Contingent grounding

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Abstract
A popular principle about grounding, “Internality”, says that if A grounds B, then necessarily, if A and B obtain, then A grounds B. I argue that Internality is false. Its falsity reveals a distinctive, new kind of explanation, which I call “ennobling”. Its falsity also entails that every previously proposed theory of what grounds grounding facts is false. I construct a new theory.

Keywords
Grounding · Explanation · Modality · Causation · Metaphysical dependence · Background conditions

Some facts are grounded in others. Here are some examples:

(1) The fact that Sally’s act is right is grounded in the fact that every god commanded it (according to divine command theory).
(2) What made the event a party was that it contained balloons, beverages, and talking persons…
(3) The napkin is square in virtue of being rectangular and of being equilateral.
(4) I have reason to lend my friend a book because I promised to do so.

The simplest way of understanding such cases is to treat grounding as a relation between facts.¹ Let “[p]” abbreviate “the fact that p”. Then (3) is understood as:

(3*) [The napkin is square] is grounded in [the napkin is rectangular] together with [the napkin is equilateral].

¹ What facts are is unimportant for purposes of this paper, so long as they are fine-grained and abundant. In particular, I assume that some modally equivalent facts are distinct, and that facts can be logically complex: there are disjunctive, conjunctive, and negative facts. Facts might be true structured propositions, or concrete parts of the world. Alternatively, we could avoid mention of facts, and render talk of grounding using a sentential connective (see Fine 2012).

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Distinguish partial from full grounding. In (3*), [the napkin is rectangular] and [the napkin is equilateral] together fully ground [the napkin is square]; they are each partial grounds. A partial ground is any part of a full ground. Full grounding is variably polyadic on the left: several facts together ground one. (Often, I will pretend that it is a set of facts that fully grounds another fact. I’ll also say that multiple facts together fully ground another; to indicate this I’ll use a “+”: “A + B ground C”.)

The four examples of grounding appear to be diverse. (1) is a case of “right-making”, whereas (3) is more like an explanation of what it is for the napkin to be square. Some philosophers have wondered whether grounding is unified. Are (1)–(4) really examples of the same phenomenon? To answer this, philosophers have tried to find features common to all cases of grounding.

First, full grounding is supposed to be an “explanatory” relation. In (4), [I promised to lend my friend the book] explains why I have reason to lend it to her. Second, full and partial grounding are often taken to be irreflexive, asymmetric, and transitive, though this is controversial.

Third, full grounding is often thought to be necessary. Distinguish two principles that ascribe necessity to grounding in different ways:

**Necessitation**: grounds always necessitate what they ground.

More precisely: given some set of facts X, if X fully grounds B, then necessarily, if everything in X obtains, then B obtains.

**Internality**: the grounding relation never holds contingently.

More precisely: if X fully grounds B, then necessarily, if B obtains and everything in X obtains, then X fully grounds B.

Both principles are popular, though controversial. Many philosophers endorse both, including Bennett (2011), Rosen (2010), Audi (2012), and Bernstein (2016).

I have four main aims in this paper. First, I argue that Internality is false (in §III). In particular, Internality is incompatible with the idea that grounding is explanatory. In this way, it contrasts with Necessitation; as a result, Internality is harder to defend than Necessitation. Second, I argue that counterexamples to Internality are both abundant—they crop up in many areas of philosophy—and problematic: they make serious trouble for grounding theorists. Most importantly, the counterexamples to Internality show that every previously proposed theory of what grounds grounding facts is false. Third, I show how the counterexamples reveal a distinctive, new kind

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2 A full ground of some fact B needn’t contain all of B’s partial grounds, since there can be multiple full grounds. In (4), I have reason to lend my friend the book because I promised to. But suppose the book contains medical information crucial to saving her life; then I also have reason to lend it because it would save her life.

3 Rosen (2010) and Fine (2012) define “partial grounding” in this way.

4 See especially Wilson (2014, 2016).

5 Some say grounding is a kind of explanation (Fine 2012); others (Schaffer 2016) say it backs explanations. See Maurin (2019) for further discussion.

6 Rosen (2010), Bennett (2011), Fine (2012), and Trogdon (2013) endorse Necessitation. Trogdon argues for it at length.
of explanation, which I call “ennobling” (§§IV, V). Fourth, I use this notion of enno‑ bling to construct a theory of what grounds grounding that is consistent with the falsity of Internality (§§VI, VII).

However, before I pursue these aims, I need to provide some background on Necessitation (§I) and Internality (§II).

1 Necessitation

Several philosophers have given putative counterexamples to Necessitation. In this section, I go through some examples, and I outline how those who endorse Necessitation— “necessitarians”—can try to respond to them. My goal is not to show that the counterexamples fail. Rather, I want to contrast their force with that of my counterexamples to Internality. Eventually, I will suggest that Necessitation is defensible in a way that Internality is not.

The Promise (again)8

Consider (4). I have reason to lend my friend a book because I promised to. But my promising doesn’t necessitate that I have reason to lend it to her. To see this, suppose that I promised only because I was forced to at gunpoint. Or suppose that I was hypnotized into promising, or that I mistook her for someone else. Then I would not have reason to return the book. This suggests that actually, it is only because I wasn’t under duress, hypnosis, etc., that promising gives me reason to lend the book.

Here’s another example. Alexander Skiles (2015) argues that the grounds of restricted quantificational facts don’t necessitate them. Let me give an example to illustrate Skiles’ view:

Roger’s students

Roger’s students are Kevin, Ginger, and Nicole, and each is wise. [Roger’s students are all wise] is grounded in [Kevin is wise] + [Ginger is wise] + [Nicole is wise]. More generally, [all Fs are G] is grounded in [a is G] + [b is G] +… where a, b… are exactly the Fs.

But imagine a possible world in which Roger has another student, Tony, who is not wise. In this world, not all of Roger’s students are wise. In the actual world, it’s only because Roger has no students besides Kevin, Ginger, and Nicole that the wisdom of the three of them makes it the case that Roger’s students are all wise. So, as

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7 See especially Leuenberger (2014) and Skiles (2015), as well as Chudnoff (2011, Sect. 1), and Chudnoff ms. Also see Bader (2015), Fine (2015, 2016), Bennett (2017, pp. 53–55), Moran (2018), Cohen (2020), and Sider (2020a, b, Sect. 2.5.2) for nuanced discussions of Necessitation.

8 This example is based on Dancy (2004, pp. 39–40).

9 I distinguish the restrictedly quantified fact [Roger’s students are all wise] from the unrestrictedly quantified fact [everything is such that if it is one of Roger’s students, then it is wise]. The latter is partially grounded in its instances, such as [if Kevin is Roger’s student, then he is wise]. The former is grounded in its instances, such as [Kevin is wise]. Sometimes grounding theorists appear to focus on the grounds of [∀x(Fx ⊃ Gx)] (although they sometimes refer to it using the name “[all Fs are G]”). I focus on restrictedly quantified facts; this will be important later. (Skiles 2015, footnote 28, also mentions this issue.)
Skiles points out, this view of the grounds of restricted generalizations entails that Necessitation is false.

In both The Promise and Roger’s Students, a set of facts X appears to fully ground B without necessitating B. But if X grounds B in one world, but fails to ground B in another world, then there should be some reason for this difference. In both examples, there is a “difference-maker”. (I have already indicated these difference-makers by underlining.) In The Promise, my telling my friend I’ll lend her the book gives me reason to do so only because I wasn’t under duress, etc. Call such a difference-maker an “enabler”. [Roger’s students are all wise] is grounded in [Kevin is wise] + [Ginger is wise] + [Nicole is wise], enabled by [Roger has no students other than Kevin, Ginger, and Nicole]. The following is true of enablers:

Necessitation*: If X grounds B, enabled by some set of facts E, then necessarily, if all the facts in X and E obtain, then B also obtains.10

But then, in order to preserve Necessitation, why not just add the enablers to the ground? Why not think that [Roger has no students other than Kevin, Ginger, and Nicole] is part of the ground? Why not think that [I wasn’t under duress] + [I wasn’t under hypnosis] etc. is part of the ground of [I have reason to lend my friend the book]?

More generally, the necessitarian can define a new relation “grounding+” that includes both grounds and enablers. Say that a set of facts, X, is a full grounding+ of B iff X has subsets X1 and X2, such that X1 U X2 = X, and X1 fully grounds B, enabled by X2. (These sets could be empty.) Necessitation* entails that if X grounds+B, then X necessitates B. So even if grounds don’t necessitate, grounds+ do. Then the necessitarian can use grounding+, ignoring what the antinecessitarian calls “grounding”.

This shows that both sides must agree that necessitarianism is true of some relation that may deserve the name “grounding”. But it doesn’t end the debate, or show that it is merely verbal. For the antinecessitarian will maintain that there is an important divide between “genuine” partial grounds and enablers, while the necessitarian will deny this. The necessitarian will view the antinecessitarian as simply honoring some more notable or salient partial grounds with the name “genuine ground”. There is also another possible disagreement: the antinecessitarian may

10 Higher-order enabling might be a counterexample to Necessitation*. A second-order enabler, for instance, would explain why E enabled X to ground B, without enabling X to ground B. Then perhaps B is not necessitated by X+E. But B is necessitated by X+enablers of all orders. We could define grounding+ by including grounds and enablers of all orders; grounds+ (so defined) necessitate what they ground+.

Call someone a radical antinecessitarian if they deny even this—if they think that grounds+enablers of all orders don’t always necessitate. Then the move of defining up a new relation of grounding+ will not work to specify a relation that necessitates. Wasserman (2017) defends the coherence of radical antinecessitarianism. Not many philosophers clearly commit themselves to radical antinecessitarianism. One who does is Emery (2019). She claims that chancy laws fully ground their instances. For instance, A = [it is a law that an event of type T has a 75% chance of occurring] could ground B = [an event of type T occurred], even though A doesn’t necessitate B, and there are no facts that plausibly could be treated as enablers (of any orders) that could, together with A, necessitate B. Bennett (2017, p. 54) argues, roughly, that the debate between necessitarians and nonradical antinecessitarians is not a deep one; she says that it is “matter of bookkeeping”. Bennett rejects radical antinecessitarianism.
deny that grounding+ is an interesting or joint-carving relation, and may refuse to call it “grounding”.

Here it becomes harder to make progress. It is an open question whether the distinction between enablers and grounds is deep, and to answer it, I would need to delve into the arguments in greater detail. That is beyond the scope of this paper. But one thing worth noting is that the grounds/enablers distinction probably cannot be drawn in independent terms. If we could find some differentia, already thought to carve at reality’s joints, that divides grounds+ into genuine grounds and enablers, then we could conclude that the distinction is itself joint-carving. But I doubt there is any such differentia.

Consider a parallel debate about causes and background conditions. Suppose I’m in a normal room full of air. I strike a match, causing it to light. The match’s lighting counterfactually depends on the presence of oxygen, and also on the striking: if I hadn’t struck the match, it wouldn’t have lit, and if there hadn’t been oxygen in the room, it wouldn’t have lit either. Despite this counterfactual symmetry, it is plausible that the presence of oxygen isn’t a cause. Instead, it is a mere background condition that helps my striking the match to cause it to light. In general, causes in some broader sense (“causes+”) seem to divide into genuine causes and background conditions.

But is this distinction a deep one? There is one reason to think it might be. Many philosophers recognize a deep distinction between events and states. My stroll through a park is an event, while my being in a park is a state. It is sometimes thought that states cannot be causes; in Judith Thomson’s words, “a state of affairs lies there, placidly and quietly”, causing nothing. Causes must be events; states can only be background conditions. This would explain why my striking the match is a genuine cause, while the presence of oxygen is not. My striking the match is an event, whereas the presence of oxygen is a state. So there is a deep distinction between causes and background conditions. They differ in ontological category: causes are events, and background conditions are states.

Return to grounding. There is no analogous rationale we could give for distinguishing enablers from grounds. Grounds, like enablers, are facts; they do not differ

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11 See Leuenberger (2014), Skiles (2015), Bader (2015), Bennett (2017), Moran (2018), and Cohen (2020). The terminology of “grounding+” comes from Skiles. Bennett and Cohen seem to think that both grounding+ and the more restrictive conception of grounding are interesting and deep (Bennett (2017, pp. 53–55) and Cohen (2020, Sect. 2).

12 One idea in Cohen (2020) is that grounding has more interesting order-theoretic properties than grounding+. Cohen suggests that grounding, but not grounding+, is asymmetric.

13 Thomson (2003).

14 Bradford Skow (2018, Chapter 2) defends this view at length. I do not actually endorse it (see Baron-Schmitt 2020, §6.3). I worry that this way of drawing the cause/background condition distinction may lead to the conclusion that there are no background conditions after all. Consider a state that, but for its status as a state, we would rightly have classified as a partial cause. Plausibly, there is some event that could take over the state’s role as a partial cause. In the match example, even though the presence of oxygen cannot be a cause, the circulation of oxygen can. But if the circulation can take over as the partial cause, then there is no need to count the presence of oxygen as a background condition after all. And this might generalize to other cases, so that although states cannot be causes, there is no need to count them as background conditions either, since there are enough events to do all the causal work.
in ontological category. Nor is there any other obvious differentia that separates genuine grounds from enablers. Perhaps this should make us somewhat more skeptical of the grounds/enablers distinction than the causes/background conditions distinction. And if we are skeptical of the grounds/enablers distinction, then we should identify grounding with grounding+, and maintain Necessitation.

Let me end this section with one last (purported) counterexample to Necessitation, from Leuenberger (2014). This example will also be relevant in the next section.

**Chromaplasm**

World A, the actual world, is a physicalist world in which I have a red experience. Suppose that physicalism entails that every ungrounded fact is physical. Then [I have a red experience] is fully grounded in some set X of ungrounded physical facts. World B is physically exactly the same as A, but my brain is infused with “chromaplasm”, a nonphysical substance which “blocks” my having a red experience, so I no longer have a red experience in world B. Then X does not necessitate [I have a red experience], since the former obtains in world B while the latter does not. But by hypothesis, X grounds [I have a red experience] in world A. So, according to Leuenberger, this is a counterexample to Necessitation.

Here the enabler is some totality fact that rules out the existence of chromaplasm in world A, guaranteeing that A is a physicalist world. The necessitarian should say that the ground, X, must already include this totality fact. Then X does not obtain in world B, and so chromaplasm isn’t a counterexample to Necessitation.

Leuenberger will object that this totality fact is not a physical fact, so it cannot be an ungrounded fact in world A (since A is a physicalist world). Then the totality fact does not belong to X, since everything in X is ungrounded. I am not sure whether to count a totality fact in a physicalist world as a physical fact. But if we do not count it as a physical fact, then perhaps we should take physicalism to require only that all ungrounded facts besides totality facts are physical facts. Then there is no problem with saying that X includes a totality fact.

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15 Someone with a less abundant conception of facts than mine might think that certain enablers, such as absences, are not facts, and so cannot be grounds. Bader (2015, p. 32) argues: “Absences…do not exist and do not instantiate any properties. As such, they cannot play a grounding-role. Since absences cannot be…grounds…it follows that the role that they play cannot be a grounding-role but only a condition-role.” By contrast, I have an abundant conception of facts, and I take absences to be negative facts that can both ground and be grounded.

16 Moran (2018, Sect. 3.2) similarly compares the ground/enabler distinction to the cause/background condition distinction, and he suggests that both distinctions are deep. Cohen (2020) holds the opposite view of mine: she thinks that it is easier to defend the depth of the ground/enabler distinction than that of the cause/background condition distinction. Trogdon (2013) claims that the cause/background condition distinction is “almost certainly pragmatic”, and so the ground/enabler distinction is probably pragmatic too.

17 Plausibly it is physical, since it will say something like “every ungrounded fact is identical to F or to G or to H …” where F and G and H … are all physical facts. All its constituents—some physical facts, the property of being an ungrounded fact, a universal quantifier, identity, and disjunction—are at least arguably physical. And a fact with only physical constituents is physical too. But it is not totally clear, because someone might wonder whether the property of being an ungrounded fact is physical. By contrast, a totality fact in a nonphysicalist world is clearly nonphysical.
My conclusion from this discussion of the putative counterexamples to Necessitation is not that they are ultimately unsuccessful against Necessitation. Rather, I have illustrated how Necessitation can be defended, in order to set the stage for Internality, which is harder to defend.

2 Internality

This section will provide some background about Internality. In the following sections, I will lay out and defend counterexamples to Internality.

Internality is the thesis that the grounding relation never holds contingently: if X grounds B, then any world where X and B obtain is a world where X grounds B. Leuenberger (2014) and Litland (2015) have given counterexamples to Internality, and so will I in the next section. But given that they have already provided counterexamples, why am I looking for another? Let me explain why. First I’ll present Leuenberger’s example. It builds on Chromaplasm (presented in the previous section).

Antiplasm

World A is a physicalist world where I have a red experience. So in A, [I have a red experience] is grounded in some set X of ungrounded physical facts. World B is physically the same as A, but my brain is infused with “chromaplasm”, blocking my red experience. The new part: world C is exactly like world B, except that there is a further nonphysical substance, “antiplasm”, which negates the chromaplasm, so that I have a red experience after all. In world A, [I have a red experience] is fully grounded in X. In world C, X obtains, and [I have a red experience] is grounded not in X alone, but in X + [my brain is infused with chromaplasm] + [my brain is infused with antiplasm]. So worlds A and C are supposed to provide a counterexample to Internality. [I have a red experience] and X all obtain in both A and C, yet [I have a red experience] has a different ground in C.

One issue with this example is that it will not be convincing to resolute necessitarians. It crucially relies on the claim that X fully grounds [I have a red experience] without necessitating it. I suggested earlier that this could be false—that perhaps X should include a totality fact that rules out the existence of chromaplasm. If that’s right, then the example does not work. For a totality fact in world A does not obtain in world C. So if X contains some totality fact in A, then X cannot obtain in C.

Here is a closely related problem with the example. Antiplasm, at best, shows that Internality is false when applied to nonnecessitating grounding. It does not show that Internality is false for grounding+. To spell this out: Antiplasm leaves the following thesis untouched:
**Internality for Grounding+:** If X fully grounds+B, then necessarily, if X and B obtain, then X fully grounds+B.

Grounding+ may very well be an interesting relation. If necessitarians are right, then it is just grounding; in that case, it is certainly interesting. So I want to look for counterexamples to Internality for Grounding+.

Now for Litland’s (2015) counterexample. It is a very complicated example involving nonparadoxical contingent self-reference—too complicated to present here. I think it really is a counterexample to Internality. (And it is also a counterexample to Internality for Grounding+.) Still, Litland’s example has some undesirable features: it is an extremely isolated case; it crucially relies on contingent self-reference and on controversial (though, I think, correct) assumptions about the grounds of logically complex facts in the presence of self-reference. These are not good reasons to maintain Internality in the face of Litland’s counterexample. But they are good reasons to look for counterexamples that lack these undesirable features, and to look for a more general pattern of contingent grounding.

Despite Leuenberger’s and Litland’s attacks on Internality, it remains a very popular thesis among grounding theorists. Why is it so attractive? Here is one reason. A big question in the grounding literature is “what grounds grounding?” What grounds facts of the form [X grounds B]? As far as I know, every attempt to answer this question has begun with the assumption that Internality is true.  

If Internality is false, then the existing proposals about what grounds grounding are false. It may even seem hard to see how we could give a theory of what grounds grounding if Internality is false. Later on, I try to do so: I give a theory of what grounds grounding that accommodates contingent grounding.

Now for my first counterexample to Internality.

### 3 A counterexample to internality

**Fire or hold?**

Private is a soldier. His two superiors are Sergeant and General. Private’s orders are determined by the commands of the highest ranking officer. There are two possible commands: *fire!* and *hold fire!* (or just “hold”). Sergeant and General each have a lever. By pushing forward, they command Private to fire; by pushing backward, they command him to hold. They cannot issue two commands, but can refrain from issuing a command.

General commands nothing, while Sergeant commands Private to fire. Then Private’s orders are to fire because Sergeant commands him to fire and General doesn’t

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18 I mean every attempt to answer the question in full generality: that is, to give a full ground of [X grounds B] for every X and B such that X grounds B. Some discussions of what grounds grounding do not presuppose Internality. For instance, Sider (2018) sketches a number of possible views of what grounds [[p] grounds [pvq]], and he does not presuppose Internality.

19 The example is inspired by Lewis (2000).
command him to hold. (There are other partial grounds too: facts about the chain of command, like [General outranks Sergeant]. But these may safely be ignored.)

Now imagine a world where Sergeant and General both command Private to fire. Then General’s command is the ground—the sole ground—for the fact that Private’s orders are to fire. Sergeant’s command is irrelevant.

This is a counterexample to Internality. Although [Sergeant commands Private to fire] + [General doesn’t command Private to hold] actually ground [Private’s orders are to fire], they do not necessarily ground it. Notice that the example doesn’t threaten Necessitation. [General doesn’t command Private to hold] and [Sergeant commands him to fire] necessitate [Private’s orders are to fire].

Let us consider some attempts to defend Internality.

**Objection A:** Even in the world where General commands Private to fire, Sergeant’s command to fire (+ [General doesn’t command hold]) also grounds [Private’s orders are to fire]. There are two independent full grounds. So the grounding is necessary after all.

**Reply to A:** This underestimates General’s authority. If General gives a command, Sergeant’s commands have no more weight than those of a random person on the street. If General commands Private to fire, then Private’s orders are to fire regardless of what Sergeant does. It is simply not true that Sergeant’s command to fire explains why Private’s orders are to fire.

**Objection B:** There is more to the ground than we might have thought. Private’s orders are to fire because Sergeant commands him to and because General doesn’t command him to hold or to fire. Then in the counterfactual scenario, the ground doesn’t obtain. General does command him to fire in that scenario.

**Reply to B:** This cannot be right. How could it be that Private’s orders are to fire in part because General doesn’t command him to fire?

**Objection B2:** We must understand partial grounding properly. Partial grounds need not each make a “pro tanto contribution” to the grounding.\(^{20}\) They are just parts of full grounds. Full grounds are explanatory; partial grounds need not be explanatory when considered in isolation. So we can include [General doesn’t command Private to fire] as a partial ground.

**Reply to B2:** This misses the point. The problem is that if we include [General doesn’t command Private to fire] as part of the full ground, we end up with a worse explanation. The [General doesn’t command Private to fire] is not needed or wanted as part of the explanation of why Private’s orders were to fire. Not needed because [Sergeant commands Private to fire] + [General doesn’t command him to hold] (+ some further partial grounds about the army’s chain of command) is already a complete explanation. Not wanted because it is especially bad to add to this explanation that General doesn’t command Private to fire. Objection B takes an alternative way that the grounded fact could have been grounded, and adds to the ground the fact that it didn’t pan out. This is an ad hoc and implausible addition.

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\(^{20}\) Berker (2018, footnote 54) uses this phrase. Objection B2 is similar to what Berker and Litland (2013) each say about Schaffer’s (2012) dented sphere. Their responses to that example are more plausible than the present objection to my counterexample.
Objection C: Fair enough. Here is a subtle modification: Private’s orders are to fire because Sergeant commands him to and because General doesn’t command Private to do anything.

Reply to C: This gives an unnecessarily strong explanation. That General doesn’t command Private to hold is all that needs to be said about General’s role; there is no need to strengthen this.

There’s also another problem for Objection C. [General doesn’t issue any commands] is a negative existential fact. Like other negative existential facts, it is grounded in its instances. One of its instances is [General doesn’t command Private to fire]. By the transitivity of partial grounding, the suggestion in Objection C still commits us to saying that Private’s orders are to fire in part because General doesn’t command him to fire.

Objection C2: This reply assumes that partial grounding is transitive. We already know about (apparent) failures of transitivity from Schaffer (2012). Consider a dented sphere, O, with determinate shape S. O is at least roughly spherical because it has shape S. And O has shape S in part because it is dented. But plausibly, O isn’t roughly spherical because it is dented. If anything, the dent “makes it harder” for O to be roughly spherical. Now there is a dilemma. If we reject transitivity, then the Reply to C does not work. Alternatively, we could maintain transitivity, perhaps by saying that O is roughly spherical partly because it is dented. But then why not say the same about our case? [General doesn’t command Private to fire] partially grounds [Private’s orders are to fire].

Reply to C2: I am still convinced that [General doesn’t command anything] is not a partial ground. But there is no need to insist on this. We can modify the example, so that there’s a third kind of command that General can give, and he does give it. That way it won’t even be true that he doesn’t issue any command. So then there will be no such fact as [General doesn’t issue any commands] that might be thought to partially ground [Private’s orders are to fire]. Here is the modified counterexample to Internality:

Fire or clean?

As before, Sergeant and General have levers that can be moved forward for *fire!* or backward for *hold fire!*, or left in the middle to issue no command. And as before, if General commands Private to fire or to hold fire, then Sergeant’s command is ignored. But General can simultaneously give Private a new command—to clean his rifle, so long as his orders aren’t to fire. If General commands Private to clean his rifle, but Sergeant commands him to fire, then General’s command is ignored. General gives this command by moving his lever upward. He can simultaneously move his lever upward and back, to also command Private to hold fire, or just upward. But the lever cannot go upward and forward; it’s not possible to clean your rifle while firing it, so General’s lever is built so he cannot command both cleaning and firing. So General’s lever has five possible positions. Sergeant’s lever does not go upward; it has only the three original positions. (His command center has not yet received the recent upgrades.)

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21 This is a popular view of the grounds of negative existentials; see Fine (2012) for instance.
Now imagine that General moves his lever upward, commanding Private to clean his rifle, while Sergeant moves his lever forward, commanding Private to fire. Then Private’s orders are to fire because Sergeant commands him to fire and General doesn’t command him to hold. As before, the fact that General doesn’t command Private to fire is irrelevant.

Consider a world where General and Sergeant both command *fire*. Then Private’s orders are to fire because General commands *fire*. As before, Sergeant’s command is not a ground. Sergeant’s command is irrelevant; any command he issued would rightly be ignored. So the responses in Objections A and B are just as bad applied to this case (Fire or Clean?) as they are to the original case (Fire or Hold?). And the response in Objection C doesn’t work, since General does issue a command.

I have defended the counterexample from some objections. I do not claim that my defense is airtight. There may still be some clever way of maintaining Internality, perhaps at the cost of making some slightly counterintuitive claims about the example or denying transitivity. But why should we be so concerned to maintain Internality? Is this concern really justified? I think that whether it is justified depends on what theorizing about grounding looks like if Internality is false. If contingent grounding is hopelessly messy, then perhaps we should be ready to go to great lengths to defend Internality. But if we can make systematic sense of contingent grounding, then we should not be so concerned to defend Internality. The remaining sections of this paper are an attempt at making sense of contingent grounding.

4 Ennoblers: examples

Having given a counterexample to Internality, I will now diagnose what’s going on in the example. Consider [General doesn’t command Private to fire]. This fact cannot be part of the ground. But what exactly is its role? Hold fixed that [Sergeant commands Private to fire] and [Private’s orders are to fire] obtain. Then [General doesn’t command Private to fire] is the difference-maker for whether the latter grounds the former. It explains how [Sergeant commands Private to fire] + [General doesn’t command Private to hold] got to be a ground, rather than a mere possible ground. Call such a difference-maker an “ennobler”.22 [General doesn’t command Private to fire] ennobles [Sergeant commands Private to fire] + [General doesn’t command Private to hold], bestowing upon it the status of ground. An ennobler does not explain the grounded fact, but rather the fact that the ground is a ground. This is a rough gloss of “ennobler”, not a definition. I define “ennobler” later.

To clarify what ennoblers are, I’ll go through some more examples. Each is also an example of contingent grounding.

Don’t litter

Boston local law says *don’t litter*. Massachusetts state law says nothing about littering (let us pretend). Massachusetts law overrides local law whenever they

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22 I borrow the term from Yablo (2004).
conflict. To use the legal term, local law is “preempted”. So littering is illegal in Boston because local Boston law says *don’t litter* and Massachusetts law doesn’t say *you may litter*.

Counterfactual scenario: Massachusetts law also says not to litter. Then it’s [Massachusetts law says not to litter] that grounds [littering is illegal in Boston]. Local law is irrelevant.

In the actual scenario, [Massachusetts law doesn’t say *don’t litter*] ennobles [Boston local law says *don’t litter*] and [Massachusetts law doesn’t say *you may litter*] to ground [littering is illegal in Boston].

Now an epistemological case:

Jack and god

When it comes to geography, Jack almost always speaks truly. So if he tells me something about geography, I have reason to believe it. But I know Jack’s secret. Jack is reliable because he (and he alone) confers with God, the ultimate authority on geography. Now, suppose that Jack tells me that Minsk is in Belarus. This gives me reason to believe that it is. [I have reason to believe that Minsk is in Belarus] is grounded in [Jack says that Minsk is in Belarus] + some other facts, like [Jack’s statements about geography are reliable].

Counterfactual scenario: After Jack says that Minsk is in Belarus, God comes and tells me the same thing. Jack’s testimony is rendered irrelevant: why heed the testimony of an intermediary when I have the information straight from God? Jack’s testimony is “screened off” or “disqualified” by God’s testimony.23

The ennabler is that God doesn’t tell me that Minsk is in Belarus.

In each example, the grounded facts arguably have some normative aspect; they concern Private’s orders, legality, and what I have reason to believe. Are there non-normative cases? This question is important because Kit Fine (2012) claims that there are different kinds of grounding, including metaphysical grounding and normative grounding, which have different properties.24 One might think that only normative grounding can be contingent.

Not so; there are nonnormative counterexamples to Internality. Recall the example of restricted quantification. On Skiles’ view, [all Fs are G] is fully grounded in [a is G] + [b is G] +… for all the Fs. This leads to a counterexample to Necessitation. One can resist the counterexample, by saying that the full ground of [all Fs are G] also includes [there are no Fs besides a, b…]. But either way, this is a counterexample to Internality. Let’s look at a specific case.

23 The term “disqualified” comes from Muñoz (2019). Muñoz discusses the epistemological upshot of similar cases; he argues at length that this notion of disqualifying is important for epistemology, especially for the epistemology of testimony.

24 Fine (2012) says that normative facts usually aren’t metaphysically necessitated by their normative grounds. Berker (2018) argues against Fine’s distinction between normative and metaphysical grounding.
Roger’s students (again)

Roger’s students are Kevin, Ginger, and Nicole; each is wise. Then [Roger’s students are all wise] is fully grounded in [Kevin is wise] + [Ginger is wise] + [Nicole is wise] + [Roger has no students who aren’t Kevin, Ginger, or Nicole].

Counterfactual scenario: Kevin isn’t Roger’s student, though he still manages to be wise. Everything else is the same: Nicole and Ginger are wise, and they are exactly Roger’s students. Then [Kevin is wise] isn’t a partial ground of [all of Roger’s students are wise].

Ennoblers (in the actual world): [Kevin is Roger’s student], [Ginger is Roger’s student], and [Nicole is Roger’s student]. These together enoble [Kevin is wise] + [Ginger is wise] + [Nicole is wise] + [Roger has no students who aren’t Kevin, Ginger, or Nicole] to ground [all of Roger’s students are wise]. Generalizing from this case, we have the following principle:

Restricted Generalizations: [a is F] + [b is F] + ... (and so on, for all the Fs) ennable [a is G] + [b is G] + ... + [a, b ... are at most the Fs] to ground [all Fs are G].

Roger’s Students is a nonnormative counterexample to Internality. It also has a different structure than the other examples. In Fire or Hold?, Don’t Litter, and Jack and God, some facts fully ground some fact B in the actual world; in the counterfactual scenario, they still obtain, but get “usurped” by some other facts that take their place as the grounds of B. General’s command usurps Sergeant’s; state law usurps local law; God’s testimony usurps Jack’s.

What about Roger’s Students? The actual ground is [Kevin is wise] + [Ginger is wise] + [Nicole is wise] + [Roger has no students who aren’t Kevin, Ginger, or Nicole]. But instead of getting usurped in the counterfactual scenario by some independent facts, it gets usurped by (very nearly) one of its own subsets: [Ginger is wise] + [Nicole is wise] + [Roger has no students who aren’t Ginger or Nicole]. (This isn’t quite a subset, since this last fact features only Ginger and Nicole, not Kevin.)

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25 I’m now assuming that [Roger has no students who aren’t Kevin, Ginger, or Nicole] is a partial ground, rather than an enabler. This is only for simplicity’s sake. Roger’s Students is a case of contingent grounding either way.

26 An alternative view, loosely based on a remark of Kit Fine’s (2012, p. 62), is that [all Fs are G] is grounded in [a is G] + [a, b ... are exactly the Fs]. On this view, there is no enabler. But I think that [a, b ... are exactly the Fs] is grounded in [a is F] + [b is F] + ... + [there are no Fs besides a, b ...], and that only this last fact is a partial ground of [all Fs are G]. [a is F], [b is F] ... do not help explain why [all Fs are G] obtains. Far from explaining it, they hinder it, since increasing the number of Fs makes it harder for all Fs to be G.
5 Ennoblers: principles

What can we say about the connection between Internality and ennobling? There are two things I’m pretty confident of. First, every counterexample to Internality involves an instance of ennobling. More precisely:

**Existence of Ennoblers**: If it is contingent whether X grounds B, then necessarily, X grounds B only if there is some non-empty E that ennobles X to ground B.

Why is this? There is a difference between worlds where the grounding obtains and worlds where it doesn’t. There must be some reason for this difference: an ennobler. This gives us a sufficient condition for the presence of an ennobler.

Second, we can give a necessary condition:

**Internality***: If some set of facts E ennobles X to ground B, then necessarily, if B and all the facts in X and E obtain, then X grounds B.\(^{27,28}\)

Recall that a similar principle, Necessitation*, connected Necessitation to enablers. In light of Necessitation*, it seemed reasonable to add the enablers to the ground, resulting in a notion of grounding that satisfies Necessitation: grounding+. Why not do the same here? Why not add the ennoblers to the ground, resulting in a new relation grounding*, which satisfies Internality?

There are two problems with this. First, my discussion of Fire or Hold? showed that grounding* is a gerrymandered relation. The ennobler, [General doesn’t command Private to fire], should not be treated as a partial ground for [Private’s orders are to fire]. Or consider Roger’s Students. [Kevin is Roger’s student] should not be included in the ground of [Roger’s students are all wise]. As Roger’s group of students grows, it becomes harder for the whole group to be wise. In general, [a is F] is not a partial ground of [all Fs are G]; being an F doesn’t help make it the case that

\[^{27}\] Internality* may seem subject to the following counterexample. Actual world: same as in Fire or Hold?. Counterfactual world: a fourth character, Supergeneral, commands Private to fire, while Sergeant still commands him to fire, and General commands nothing. Then Supergeneral’s command, not Sergeant’s, grounds him to fire, and General commands nothing. Then Supergeneral’s command, not Sergeant’s, grounds him to fire, and General commands nothing. [Sergeant commands Private to fire] and [General doesn’t command him to hold] and [General doesn’t command him to fire] all obtain, but Sergeant’s command doesn’t ground [Private’s orders are to fire].

Here are two possible responses. (1) I misidentified the ennobler. It shouldn’t be that General doesn’t order Private to fire, but that no officer outranking Sergeant orders Private to fire. This rules out the possibility of Supergeneral commanding Private to fire. (2) I didn’t fully spell out the ground in Fire or Hold?. I should have also included the fact that Sergeant is outranked only by General. I’m convinced that (1) or (2) is right, and I lean toward (1).

\[^{28}\] The converse is false: noncontingent grounding can be ennobled. Here’s an example. Humans have two notable features. First, they are all under 10 feet tall. Second, they are each essentially human. Now, applying the principle Restricted Generalizations: [All humans are under 10'] is grounded in [Abby is under 10’] + [Bernhard is under 10’]… + [there are no humans besides Abby, Bernhard…], ennobled by [Abby is human] + [Bernhard is human]… But Abby, Bernard, and all other humans are essentially human. So there is no world in which Abby or Bernard fails to be human while still having a height under 10’. And so the grounding obtains in every world in which the grounds all obtain.
all Fs are G. So we should not include ennoblers as partial grounds. Grounding* is not always explanatory. It does not deserve to have “grounding” in its name.

This is the difference between enablers and ennoblers. Enablers help explain the grounded fact, so they plausibly can be included in the ground. Ennoblers do not help; they may even “hinder” the grounded fact, ruling out a possible way for it to obtain. Ennoblers only explain why the ground is a ground.

There is a second, subtler problem with trying to preserve Internality by defining grounding* to include the ennoblers as partial grounds*. The problem is that Internality* doesn’t entail that grounding* is noncontingent. Internality* says that if it’s possible that X grounds B, ennobled by some set of facts E, then B + X + E necessitate that X grounds B. It does not entail this stronger principle:

**Internality**: If X grounds B, ennobled by some set of facts E, then necessarily, if B and all the facts in X and E obtain, then X grounds B, ennobled by E.

Internality** is what would be needed for grounding* to satisfy Internality. Internality* is not enough. But I am not sure that Internality** is true. For ennobling itself might be contingent; ennoblers might be such that they could have obtained without being ennoblers. They could be usurped by some other facts better suited to ennoble.

Let me change topics for a moment. We will return to ennoblers soon.

**6 What grounds grounding?**

The falsity of Internality has significant consequences—among them, that every view proposed in print of what grounds grounding is false.29

The question “what, if anything, grounds grounding facts?” is difficult and important. One might have thought facts of the form [X grounds B] are ungrounded. But there are strong reasons to think that they must be grounded. One reason, given by Dasgupta 2014, is that physicalism entails that grounding facts are grounded.30 Suppose physicalism is true. Plausibly, physicalism entails that every ungrounded fact is physical.31 So mental facts are grounded in physical facts. Take [M is grounded in P], where M is a mental fact and P is a physical fact. This grounding fact is not a physical fact, since it is partly about M, a mental fact. Then it follows from physicalism that it is grounded. Our view of grounding facts had better be consistent with physicalism, so we shouldn’t take grounding facts to be ungrounded.

But then what grounds grounding facts? Two main views have been proposed. Bennett (2011), deRosset (2013), and Litland (2017) say that X fully grounds [X grounds B]. Grounding facts are grounded in the ground. This view is simple and

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29 I mean every general view. See footnote 18.
30 Or at least that many of them are. Perhaps not all. It is compatible with physicalism that [P1 grounds P2] is ungrounded, if P1 and P2 are both physical facts. See Sider (2011, p. 170) for a more general argument.
31 Dasgupta ultimately denies this, instead saying that physicalism entails that every fundamental fact is physical.
elegant. But if Internality is false, it is also false. If Internality is false, X may not necessitate B. This doesn’t quite refute the view, because Necessitation might be false. [X grounds B] might be grounded in X, even though X doesn’t necessitate it. But Bennett, de Rosset, and Litland themselves all endorse Necessitation. If Necessitation is true and Internality is false, then [X grounds B] can’t be grounded in X.32

A second view, endorsed by Dasgupta (2014), takes X to be a partial ground of [X grounds B], but never a full ground. X, together with some facts about what is essential to B, grounds B.33 Dasgupta gives an example of an event E, a conference, which contains people giving talks, comments, etc. [E is a conference] is grounded in [E contains people giving talks, comments, etc.] And the grounding fact—[[E is a conference] is grounded in [E contains people giving talks, comments, etc.]]—is fully grounded in [it is essential to conferencehood that if an event contains people giving talks, comments, etc., then that event is a conference] + [E contains people giving talks, comments, etc.].

Dasgupta’s view is intuitive, and it gives plausible stories about individual cases, like the case of the conference. But if Internality is false, then so is Dasgupta’s view. Any fact about what’s essential to B is necessitated by B. If Internality is false, then in some cases, X and B together don’t necessitate [X ground B]. In such a case, X + facts about what’s essential to B don’t necessitate [X grounds B]. So if Necessitation is true and Internality is false, then Dasgupta’s view is wrong. Dasgupta accepts Necessitation, so this is a problem for him.

Can these views be fixed? Can we alter them so that they are compatible with the falsity of Internality? I think so. We simply add the ennoblers to the ground of the grounding fact. For example, take the first view—namely, that X grounds [X grounds B]. Then simply add the ennoblers to X. If X grounds B, and this is ennobled by E, then X + E fully ground [X grounds B]. This avoids the problem, since X + B + E necessitate [X grounds B].34

The idea is that an enabler helps to make the ground a ground. I think this is intuitive. (In fact, I find it so intuitive that I think it provides another reason to think that at least some grounding facts are grounded.) In Fire or Hold?, [General doesn’t command Private to fire] is part of what makes [Sergeant commands Private to fire] + [General doesn’t command Private to hold] ground [Private’s orders are to fire]. In Roger’s Students, [Kevin is Roger’s student] is part of what makes [Kevin is wise] a partial ground of [all of Roger’s students are wise].

32 Litland himself (2015) observes that Internality is entailed by Necessitation + the Bennett–deRosset–Litland view, and by Necessitation + Dasgupta’s view.

33 Or perhaps what is essential to the constituents of B, rather than B itself. See Rosen (2010) and Fine (2012) for similar views.

34 I do not endorse the view that [X grounds B] is fully grounded in X + any ennoblers. This is a modified version of the Bennett–deRosset–Litland view, and there are reasons to worry about both their view and this modified version (see Dasgupta 2014, pp. 571–574). Rather, I endorse a general recipe for accommodating cases of contingent grounding: if an account of the grounds of grounding facts would be a good account if not for its inability to handle counterexamples to Internality, then the modification of that account that adds ennoblers to the grounds of grounding facts is a good account.
This appears to remove the threat that grounding facts posed to physicalism. \([X \text{ grounds } B]\) is grounded in \(X + E\) (+ maybe some other facts). \(X\) and \(E\) are any old facts, and it is the job of physicalists to find physical grounds for them. Assuming that grounding is transitive, \([X \text{ grounds } B]\) is grounded in whatever physical facts ground \(X\) and \(E\). (What about the other facts that might partially ground grounding facts, like facts about essences? I don’t know whether these could have physical grounds, or whether they could be made compatible with physicalism in some other way. But it’s not my problem. If they can’t be, then they shouldn’t be included in the grounds of grounding facts.)

But a new question arises. What grounds ennobling? Can we say why \(E\) ennobles \(X\) to ground \(B\)? Yes. In fact, we can do something even better: we can define ennobling. Suppose that \(X + E\) fully ground \([X \text{ grounds } B]\). Then we define ennobling:

\[X \text{ grounds } B, \text{ ennobled by } E\] just if \([X \text{ grounds } B]\) is grounded in \(X + E\).35

I’m defining ennobling by appealing to what grounds grounding. But earlier I gave instructions for figuring out what grounds grounding (“just add the ennoblers to whatever you previously thought grounded grounding”) by employing an undefined notion of ennobling. This is a problem. I can’t have both the definition and the instructions, since the definition trivializes the instructions. The instructions now uselessly tell us that \([X \text{ grounds } B]\) is grounded in \(X + \text{ the } Y\) such that \(Y + X\) grounds \([X \text{ grounds } B]\). A choice must be made. I choose to keep the definition, and trivialize the instructions. But hopefully the examples I have given help illustrate what together with \(X\) could ground \([X \text{ grounds } B]\).

7 Ennoblers and enablers

There is another potential problem for this definition of ennobling. I think ennoblers are always partial grounds of grounding facts. I am less confident that there are no other partial grounds that I have missed. In particular, one might think that enablers help to ground grounding facts.36 For instance, \([I \text{ wasn’t under duress}]\) partially grounds \([I \text{ promised to lend my friend the book}]\) grounds \([I \text{ have reason to lend it}]\). But if enablers ground grounding facts, then our definition of ennoblers will fail to distinguish them from enablers. It will classify enablers as ennoblers.

This view of enablers looks very attractive. Antinecessitarians face a question: if enablers aren’t just partial grounds, then what role exactly do they play in grounding? A tempting answer is that they are partial grounds of grounding facts. But I don’t think that this answer is right. (Maybe it is the best answer available to antinecessitarians, but if so, then so much the worse for antinecessitarians.) Unlike

35 Here I am assuming that the modified version of the Bennett-deRosset-Litland view is true. Again, I do not actually endorse this modified view. If, instead, a modified version of Dasgupta’s view is true, then we should give a slightly different definition of ennobling: \([X \text{ grounds } B, \text{ ennobled by } E\] just if \([X \text{ grounds } B]\) is grounded in \(X + E + \text{ some facts about what is essential to } B\) and \(B\)’s constituents.

36 Skow (2016, p. 111) defends this view.
ennoblers, enabling don’t help to explain grounding facts at all. What distinguishes enablers from ennoblers is that they explain different facts: ennoblers explain grounding facts, whereas enablers explain the grounded facts. This is why enablers can be included in the ground, while ennoblers cannot be. Ennoblers don’t explain the grounded fact at all; they may even make it harder for it to obtain. Enablers, by contrast, do explain the grounded fact, so it makes sense to include them as part of the ground.

These issues generalize beyond grounding. If we think that causal background conditions are not causes, then we face a question: what is it for something to be a background condition? It is very tempting to answer that background conditions are “second-level explanations”. Skow (2018) argues for this at length. Skow claims that background conditions are not causes; rather, they are reasons why one event caused another. The presence of oxygen does not cause the lighting of the match; instead, it is a reason why the striking of the match is a cause of the lighting. But I am skeptical of this, because of the contrast with ennoblers. Consider the fact that the match was not engulfed in flame a split second earlier. That would explain why the striking (rather than an engulfing) was a cause of the lighting. The lack of engulfing is a causal ennobluer, making the striking into a cause. The presence of oxygen, by contrast, only explains why the match lit; not why the striking was a cause of its lighting.

This is a general worry for Skow and antinecessitarians. They want to distinguish between grounds (and causes) and enablers (and their causal analogues). But then it is hard to distinguish the explanatory work that enablers do from the work that ennobluer do. The very facts that enablers might seem to explain are instead explained by ennoblers.

8 Conclusion

Rejecting Internality leads to a theory of grounding that is not hopelessly messy, but is somewhat more complicated than we might have hoped. We need to worry about ennobluer now. And grounding might seem to be less unified: sometimes it is contingent; sometimes it isn’t. Metaphysicians have wondered whether the diverse cases of grounding really have much in common, and we have found a respect in which they have less in common than expected.

Should this worry grounding theorists? Would they be better off theorizing only about more specific relations, like rightmaking or the determinate-determinable relation? I don’t think so. First, on my view, grounding still has a unified structure; any case of grounding is of the form: X grounds B, ennobluered by E, where E is a

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37 Skow (2018, Chapter 2).
38 One option available to antinecessitarians is to appeal to contrastive grounding, and say that ennobluer and enablers explain the same fact, but relative to different contrasts. On this approach, an ennobluer explains why B is grounded in X, as opposed to having some other ground, whereas an enabler explains why B is grounded in X, as opposed to not obtaining at all.
possibly empty set of ennoblers. And all grounding is governed by the two principles I endorsed, Existence of Ennoblers and Internality*. Second, and more importantly, Internality failures give grounding a different kind of legitimacy: they bolster the analogy between grounding and causation. My counterexamples to Internality are closely analogous to counterexamples to the intrinsicality of causation. (Fire or Hold² is based on Lewis’s (2000) example of trumping preemption.) Such examples would never lead anyone to question the fruitfulness of theorizing about causation; the same should apply to grounding.³⁹ Any disunity among cases of grounding exposed by the counterexamples to Internality is outweighed by the unity between grounding and causation.⁴⁰

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³⁹ Bernstein (2016) suggests that the truth of Internality is bad news for grounding theorists. She defends a skeptical stance toward grounding by arguing that causation and grounding are not very similar; one of her arguments is that grounding is always internal, whereas causation is extrinsic in cases of trumping preemption.
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