

How to be a Rational Foundationalist

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I. Rational Foundationalism

Some things depend on, or exist in virtue of, other things. This fact has been used as a premise in cosmological arguments for the existence of an independent, ‘ultimate ground’ of being: confronted with well-known problems with self-dependence (bootstrapping), infinite chains of dependence (turtles-all-the-way-down scenarios), and circular chains of dependence (chicken-and-egg scenarios), it would seem that tracing the chain of dependent beings back far enough will eventually lead to a fundamental being that serves as the foundation of being generally. Following Jonathan Schaffer (2010), let us call this view *metaphysical foundationalism*: “The metaphysical foundationalist thinks all being must originate in basic being and rejects limitless [and circular] chains of dependence. There must be a ground of being. If one thing exists only *in virtue of* another, then there must be something from which the reality of the derivative entities ultimately derives” (37). Otherwise, “being would be infinitely deferred, never achieved” (62). So, the metaphysical foundationalist thinks there must be a fundamental being—a being that depends on nothing for its existence.

It often seems as if metaphysical foundationalism is motivated by the Principle of Sufficient Reason. The PSR, in its most general and canonical form, states that whatever exists has an explanation of its existence. If the metaphysical foundationalist’s notion of dependence is explanatory—i.e., where y depends for its existence on x , x explains the existence of y —and it certainly seems intended to be, the relevance of the PSR is clear. We have a classic Leibnizian-style cosmological argument for the existence of a fundamental being. Leibniz and other classical rationalists (e.g., Descartes, Spinoza, Clarke) believed, as Schaffer apparently does, that *being* needs explaining, and that *sans* the existence of some fundamental, explanatory ultimate, being in general is inexplicable. Following Shamik Dasgupta (2014), let us call *metaphysical rationalism* the view that some version of the PSR is true.¹

The metaphysical foundationalist of today, however, is no rationalist of yesteryear. Despite the affinities between them, the metaphysical foundationalist’s understanding of what it means to be fundamental—i.e., not dependent on anything—is incompatible with the PSR. Our explanatory reading of ‘dependence’ would entail that a being not dependent on anything is a being not explained by anything. The question I want to explore is how one might be both a metaphysical foundationalist and a metaphysical rationalist—a *rational foundationalist*, if you will.

II. Two Lessons Learned

¹ For present purposes, I’ll assume a PSR about *things*, as opposed to facts or propositions: every thing that exists has an explanation of its existence. A “thing,” as I will use the term, is an entity whose existence cannot be reduced to something else. Facts, truths, events, and states of affairs are nothing over and above their constituents, so what requires explanation is the existence of the constituents themselves. This version of the PSR avoids entirely concerns of modal collapse.

The rationalists of yesteryear *were* what I'm calling rational foundationalists; they just had a different understanding of fundamentality than do contemporary metaphysical foundationalists. Their commitment to the PSR entailed that a fundamental being, no less than anything else, has an explanation. But their proposals of how exactly this works—viz., that God's existence is identical to, contained within, or follows from God's essence—are obscure and implausible. But we can learn from them important lessons as we sketch our own proposal for how to be a rational foundationalist.

The first lesson is that a richer understanding of fundamentality is needed. Philosophers today define fundamentality negatively in terms of dependence, where to be fundamental is to be *independent*; i.e., not dependent. While the rationalists would also define fundamentality in terms of dependence, they arguably had a much richer notion of independence. They often described an independent being as one that does "not dependent on anything "ad extra" or "wholly distinct," or "external to itself", leaving open the possibility that it might depend on—and so be explained by—something *ad intra*. This, I take it, is how to avoid an infinite regress: rather than finding an explanation for the existence of a fundamental being by "going back" to something prior and external to it, the explanation is found by turning inward.

Leibniz's account of the 'inward explanation' seems to also avoid bootstrapping. He does not say, as others do, that God's existence is *identical* to, and so somehow explained by, his essence, which, to my ears, sounds like bootstrapping himself into existence. Rather, Leibniz says that God's existence "follows from" God's essence. While this may avoid regress and bootstrapping, I don't see how it avoids vicious circularity. Leibniz also thought that all essences, including God's ultimately depend on God. So, God exists because of God's essence, but also all essences exist because God exists. Is this not viciously circular?

Robert Adams suggests that all Leibniz needs to say here is that there is a *mutual* dependence between God's existence and God's essence in the same way there is between necessary truths and God's understanding. Adams (1994, 185) writes:

Whatever relations of explanation and metaphysical dependence Leibniz supposes to obtain among these, he cannot consistently suppose that any of them is independent of any of the others in the sense that there is a possibility of its obtaining without them, for he does not believe that there is any possibility of any of them not obtaining. All necessary truths are in this way inseparable from each other. ... His argument ... does not imply that God's understanding is naturally prior to the necessary truths. It does imply that the truths could not exist without being understood by God, and that is supposed to explain what sort of being the truths have. But it is equally part of Leibniz's view that God could not exist without understanding exactly those necessary truths. Neither could exist without the other.

Of course there are mutual entailment relations between necessary truths. For example, if '1+1 = 2' and 'whatever has a shape has a size' are necessary truths, then each will entail, without seeming prior to, the other. But this sort of mere modal entailment can't be the whole story because there remains an apparent explanatory asymmetry between God's understanding and necessary truths that is not there between ordinary cases of mutual necessary entailment. God's understanding explains what necessary truths there are, not vice versa, even if just those necessary truths modally entail God's understanding. The same is true of the relation between God's essence and existence, as, according to Leibniz, the divine essence is supposed to explain God's existence. In both cases, the former seems explanatorily and ontologically prior to the

latter, even if each mutually entails the other on account of their necessity. To all appearances, one does seem “naturally prior,” to use Adams’ phrase.

The lesson to be learned here, hinted at by Adams, is that some form of mutual dependence seems necessary for an ‘inward explanation’. But are there cases of mutual dependence that are not viciously circular? To answer this question we turn to the literature on grounding and ontological dependence.

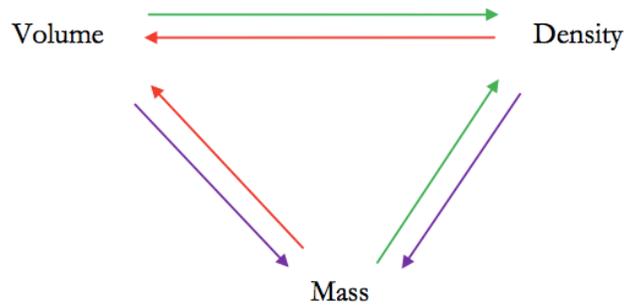
III. Re: Lesson 2. Mutual Dependence

I am aware of about twenty putative examples of mutual dependence (or ground) discussed in the literature. Oft-discussed is Kit Fine’s (1994, 65) example of reciprocal essences: it is part of the essence of Sherlock Holmes to be admired by Watson, and likewise part of the essence of Watson to admire Holmes. Both essences depend on each other. Another is the two poles of a magnet, where the magnet’s north and south poles depend on each other (Bliss 2014). Or take the three quarks of a baryon, where each quark depends on the others for its color force and, probably, existence. More generally but structurally similar, take the determinate volume, density, and mass of any extended object, where again, each quantity depends on the others. Or consider Michael McKenna’s claim that S’s being morally responsible for some action depends on it’s being appropriate for S to be held morally responsible for that action *and vice versa* (McKenna 2012, 80ff).

These examples (and others) are frequently rejected *tout court* because, many philosophers argue, grounding is an ontological priority relation, and so is asymmetric. If x grounds y , then x is prior (in the order of being) to y . But if grounding is asymmetric, then there can be no genuine cases of mutual ground; they’d all be viciously circular: x cannot be prior to y and y also be prior to x . I agree that many—perhaps even most—cases of ground are asymmetric, and that many—perhaps even most—putative examples of mutual ground fail on account of being viciously circular. But as a general strategy for ruling out any and all cases of mutual ground, this fails—and fails for a very interesting reason.

A closer look at some of the examples reveals that not all of them feature the kind of binary dependence structure common to paradigmatic instances of circularity (where x depends fully on y and y depends fully on x), which do seem vicious: for if we wanted to know the full story on why y exists and are told it’s x , we would justifiably assume that x is ontologically prior to y : to find the reason for y , we have to *go back* to x . But if we then are also told that the full story on why x exists is y , we have a priority problem: how can x be prior to y , but also y be prior to x ? That seems impossible. To make the point clearer, it will be useful to put it in terms of grounding and make a customary distinction between full and partial grounding: x fully grounds y just in case x is by itself the sufficient metaphysical explanation of y , whereas x partially grounds y just in case x is not by itself the sufficient metaphysical explanation of y , and there exist some Xs such that x is among the Xs that fully ground y . Now we can say: it seems that priority tracks full ground: if x fully grounds y , then x is ontologically prior to y . So examples of mutual dependence where y fully depends on x and x fully depends on y are viciously circular because they run into the problem of how they could both be prior to each other.

But several of the examples of mutual ground aren’t like this at all. Naomi Thompson (2014) is explicit, for instance, that in the mutual dependence between mass, volume, and density, each only *partially*, not *fully*, depends on another. Where each arrow represents partial dependence, she provides the following figure (Fig. 1) to illustrate:



The mutual dependence here is ternary and partial rather than binary and full, and so avoids being obviously viciously circular in the way others are. This same structure seems explicit in the example of baryons: we could say each of the three quarks of a baryon partially depend on each other.

This ‘ternary and partial’ structure is also implicit in other examples, but has been overlooked. Bliss, for instance, seems to present the magnet example as binary and full, where the two terms (the North and South poles) are fully dependent on each other. Karen Bennett (forthcoming) objects that “the appearance of symmetric dependence is easily explained away as being a case of common ground: both poles are built from the magnetic field of the object” (42). Bennett rightly highlights the presence of a third thing common to the existence of both poles, and so rejects this as a case of mutual dependence between the poles. But that doesn’t follow. Without a reason to attribute all the grounding work to what the poles have in common, it could still be the case that the poles partially depend on each other as well as (at least) a *tertium quid*. The same dialectic is replayed in the example of the mutual dependence between being responsible and holding responsible. Mckenna clearly thinks of the mutual dependence here as binary and full. Paul Manata (forthcoming) objects that this violates commonly assumed properties of ontological dependence (namely, asymmetry), and argues instead that “both being morally responsible and holding morally responsible do not ground each other; both are grounded in a third thing, ... the dynamic moral responsibility system” (2). Repeat: Manata rightly highlights the presence of a third thing common to both being and holding responsible, and so rejects this as a case of mutual dependence between being and holding responsible. But that doesn’t follow, for the same reason as given above. Similar points can be made about more examples still: the mutual dependence between the essence of Sherlock and the essence of Holmes is partial, as the essence of both also depends on other things in the fictional story. And so on. Of course, the dependence structure doesn’t have to be strictly ternary, either. But the lesson of the mutual dependence story is: not strictly binary and full, but minimally ternary and partial.

IV. Re: Lesson 1. Independence

With an acceptable form of mutual dependence at hand, I turn now what I think is a promising way to understand ‘independence.’ The rationalists, recall, described an independent being as, e.g., “not dependent on anything *wholly distinct*,” leaving open the possibility that an independent might yet depend on, and so be explained by, something *ad intra*. But what internal to a thing might it depend on that explains its existence?

The most obvious candidate here is a thing's parts. Any attempted explanation for why the universe exists that cites only things internal to it will surely cite its parts, such as galaxies, stars, and planets. Any attempted explanation for why a proton exists that cites only things internal to it will cite its three quarks. So we might think of an independent being as depending on—and so being explained by—its parts, but *only* its parts. I propose, therefore, a mereological definition of independence: x is independent *iff* x depends for its existence on its parts—but nothing but its parts (where by 'part' I mean 'proper part': y is proper part of x *iff* y is a part of x and $y \neq x$). A fundamental being will be independent in the sense that it will not depend on anything “wholly distinct” or “external to” itself, where x does not depend on anything “wholly distinct” or “external to” itself just in case x does not depend for its existence on anything *disjoint* from x (where x is disjoint from y *iff* x doesn't overlap y , and x overlaps y *iff* there is some z that's a proper part of x and y).

But then what explains the parts? The ban on 'turtles all the way down' scenarios eliminates *turtle gunk*: neither x nor x 's parts can depend on parts 'all the way down', lest the reason for x and x 's parts be infinitely deferred and never achieved. So if the parts have an explanation at all, they must somehow explain each other. But the ban on chicken-and-egg scenarios eliminates *chicken parts*: viciously circular grounding chains between x and its parts and between x 's parts. This is where our 'ternary and partial' structure of mutual dependence comes in. Let's build the picture up more methodically to arrive at the simplest mereological model of a fundamental being.

V. Building a Fundamental Being

The ban on turtle gunk eliminates an infinite regress of parts being grounded in parts all the way down, and the ban on bootstrapping and chicken parts requires a finite lower bound of at least three parts.² To see this, consider various models of bipartite objects that get fully grounded³ by their parts and whose parts also get fully grounded:

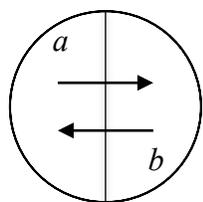


Fig. 2

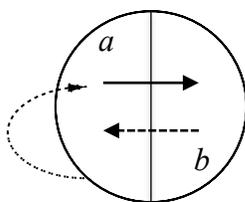


Fig. 3

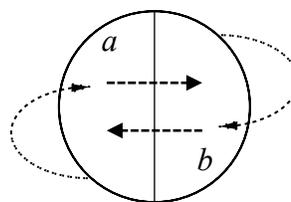


Fig. 4

In Fig. 2 we have the problem of vicious circularity that comes with violations of the asymmetry of full ground: a fully grounds b and b fully grounds a . But we've already rejected this as coherent above.⁴ No matter how we try to avoid this by swapping in relations of partial ground, as in Figs. 3-4, we run into bootstrapping problems. In Fig. 3, for instance, a fully grounds b and

² By a weak supplementation principle of classical extensional mereology ($x \ll y \supset \exists z [z \ll y \wedge \sim z < x]$), anything with a proper part must have at least at least two proper parts. So I don't consider a mereologically simple model. See Simons (1987, 28ff) for details.

³ Where the solid-line arrows represent full ground and the dashed-line arrows represent partial ground.

⁴ Further, assuming transitivity of full ground, irreflexivity of full ground is also violated: if a fully grounds b and b fully grounds a , then a fully grounds a .

b partially grounds a , leaving only a itself to fill in its own grounding gap. Similarly in Fig. 4, if a and b only partially ground each other, each is left to only its own resources to get the rest of themselves fully grounded.

Simply introducing a third term, as in Fig. 5, does not help:

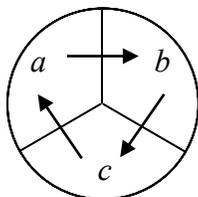


Fig. 5

For, assuming the transitivity of full ground, this just repeats the vicious circularity and bootstrapping problems encountered in other models: we have a violation of asymmetry (c grounds a , and because a grounds b and b grounds c , a also grounds c) and irreflexivity (a grounds b grounds c grounds a , so a grounds a) of full ground. These problems will recur regardless of how many parts the object has so long as the chain of full ground remains loopy, as is in Fig. 5. But suppose we alter the structure to be less loopy and more webby, like in the ‘ternary and partial’ examples discussed above:

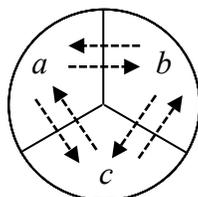


Fig. 6

In Fig. 6 we do seem to have a coherent model of a fundamental being, as a rational foundationalist would see it: the object as a whole is fully grounded in its parts, and each of its parts are fully grounded in the others (each part partially grounds the other two, and any pair of parts fully grounds the unpaired part). In this way it avoids the priority problem: when a and b ground c , a alone, as a mere partial ground of c , is *not* ontologically prior to c . What’s prior to c in this case is not a , but a with b . Because partial grounding is not necessarily a relation of ontological priority, it cannot be said that while a with b fully grounds c , and b with c fully grounds a , therefore a is ontologically prior to c in the first chain but not ontologically prior to c in the second. No part is ontologically prior to another. Each part is mutually grounded in the others. Everything is fully grounded and so gets explained, satisfying the metaphysical rationalist, all without the messy business of bootstrapping, turtle gunk, or chicken parts, satisfying the metaphysical foundationalist. Taking something structurally like the object in Fig. 6, then, is how to be a rational foundationalist.

VI. Concluding Remarks

This is an intriguing picture of what a fundamental being must minimally be like, to say the least. But it is one we are led to by accepting both metaphysical foundationalism and rationalism. In starker terms: with the noted principles and definitions defended, the ultimate ground of being to

which a PSR-based cosmological argument leads to, in essence, triune. Are there real-world candidates to which this model conforms? Does this picture give us a reason to think baryons (e.g., protons and neutrons) are fundamental? They are, after all, known to have an extraordinarily stable atomic structure. Or might there be a more “extramundane” candidate, as Leibniz thought? Either way, the framework provided by rational foundationalism may prove fruitful for further investigations—whether physical or metaphysical—into the fundamental nature of reality.

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