia, 2010, 2014], [Litland, 2015], [deRosset, 2015], [Schnieder, 2011]; see [Jenkins, 2011], [Thompson, 2016b], and [Wilson, 2014], for dissenting views. [CROSS-REF! the section on logic?]

Finally, Berker has contended that grounding claims chain with one another to yield claims of dependence and determination that are clearly akin to grounding; but in cases in which relations are relevantly diverse we cannot chain instances together to yield anything like the sort of relation with which we started. So, for instance, from

- (11)  $A$  could have maximized utility by not telling him  $\langle A$  acted wrongly in telling him
- (12)  $A$  acted wrongly in telling him  $\langle$  either  $A$  acted wrongly in telling him, or  $A$  acted in a way she believed to be wrong.

we may infer that there is “some non-rigged-up sense” in which  $A$ ’s acting either wrongly or in a way she believed to be wrong is grounded in  $A$ ’s failing to maximize utility. Consider, by contrast, a clear case of pluralism: there is the relation *being bigger in geographic area than* and the relation *being bigger in population than*. Each is colloquially expressed by the comparative predicate “is bigger than.” But chaining instances does not yield any instance of any relation of comparative size. So, for instance, from

- (13) New York City is bigger in population than Montana
- (14) Wyoming is bigger in size than New York City

we may not infer that there is any “non-rigged-up sense” in which Wyoming is bigger than Montana [Berker, 2017, §5.1.].<sup>10</sup>

<sup>9</sup>See [Schaffer, 2016]. The claim that ground bears an intimate relation to explanation is a core and commonplace commitment in the literature. [CROSS-REF! the section on grounding and explanation.]

<sup>10</sup>This argument runs into trouble because claims of causal dependence and determination appear to chain with claims of ground to yield some claim of dependence and determination that is clearly akin to ground. So, for instance, from

It would seem that, if these enthusiasts of ground are correct about all of these respects of unity, developing and applying a theory ground is a perfectly sound project. We might expect that theorizing to consist in part in regimenting grounding claims using one of the indicated formalisms, describing its formal features, and tracing its implications for explanation and relative fundamentality. Thus, this second battery of considerations is not just a challenge to the kind of skepticism we are presently discussing, but also part of an attempted affirmative case for the utility of theorizing about ground. It is unsurprising, then, that skeptics about ground doubt that cases of ground are genuinely unified in the ways we have indicated, and that much of the skeptics' criticisms have been aimed at these claims of unity.<sup>11</sup>

The third challenge faced by the proposal to base skepticism about ground on the claim that the phenomena at issue are disparate is that it is not at all clear that disunity of the relevant sort provides any reason for skepticism. One kind of *grounding pluralism* holds that there are a number of different varieties of ground, none defined in terms of the others. [CROSS-REF! the section on pluralism.] This is not a reason to think that theorizing about ground is a generally defective enterprise. In fact, it seems most plausibly construed as a contribution to the theory of ground. Similarly, there are hundreds of thousands of kinds of beetles, exhibiting massive diversity of form and function. It does not follow that theorizing about beetles in general is defective. Such theorizing depends, of course, on the fact that there is a common taxonomic category, *Coleoptera*, to which these organisms all belong, and that there are substantial commonalities among them that do not extend to other creatures, in causal history if nothing else.<sup>12</sup>

Suppose, however, that the kinds of ground are even more diverse than the kinds of beetles, exhibiting little in the way of commonalities. Suppose, for instance, that it were discovered that there are many kinds of ground, as disparate from one another as the two relations we colloquially mark using "bigger than." For the reasons highlighted by Berker [2017], this would be a very surprising discovery about ground. Our theorizing, naturally, would have to mark the distinction between the many kinds of ground, and we might have to be careful to avoid, among other pitfalls, chaining instances of the disparate varieties to yield nonsense relevantly analogous to the conclusion that Wyoming

(15) My painting efforts (causally) made the table black

(16) The table's being black makes it (by grounding) either black or blue

we may infer that there is "some non-rigged-up sense" in which my painting efforts made the table either black or blue. But enthusiasts of ground typically want to distinguish ground from causation. This point is inspired by remarks by [Schaffer, 2016, §4.3] and [Kim, 1993].

<sup>11</sup>Essentially all published skeptics urge this point; see especially [Koslicki, 2015] and [Wilson, 2014].

<sup>12</sup>Koslicki [2015] argues against the idea that the disparate varieties of ground she discusses are all species of a common genus. Her argument assumes (though, as I read her, merely for the purposes of argument against [Rosen, 2010]) a broadly Aristotelian conception of the relationship between a genus and its species, on which there must be a *real definition* of the species in terms of the genus and some *differentia*. It is not clear that this Aristotelian conception applies to the actual variety of beetles.

is “bigger than” Montana. This is pretty close to the worst-case scenario for the disunity of ground, but it is no reason to object in advance to the possibility of developing a perhaps pluralistic theory of ground. Indeed, very prominent enthusiasts of ground appear to have theories of just this sort.<sup>13</sup> So, there is no quick inference from the truth of the skeptic’s premise that the phenomena we mark using grounding locutions are disparate to global skepticism.

### 3.2 Uninformative?

Another form of indirect skepticism about ground contends that grounding claims on their own provide little or nothing in the way of information about matters of antecedent interest. So Koslicki, for instance, argues that claims of ground are not *specific* enough to provide us with the details we need to understand a relation of dependence and determination in particular situations. There are significant differences, Koslicki notes, between the way in which the existence and features of sets depend on and are determined by the existence and features of their members (on a Finean theory) and the way in which the existence and features of a hylomorphic compound depends on the existence and features of its matter and form (on an Aristotelian theory) [Koslicki, 2015, esp. pp. 340-1]. These differences matter for theorizing, Koslicki argues: simply lumping both cases together as cases of grounding without delving into the details is theoretically unhelpful.

Similarly, Wilson contends that claims of ground on their own do not provide “even basic illumination about [n]or allow even basic assessment of claims of metaphysical dependence” in particular cases [Wilson, 2014, pp. 544-5]. Wilson identifies three types of questions which, she says, have to be answered to provide illumination or allow assessment of claims of dependence. Consider a grounding claim relevant to the mind-body problem:

(17) Joe is in neural state  $N$  < Joe is amused.

Suppose for the sake of illustration that (17) is true. Wilson argues that (17), by itself, does not entail an answer to any of the following questions:

**Existence** Does the fact that Joe is amused exist?

**Reduction** Is the fact that Joe is amused reducible to the fact that Joe is in neural state  $N$ ?

**Efficacy** Does the fact that Joe is amused have any causal powers that the fact that Joe is in neural state  $N$  does not have?

<sup>13</sup>[CROSS-REF! Richardson’s section on pluralism.] Non-skeptical pluralists hold that we have to be careful about drawing modal conclusions from claims of ground, since there are different kinds of necessity entailed by the different kinds of grounding claims. [CITE! Rosen, “What is Normative Necessity?”.]

And, she says, these questions need to be answered to assess and gain illumination about the claim that Joe's amusement is dependent on and determined by his neural state.<sup>14</sup>

Why think claims of ground by themselves entail no answer to either Wilson's three questions or the matters of detail to which Koslicki alludes? As a simple matter of logic, there is no narrowly logical entailment between the truth of (17) and answers to any of Wilson's three questions. Similarly, to be told that {Joe} exists in virtue of the fact that Joe exists entails nothing, as a matter of the sort of logic one learns as an undergraduate, about whether {Joe} is a compound of Joe and an Aristotelian form. So, as a matter of logic, narrowly construed, (17) lacks the sort of entailments that Wilson and Koslicki are hoping for. So, philosophers may, without any formal contradiction or rank incoherence, hold (17) without taking any position on EXISTENCE, REDUCTION, OR EFFICACY. Moreover, Wilson argues, philosophers working on ground have or could easily take opposite sides of these questions while affirming (17) [Wilson, 2014, pp. 545ff.].<sup>15</sup>

Skepticism on the basis of the charge that grounding claims are uninformative faces two related challenges. The first is that it is not clear how unformativity of the relevant sort provides any reason for global skepticism. Assuming that the claim that (17) is uninformative on its own is consistent with its being true, evidently the charge provides no reason for hard eliminativism. The idea must be, then, that the charge of unformativity supports either soft eliminativism or revolutionary reductionism. But it is not yet clear why it should do so.

The skeptic's premise, recall, is that the truth of (17) does not narrowly logically entail answers to the sorts of questions that need to be answered for us to understand or assess the claim that Joe's amusement depends on and is determined by his neural state. As a result, philosophers may, without any formal contradiction or rank incoherence, hold (17) without taking any position on

<sup>14</sup>Wilson thinks the answers to the questions of the existence of psychological states, their distinctness from physical states, and their distinctive causal efficacy are crucial to the assessment of competing views. But she presents this as merely her own view of the dialectical situation, and she sensibly suggests that other reasonable views about the basis for assessment of Grounding claims and associated views are possible [Wilson, 2014, p. 549]. She identifies these three issues as the basis of assessment, then, solely for the sake of illustration. I am happy to play along.

<sup>15</sup>On EXISTENCE, though the most natural position, perhaps, is to think that (17) entails that Joe's amusement exists, Wilson [2014, pp. 545-6] reads Fine and Rosen as denying the entailment. For what it's worth, I interpret both authors differently from Wilson. On REDUCTION, Wilson [2014, pp. 545, 574] cites [Rosen, 2010, p. 124] as contending that reduction (of a certain sort) is not only consistent with, but entails grounding, while many theorists hold that, by the irreflexivity of grounding together with a conception of reduction that requires identification of facts, grounding is incompatible with reduction. Again, it seems to me that there are subtle features of Rosen's view that undercut the appearance of disagreement here. [CROSS-REF! section on reduction?] The case of EFFICACY is the most straightforward, since grounding applies both in cases like (17), in which the idea of causal efficacy seems to get purchase, and also in cases in, *e.g.*, ethics or metaphysics of modality, in which the facts in question appear not to have causal powers. Grounding claims seem to say nothing on their own about what causes what. [CROSS-REF! Wang section on causation?]

those questions. The narrowly logical facts are adequately clear, as is the prima facie coherence of each of the positions to which Wilson draws our attention.

But these facts seem to be the basis for an invitation to further develop the theory of grounding, tracing its links to existence, reduction, and causal powers, rather than for a charge that the very project of developing such a theory is misbegotten. No doubt the evidence adduced for the theory will draw on considerations that go beyond logic, narrowly construed. This is a very common phenomenon. Compare the theory of ground with the theory of electromagnetism. The claim, for instance, that a given body has unit negative charge does not narrowly logically entail much of physical interest. To get interesting consequences from an attribution of unit negative charge in a particular case requires that we appeal to claims about charge that go far beyond logic. These claims are the target of theorizing, and draw connections between charge and work, energy, force, mass, voltage, *etc.* Similarly, the profound confusion in the middle of the 20th century about the nature and features of what we nowadays call “metaphysical necessity” was no reason to think that theorizing about it would be fruitless. There were skeptics, famously including Quine, but they had other grounds for their skepticism [Quine, 1943, 1947, 1966]; see [Kaplan, 1986] for discussion. Now, there is no guarantee *ab initio* that the theory of ground will end up succeeding nearly as well as the theory of electromagnetism or (even) the theory of modality. But, it seems, the only way to find out is to develop the theory and see how it goes. So, the uninformativity of grounding claims seems on its own to be no basis for global skepticism.

The second challenge is that similar considerations appear to apply to almost any phenomenon of interest. To illustrate, consider Wilson’s position. As we have seen, Wilson contends that grounding claims are uninformative, and that the theoretical work supposedly done by grounding is better done by a battery of other relations, which she calls “small-g” grounding relations [Wilson, 2014, p. 539].<sup>16</sup> One of these relations is mereological composition. Suppose we are given a particular baseball  $b$ , mereologically composed of certain material proper parts  $p_0, p_1, \dots, p_n$ , and consider the claim

(18)  $b$  is mereologically composed of  $p_0, p_1, \dots, p_n$ .

This claim on its own does not narrowly logically entail answers to questions analogous to EXISTENCE, REDUCTION, or EFFICACY.<sup>17</sup> As a result, philoso-

<sup>16</sup>One wrinkle is that the work is done by the battery of other relations together with a notion of fundamentality. So, the theoretical work that is supposedly done by, say, the claim that a certain baseball  $b$  exists in virtue of the existence and features of its material proper parts is better done by the claims (i) that  $b$  has certain material proper parts; and (ii) that those parts are fundamental with respect to  $b$ . This wrinkle does not affect the debate I am presently describing.

<sup>17</sup>On EXISTENCE, though the most natural position, perhaps, is to think that (18) entails that  $b$  exists, van Inwagen [1990] can be read as denying the entailment, at least so long as (18) is uttered “outside the ontology room.” On REDUCTION, the most plausible view is that  $b$  is not identical to its material proper parts, but there is an interesting and important view, a version of *Composition as Identity*, which defends the identification; see [Wallace, 2011] and the essays in [Cotnoir and Baxter, 2014]. The case of EFFICACY is the most straightforward, since composition claims seem to say nothing on their own about what causes what.

phers may, without any formal contradiction or rank incoherence, accept (18) while taking any position on each of the analogues of EXISTENCE, REDUCTION, or EFFICACY. Moreover, this problem is not peculiar to ground and mereological composition. It will plausibly generalize to almost any notion of interest. Philosophers are resourceful, and *prime facie* coherence is fairly easy to come by.

So, if unformativity is taken to support some form of global skepticism about grounding, then the analogous phenomenon with respect to almost every other phenomenon should be taken to support the analogous skeptical position about those phenomena. As Wilson's example demonstrates, global skeptics do not typically take their skepticism to be quite that global. More to the point, grounding enthusiasm is on firm ground if there is no more (and no less) reason for skepticism about ground as there is for skepticism about metaphysical modality, mereological composition, or electrical charge.

## 4 Conclusion

We have discussed only a few of the many potential arguments for global skepticism. Still the discussion reveals two general lessons for the contemporary state of the debate between enthusiasts of ground and global skeptics. First, direct forms of skepticism look to grounding enthusiasts as if they run afoul of the three sources of insight into the nature of grounding. Those include the fact that ground figures in a large number of inquiries in a wide variety of areas, some of which have been successful; that there are paradigmatic cases in which it is easy to assess claims of ground; and that even in harder cases where success has eluded us, we are familiar in practice with the constraints governing the truth conditions for claims of ground. Indeed, any form of global skepticism must ultimately find a way to reconcile itself with these three sources of insight, since they establish a presumption against each of the three forms of skepticism we have identified.

Indirect forms of global skepticism at least defer the challenge of reconciling themselves to these three sources of insight. The cost of accommodation, however, is that the link between the considerations the skeptics advance as premises and global skepticism is more difficult to discern. The second lesson is that these considerations, including the alleged disunity of grounding phenomena and the alleged unformativity of grounding claims, look to enthusiasts of ground more like invitations to theorizing than objections.

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