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Metaphysical Foundationalism and the Principle of Sufficient Reason

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Abstract

There is a ubiquitous claim in the grounding literature that metaphysical foundationalism violates the principle of sufficient reason (PSR) in virtue of positing a level of ungrounded facts. I argue that foundationalists can accept the PSR if they are willing to replace fundamentality as independence with completeness and deny that ground is a strict partial order. The upshot is that the PSR can be compatible with both metaphysical foundationalism and metaphysical infinitism, and so presupposing this fixed explanatory demand need not beg the question in favour of either view.

Résumé

Une position commune dans la littérature sur la fondation est que le fondationnalisme métaphysique ne respecte pas le principe de raison suffisante (PRS) parce qu'il postule un niveau de faits non fondés. Dans cet article, je soutiens que les fondationnalistes peuvent accepter le PRS s'ils acceptent de remplacer la fondamentaleité comme indépendance par la fondamentaleité comme complétude et s'ils rejettent l'idée de fondation comme relation d'ordre partiel strict. La résultante est que le PRS peut être compatible autant avec le fondationnalisme métaphysique qu'avec l'infinitisme métaphysique, et donc que l'adoption de cette contrainte explicative ne favorise pas l'une ou l'autre des positions.

Keywords: grounding; fundamentality; Principle of Sufficient Reason (PSR), metaphysical explanation; infinite regress

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1. Introduction

There has been a great deal of debate lately about the structure of the world. Metaphysical foundationalists maintain that infinite or non-well-founded chains of ground are vicious and so must be grounded in something fundamental, a level of facts that are independent or ungrounded (Cameron, 2008; Schaffer, 2009, 2010, 2016). However, metaphysical infinitists maintain that non-well-founded chains of ground are unproblematic. They see no issue with the structure of reality descending indefinitely into ever more fundamental levels without a fundamental ground (Bohn, 2018; Cameron, 2022; Schaffer, 2003). Furthermore, a conception of ground as a distinctive form of metaphysical explanation has garnered interest in a grounding-based formulation of the principle of sufficient reason (PSR) that says, ‘All facts have grounds.’ As a result, a common criticism of foundationalism is that it violates the PSR by positing a level of facts that are ungrounded and, therefore, unexplained. Insofar as infinitism entails that every fact is grounded, infinitism does not violate the PSR.

I argue that foundationalism can be consistent with the PSR if the foundationalist is willing to replace the notion of fundamentality as independence with fundamentality as completeness. On this revised view, the foundationalist can maintain that fundamental facts are self-grounded or mutually grounded, and so have an explanation, but are nonetheless still fundamental insofar as they provide a *complete* basis for everything else. The benefit of this result is that, contrary to thinkers like Ricki Bliss (2013, 2019) and Ross Cameron (2022), there is nothing problematic with both metaphysical foundationalists and metaphysical infinitists insisting on a certain fixed explanatory demand when arguing for their respective views. Both can agree beforehand that every fact has a ground and then focus on the relative merits and costs this explanatory demand may have for either theory.

2. Grounding and Metaphysical Foundationalism

Many metaphysicians today endorse a structured ontology where reality is ordered by relations of metaphysical dependence (Audi, 2012; Schaffer, 2009). On this view, some phenomena are derived from more fundamental phenomena, resulting in a hierarchical picture of reality. For many, grounding is the primary notion that plays this structuring role. Grounding is captured by the phrase ‘in virtue of’ and is typically conceived of as a non-causal asymmetric relation of determination or metaphysical priority that holds between facts. The orthodox position is that grounding forms a strict partial order: it is asymmetric, irreflexive, and transitive.¹ Consider the following typical examples.

- The conjunction A&B is true because its conjuncts, A and B, are true.
- The set {Socrates} exists because Socrates exists.
- An act is lovable by the gods in virtue of its being pious.
- Mental facts obtain because of neurophysiological facts.

These diverse examples are united by exhibiting some phenomenon holding *in virtue of* some other phenomenon. Conjunctions are true in virtue of their conjuncts. Mental

¹ Strictly speaking, it is *partial* ground that is presumably a strict partial order, rather than full ground.

facts obtain in virtue of neurophysiological facts. And these examples are meant to exhibit a form of non-causal asymmetric priority.

Grounding is also associated with a distinctive form of non-causal metaphysical explanation. Though there are various notions of ground in the literature and disagreement regarding its relationship with explanation, I assume ground is a metaphysical kind of determinative explanation. On this view, ground itself is an explanatory relation between facts. When we cite the grounds for some fact, x , we cite a metaphysical, as opposed to causal, explanation for x . Thus, throughout this article, I will use the words ‘ground’ and ‘explanation’ synonymously. I understand facts to be non-representational states of reality rather than propositions, though I remain neutral on an explicit account of what facts are, exactly.

Given this structured approach to ontology, we can ask whether there are any fundamental facts in the order of grounding. To answer this question in the affirmative is to endorse the view called ‘metaphysical foundationalism.’ Very roughly, foundationalism says that there must be some fundamental facts in reality upon which everything else depends.² On this view, reality has a foundation, a point at which there is no further dependence. As such, the core conception of fundamentality underlying this debate is independence. What it is for x to be fundamental on a grounding approach is for x to be ungrounded. Fundamental facts are, therefore, brute facts. They lack an explanation entirely. The foundationalist thinks that the infinite regress of facts posited by the infinitist would be vicious and so must terminate, or be ultimately grounded in, some fundamental facts.

3. The Principle of Sufficient Reason

As a result of the explanatory nature of grounding, we can formulate the following version of the PSR in terms of ground (Amijee, 2021; Raven, 2021).

PSR: All facts have grounds.

However, since foundationalism countenances a level of fundamental brute or unexplained facts, there is a ubiquitous claim in the literature that foundationalism violates the PSR, while infinitism does not, and that this accords an advantage to infinitism. For example, Matteo Morganti (2015) writes,

... the regress postulated by the infinitist successfully accounts for the being of *any* particular entity at *any* particular layer in the hierarchy of reality. Indeed, this does appear to constitute an advantage for infinitism over foundationalism, as foundationalists *necessarily* leave unexplained the being and nature of at least *some* entity — the ungrounded entity or entities that ground(s) everything else. (p. 560)

Fabrice Correia and Benjamin Schnieder (2012) write, “For the PSR in effect denies that there are fundamental facts, i.e., facts that are not grounded by anything else” (p. 5). Schnieder and Alex Steinberg (2016) write,

² More precisely, foundationalism is understood in terms of grounding being a well-founded relation. There is some disagreement regarding how best to formulate well-foundedness. For my purposes here, I follow T. S. Dixon in defining foundationalism or well-foundedness in the following way: “Every non-fundamental fact x is fully grounded by some fundamental facts Γ ” (2016, p. 446).

Once the PSR is phrased in terms of grounding, it becomes apparent that the principle is of much current interest. It is, in effect, the denial of the widely endorsed claim that there are fundamental truths (which are true, but not because of other truths) or brute facts (which obtain, but not because of other facts). If the argument against the PSR is successful, there must be such fundamental truths or brute facts. (pp. 524–525)

Lastly, Einar Bohn (2018) argues that infinitism ought to be preferred over foundationalism since foundationalism violates the PSR. Bohn (2018) formulates his metaphysical version of the PSR (which he labels “MPSR”) as “every fact p has a metaphysical explanation” (p. 178).

All of the above criticisms implicitly assume that the PSR in question is unrestricted (henceforth ‘UPSR’) such that *all* facts receive a ground or explanation rather than some subset thereof. A natural response to these criticisms, then, is for the foundationalist to endorse a restricted version of the PSR (henceforth ‘RPSR’). The idea here is that a certain subset of facts is exempt from explanation. Perhaps facts in this subset are *inapt* to be grounded for some reason. That these allegedly exempt facts don’t receive an explanation is no strike against the PSR since the PSR would not apply to them in the first place. Those facts that are not apt to receive an explanation or ground, then, might serve as good candidates for being the fundamental facts, thus rendering foundationalism compatible with the PSR, albeit in a restricted form.

Several thinkers take this approach. For example, Bliss offers the following argument in favour of foundationalism.

1. There is an explanation for why there are any dependent entities whatsoever.
2. No dependent entity can explain why there are any dependent entities whatsoever.
3. Therefore, there must be something fundamental. (Bliss, 2019, p. 369)

Without getting into the details of the argument itself, Bliss acknowledges that premise 1 of her argument is likely a consequence of some version of the PSR. But it is an open question how best to formulate it. Because of Bliss’ prior commitment to fundamentality as independence, Bliss (2019) suggests a restricted version of the principle that says, “Every dependent fact has an explanation” (p. 375).

Similarly, Shamik Dasgupta (2016) offers a version of the RPSR that says, “Every substantive fact has an autonomous ground” (p. 390). Dasgupta argues that the only way to offer a satisfactory explanation to a series of why questions is to ground them in facts that are *inapt* to be grounded in the first place. A substantive fact, for Dasgupta, is one that is apt to have a ground, such as why some particles are arranged in a certain way. An autonomous fact, by contrast, is one that is not apt to be grounded. The question of what grounds an autonomous fact cannot legitimately be raised. For Dasgupta, facts about essence are autonomous. For example, suppose it is essential to water that it is a substance composed of H_2O . Dasgupta maintains that to ask the question, “In virtue of what is it part of *what water is* that it is composed of H_2O ?” (Dasgupta, 2016, p. 386) makes little sense. The fact is not apt to have

a ground or metaphysical explanation on Dasgupta's view. As a result, our chain of explanations will eventually terminate in some autonomous essentialist facts, thus providing a satisfactory stopping point to our why questions.

However, restricting the PSR poses problems as well. If foundationalists restrict the PSR, then they need a principled means by which to demarcate that class of facts that have an explanation from those that do not. This is a problem for any attempt to restrict the PSR since doing so always runs the risk of being ad hoc or arbitrary (Della Rocca, 2010). But implementing a non-arbitrary restriction on the PSR seems difficult. We can already see problems with our two examples above. Take Bliss' RPSR, "Every dependent fact has an explanation." The principle is vacuous insofar as dependent facts, by definition, just are facts that have a ground or explanation. To be dependent is to be grounded or explained. As such, Bliss' RPSR is not a principle that governs explanation but rather an analytic statement. Furthermore, we might wonder why non-dependent facts can't also have a ground. Bliss doesn't provide any independent justification for why the PSR cannot also apply to fundamental facts.

Dasgupta's version of the RPSR, "Every substantive fact has an autonomous ground," is also problematic because his notion of autonomy doesn't appear to be in good standing. Though Dasgupta takes autonomy to be a primitive notion, he attempts to clarify it, in part, on the basis of causal explanation. Dasgupta (2016) suggests that mathematical facts, like $1+2=3$, lack a causal explanation because they are not apt to be causally explained in the first place (p. 384). Autonomy is supposed to be analogous in some way. But causal explanation is a poor model for autonomy because it has no analogue for ground. Abstract mathematical facts are inapt for causal explanation because they stand outside the causal order. But there isn't an analogous distinction between facts that are inside and outside the grounding order (Glazier, 2017, p. 2882). Abstract facts are both uncaused and causally inefficacious. They are neither caused nor do they cause anything. But Dasgupta's paradigm examples of autonomous facts — facts about essences — though allegedly ungrounded nonetheless do ground other facts. So, the sense in which Dasgupta's autonomous facts would be outside the grounding order is not analogous to the sense in which abstract mathematical facts are outside the causal order. Indeed, an autonomous fact's being able to ground some other fact entails that it is within the grounding order after all.

This poses a dilemma for Dasgupta's RPSR. If we are meant to understand autonomous facts as being outside the grounding order in the exact same sense in which mathematical facts are outside the causal order, then autonomous facts will not ground substantive facts. To be outside the grounding order would involve not being grounded and not grounding anything else. It would be false, then, that every substantive fact has an autonomous ground. But if Dasgupta thinks that autonomous facts can ground substantive facts, which he does, then autonomous facts are not outside the grounding order but instead they clearly function within it, in which case there is no sense in which autonomous facts are analogous to facts inapt for causal explanation. Furthermore, though mathematical facts are inapt for causal explanation, they are precisely the sorts of things that can stand in relations of ground

(Raven, 2021, p. 1053). Thus, causal explanation is a poor model for autonomy and vitiates Dasgupta's RPSR.

4. Foundationalism and Completeness

As we've seen above, there is at least a presumption in favour of the UPSR over the RPSR since the UPSR doesn't have to shoulder the burden of specifying what the restriction upon explanation is supposed to be. Thus, if it turns out in the end that restricting the PSR is implausible, an alternative option for the foundationalist is to embrace the UPSR and simply deny that the fundamental facts are ungrounded or independent. Instead, the foundationalist might say that the fundamental facts are self-grounded or else mutually grounded in each other. This approach has two major consequences.

First, countenancing self-grounded or mutually grounded facts involves accepting reflexive or symmetric instances of grounding, respectively. Thus, the foundationalist would have to deny that ground is a strict partial order. Many are reluctant to do so, including myself. But there has been a growing movement in recent years to question virtually all formal properties of grounding. Cameron (2022) argues for circles of ground. Bliss (2018) argues for the possibility of reflexive grounding, and several other thinkers, most notably C. S. Jenkins (2011), Naomi Thompson (2018), and Elizabeth Barnes (2018), argue that grounding can be reflexive or symmetric. Though I cannot evaluate the plausibility of these accounts here, there is at least a precedent of denying ground as a strict partial order upon which the foundationalist can draw.

Second, it requires reconceptualizing fundamentality as something other than independence or ungroundedness. Many foundationalists may find this result unpalatable because independence appears to be the received view on fundamentality in the grounding literature (Bliss, 2019; Cameron, 2008; Schaffer, 2009, 2010). As Karen Bennett (2017) argues, "independence is a — *the* — central aspect of our notion of fundamentality" (p. 105). However, there is an alternative conception of fundamentality that arguably shares equal status with independence and is consistent with grounded fundamental facts, namely, completeness.

A set of facts can be fundamental insofar as they are complete. Completeness is the idea that the fundamental facts determine or are responsible for everything else. While independence says that nothing grounds the fundamental facts, completeness says that the fundamental facts ground everything else. As Bennett (2017) notes, "independence and completeness together reflect the two halves of the familiar phrase 'unexplained explainers', which precisely invokes both notions" (p. 111). And completeness certainly captures our intuitive understanding of the concept of fundamentality. When we give an account of the fundamental nature of the world, presumably we are trying to "characterize things completely and without redundancy" in order to say why everything is as it is (Lewis, 1986, p. 60). So, replacing independence with completeness is unproblematic.

Though completeness and independence are intensionally distinct, they are typically thought to be extensionally equivalent, such that the set of all and only independent facts in a world is the unique minimally complete set there (Bennett, 2017,

p. 122). However, if we drop certain assumptions, the two notions can become extensionally distinct as well. For example, Stephan Leuenberger (2020) argues that independence and completeness are equivalent notions. But Leuenberger's result relies on the irreflexivity of ground. If we drop the irreflexivity, then completeness and independence can come apart. This development suits the foundationalist who accepts the UPSR quite nicely. For while fundamental self-grounded facts, say, are incompatible with independence, they are compatible with completeness. Bennett agrees. Working within her framework of building, a notion similar to ground, she writes, "If building could hold in certain patterns — patterns that I myself do not think are possible — there could be a complete set of entities though no independent ones. For example, suppose building could, *per impossible*, hold either reflexively or in a circle. A world in which there was nothing but self-built entities, or nothing but a building circle, would be a world in which there is a complete set, yet no independent entities at all" (Bennett, 2017, p. 112).

Consider the following definition of completeness from Leuenberger (2020). He refers to completeness as "A-fundamentality."

f is A-fundamental =_{df} f belongs to every grounding base. (Leuenberger, 2020, p. 2651)

The notion of a grounding base is based upon the familiar idea of a supervenience base, where " Γ is a *grounding base* iff for every f that does not belong to Γ , there is $\Gamma' \subseteq \Gamma$ such that Γ' is a ground for f " (Leuenberger, 2020, p. 2651). The idea here is that, for any fact, f , that itself is not part of the grounding base, there is a subset of that grounding base such that it is a ground for f . In other words, the grounding base is the ground of everything outside the base. All that completeness requires is that the fundamental facts ground, or act as a base for, everything else. To be clear, 'everything else' cannot mean 'everything other than themselves' since we are saying the fundamental facts are self-grounded. They do ground themselves. Rather, the foundationalist who accepts the UPSR should understand the fundamental facts to form a base that itself grounds every fact that is not a member of that base.

As such, the foundationalist who accepts the UPSR can maintain that self-grounded or mutually grounded facts are fundamental in a perfectly good sense, even while rejecting independence. Of course, we could no longer characterize the fundamental facts as the unexplained explainers. Here, the fundamental facts would be the explainers of everything else, though not themselves unexplained. But that is to be expected since, according to the UPSR, nothing is left unexplained, not even the fundamental facts.

5. Fixing Our Explanatory Demands

I've argued that foundationalism can be compatible with the UPSR, provided that foundationalists are willing to revise their views in admittedly substantial ways. However, several thinkers have expressed a more general concern about foundationalists arguing for their views on the basis of a fixed explanatory demand. As we'll see below, foundationalists typically argue that their views can meet a certain explanatory

demand that infinitism cannot. The concern is that foundationalists illegitimately burden infinitists with an explanatory demand that infinitists are not necessarily required to adopt in the first place. Since the UPSR is a strong explanatory demand, we might worry that there is a problem with foundationalists, or infinitists for that matter, presupposing the UPSR from the outset.

For example, Bliss (2019) notes that one argument for foundationalism suggests that, without some fundamental facts in the order of grounding, we would lack a completely satisfactory explanation for the existence of all of the derivative facts. While each fact's existence in the infinite regress may receive a ground, we might think the regress *as a whole* lacks a ground or explanation, that there is no explanation for why *anything* has existence in the first place. Thus, infinitism would exhibit a kind of explanatory failure, while foundationalism would not. But if by a 'completely satisfactory explanation' we just mean one that invokes fundamental facts, Bliss argues the foundationalist is begging the question. Similarly, Bliss (2013, p. 408) argues that even if an infinite regress or non-well-founded chain of ground fails to offer us an explanation of why anything at all has existence or why the regress *as a whole* exists, say, that is no fault of the regress itself because the regress, on her view, is not designed to answer that question. Bliss' worry here is that it is illegitimate for the foundationalist to impose these sorts of explanatory demands upon the infinitist, at least without independent justification for doing so.

And Cameron (2022) argues that it is methodologically preferable not to hold fixed a certain explanatory demand and then use that demand to rule out metaphysical views that are genuine contenders. He writes,

even if the foundationalist has an argument against Metaphysical Infinitism that is good by their own lights, we shouldn't expect it to worry the infinitist, or to convince the undecided. The infinitist can even grant that it is a theoretical cost that they do not meet a certain explanatory goal that the foundationalist can meet, but that it is simply a cost that is outweighed by the benefits of the infinitist metaphysic they are defending ... I would urge that we *not* hold fixed such an explanatory goal from the outset, simply because doing so — in the absence of a compelling reason that such a goal must be met — is to rule out metaphysical options with no good reason. (Cameron, 2022, p. 108)

On Cameron's view, foundationalists too often assume as part of their argument a fixed explanatory demand that the infinitist allegedly cannot meet. The moral, then, is that neither the foundationalist nor the infinitist should come to the table with fixed explanatory demands or goals, at least not without independent justification.

My suggestion is that, contra Bliss and Cameron, there is nothing problematic about either the foundationalist or the infinitist holding fixed the explanatory demand in question here, namely, the UPSR, because both theories can be consistent with the UPSR. Thus, neither theory can automatically rule out the other simply by wielding the UPSR. Instead, the debate between the two theories will come down to how well either theory satisfies the UPSR and the plausibility of the foundationalist's denial of ground as a strict partial order. With regards to the former, though both

theories can be consistent with the UPSR in principle, one theory may still satisfy the UPSR to greater degree than the other.

For example, the foundationalist will argue that in addition to every derivative fact receiving a full ground or explanation in virtue of the fundamental facts, the fundamental facts also account for the further fact of why anything exists at all or why the regress as a whole exists. By contrast, the infinitist can argue that every fact receives a full ground in virtue of the chain of ground never terminating and that there simply is no further fact about the regress *as a whole* or the existence of any facts *at all* that needs explaining. If every fact has a ground on infinitism, then the infinitist will insist that nothing goes unexplained and so fundamental facts aren't needed. Both foundationalists and infinitists, therefore, can agree that every fact has a ground. But they may disagree on what further facts there are that need explanation and how well either theory can accommodate those facts.

6. Conclusion

We've seen that there is a ubiquitous claim in the literature that metaphysical foundationalism violates the PSR while metaphysical infinitism does not, and that this accords an advantage to infinitism. I've argued that restricting the PSR is implausible, but that the foundationalist can nevertheless accept the UPSR by rejecting fundamentality as independence and ground as a strict partial order. These rejections are, admittedly, controversial though not unprecedented. I also argued that there is no inherent problem with both the infinitist and foundationalist presupposing a fixed explanatory demand beforehand, namely the PSR.

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