

Can grounding characterize fundamentality?

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ABSTRACT: It can seem incoherent to fully characterize fundamentality in terms of grounding, given that the fundamental is precisely that which cannot be fully characterized independently. I argue that there is no such incoherence.

Here I defend the coherence, though not the correctness, of fully characterizing metaphysical fundamentality in terms of grounding.

According to some, there is an important metaphysical relation of **grounding**. This relation is intimately connected to metaphysical explanation, and we express it by saying that x holds “in virtue of” y . Grounding theorists disagree about whether or not the concept of grounding is semantically basic and about whether or not the relation of grounding is metaphysically fundamental.¹

Grounding theorists have often attempted to use grounding to characterize many other metaphysically important properties and relations, such as the property of being metaphysically fundamental. The grounding theorist might suggest, for example, that for something to be metaphysically fundamental is for it not to be grounded, or perhaps for it to be a constituent of a fact that is not grounded. Many other characterizations in a similar spirit are possible.²

Others, however, would resist any attempt to characterize fundamentality in terms of grounding on the basis of:

The **simple argument**:

(1) The fundamental cannot be fully characterized independently.

(C) Therefore, the fundamental cannot be fully characterized in terms of grounding.³

¹ I believe that the spirit of what I will say below applies equally to the view that there is a grounding *operator* rather than a grounding *relation* (Fine (2012)). Influential discussions of grounding include Fine (2001), Schaffer (2009), and Rosen (2010). For an example of a state-of-the-art theory of grounding, see Schaffer (2016).

² Schaffer (2009) appears to give something like the first suggestion. Rosen (2010, p. 112) offers a more developed version of the second suggestion.

³ Wilson (2014, p. 560) endorses this argument: “The suggestion ... is that the posit of Grounding is needed metaphysically to characterize the fundamental as the un-Grounded.... The suggestion can be resisted, however The fundamental should not be metaphysically characterized ... in *any* other terms. The fundamental is, well, *fundamental*.” She repeats the argument in her (2016a, pp. 192-3).

The rationale for premise (1) is straightforward: a fundamental entity is precisely one which cannot be fully characterized in terms of other entities. (I use the term “entity” as a maximally broad sortal, covering objects, properties, relations, events, states of affairs, facts, etc.) *A fortiori*, then, the fundamental cannot be characterized in terms of grounding.

Here I show that this simple argument, while perhaps sound, does not undermine the attempt to fully characterize fundamentality in terms of grounding. Nor do variants of the simple argument fare any better. To think otherwise is to elide the distinction between a property and its bearer.⁴

1. Rebutting the simple argument and its variants

Consider a red apple. Obviously we must distinguish between the property of redness and the apple: the former is a property, and the latter is something that instantiates that property. Equally obviously, the properties of the bearer need not be properties of the property, and vice-versa: the apple is red, but the property of redness is not itself red; the property of redness is a color property, but the apple is not a color property.

Keeping these obvious remarks in mind, let us grant premise (1): whatever is fundamental cannot be fully characterized independently. Let us therefore grant the conclusion as well: the fundamental cannot be fully characterized in terms of grounding. The crucial point is that premise (1) says only that fundamental *entities* cannot be fully characterized independently, and likewise the conclusion says only that fundamental *entities* cannot be fully characterized in terms of grounding. Premise (1) does not say that *the property of fundamentality* cannot be fully characterized independently, nor does the conclusion say that *the property of fundamentality* cannot be fully characterized in terms of grounding.

Suppose then that there is some entity, a quark perhaps, that is fundamental. The quark cannot be fully characterized independently; it follows that the quark cannot be fully characterized in terms of grounding. But it does *not* follow that *the property of fundamentality itself* cannot be fully characterized in terms of other entities. It is perfectly consistent for the grounding theorist to say, for example, that for something to be fundamental is for it not to be grounded. She will then say that *the quark* is not grounded in anything, while also saying that *the quark’s being*

⁴ Roughly the objection that I will offer has been given before in very compressed form – see Cameron (2016, p. 389, fn. 7) and Raven (2016, pp. 14–15). The objection also appears in an earlier version of Berker (forthcoming), though I am told that it will be cut from the published version. Here I will develop the objection much more fully than it has been developed before, rebut a recent attempt to repair the simple argument (Wilson (2016b)), and suggest that further repairs should not be attempted.

I thank an anonymous referee for his/her thoughtful assistance in situating this paper relative to these other works.

fundamental is grounded in something – in particular, that it is grounded in the quark’s not being grounded in anything.⁵

At least, it is perfectly consistent for the grounding theorist to say this *unless* the property of fundamentality is itself fundamental. For if the property of fundamentality is itself fundamental, then, by premise (1), it cannot be fully characterized independently. *A fortiori*, it cannot be fully characterized in terms of grounding. But there is nothing forcing the grounding theorist to concede that the property of being fundamental is itself fundamental. After all, it is perfectly common for a property not to instantiate itself – the property of being red is not itself red. The grounding theorist is committed to saying that, likewise, the property of being fundamental is not itself fundamental.

Indeed, this commitment is independently plausible, for the rationale for premise (1) already seems to suggest a full characterization of fundamentality. According to that rationale, a fundamental entity is precisely one which cannot be fully characterized in terms of other entities. This seems not only to tell us something *about* entities that are fundamental; it seems also to tell us *what it is* for an entity to be fundamental – at least to a first approximation. (We can see the grounding theorist as attempting to make this first approximation exact.) And if we have here, or somewhere nearby, a full characterization of the property of being fundamental in terms of other entities, then – given that a fundamental entity is one which cannot be fully characterized in terms of other entities – it follows that the property of being fundamental is not itself fundamental.

Notice that the following argument is no better:

The revised argument:

(1*) All that is fundamental, taken together, cannot be fully characterized independently.

(C*) Therefore, all that is fundamental, taken together, cannot be fully characterized in terms of grounding.

In replacing (1) with (1*), we allow that a particular fundamental entity might be fully characterized in terms of one or more distinct fundamental entities. Think of the way that metaphysical possibility can be fully characterized in terms of metaphysical necessity and vice-versa. (1*) would allow us to treat both metaphysical possibility and metaphysical necessity as fundamental if we so desired, while (1) would force us into a seemingly arbitrary choice of treating at most one of these as fundamental.^{6,7}

⁵ Many would claim that only *facts*, and thus not objects like quarks, stand in grounding relations. My argument can easily be reframed to accommodate this claim.

⁶ I thank Selim Berker for drawing my attention to this example in a related context.

⁷ I interpret Wilson (2016b, pp. 5-6) as endorsing the revised argument. She states, “If anything is appropriately seen as *not* determined by *other* facts or goings-on at a world, it is, I claim, the *overall* extension of what is fundamental” (final emphasis mine, all other emphases hers). Wilson explicitly

The revised argument, like its predecessor, may be sound. But to think that (C*) tells against characterizing fundamentality in terms of grounding is to commit the same error as before – the error of eliding the distinction between the property of fundamentality and its bearers. For consider all of the entities that are fundamental. Perhaps these will include certain particles, fields, natural and metaphysical laws, and so forth. (1*) entails that these particles, fields, laws, etc. cannot together be fully characterized independently, and (C*) entails that these particles, fields, laws, etc. cannot together be fully characterized in terms of grounding. As long as grounding is not itself a fundamental entity – and it is not clear that the grounding theorist must grant this claim, but let us do so anyway – then (C*) does follow from (1*). But (1*) is perfectly compatible with there being a full independent characterization *of those particles, fields, laws, etc. all being fundamental*, and (C*) is perfectly compatible with giving that full independent characterization in terms of grounding.

By now it should be obvious that no variant of the simple argument will succeed. Perhaps that which is fundamental cannot be fully characterized independently, or perhaps there is some other true premise in this neighborhood. Even so, it is perfectly coherent, whether or not it is correct, for the grounding theorist to offer a full characterization of fundamentality itself.

2. A way forward?

Still, it is also perfectly coherent to accept **fundamentality primitivism**, the view that there is no independent full characterization of fundamentality. While the fundamentality primitivist should not pursue further revisions of the simple argument, I will suggest a more promising idea for the fundamentality primitivist to explore.⁸

The characterizations of fundamentality considered in this paper involve commitment to a pair of claims – a weaker conditional claim and a stronger explanatory claim – each of which connects fundamentality to grounding. Just to take an example:

frames this as a response to Berker and Raven (see fn. 4), but as far as I can see the only change in her argument is to appeal to the overall extension of what is fundamental – to all fundamental entities, taken together – where the original argument appeals to particular fundamental entities. This interpretation is further supported by her clarification that she wishes to allow “that fundamental goings-on *themselves* may ‘hold in virtue of something’ – e.g., may metaphysically depend on each other” (2016b, p. 5, her emphasis).

⁸ In addition to Wilson, possible fundamentality primitivists include Fine (2001) and Barnes (2012). I make these attributions tentatively because Fine and Barnes openly suggest that the *concept* of fundamentality is semantically basic, but it is unclear whether they mean also to suggest that *fundamentality itself* is metaphysically fundamental.

Simple conditional claim: For any entity x , if x is fundamental, then x is ungrounded.

Simple explanatory claim: For any entity x , if x is fundamental, then (x is ungrounded and x 's being ungrounded fully explains x 's being fundamental).

In offering variants of the simple argument, the fundamentality primitivist was primarily (and unsuccessfully) targeting the weaker conditional claim; the stronger explanatory claim would just have been collateral damage. The revised argument, for example, was driven by the concern that metaphysical possibility and metaphysical necessity might both be fundamental even while each is grounded in the other, a concern which primarily targets the simple conditional claim.

But I encourage the fundamentality primitivist to abandon not just the simple argument and its variants, but the entire strategy of targeting such conditional claims. The problem is that the grounding theorist can readily modify the conditional claim (as well as the explanatory claim) as necessary. In this case, the grounding theorist might concede that a fundamental entity need not be ungrounded; a fundamental entity need only be an element of some *minimal group* of entities that are identical to or ground everything else. To be precise:

Revised conditional claim: If entity x_1 is fundamental, then x_1 is a member of some group $x_1 \dots x_n$ such that (every entity is either grounded in or identical to entities $x_1 \dots x_n$, and there are no entities $y_1 \dots y_m$ such that ($m < n$, and every entity is either grounded in or identical to $y_1 \dots y_m$)).

The revised conditional claim allows that metaphysical possibility and metaphysical necessity might each be fundamental despite grounding one another. For there might be one such minimal group that includes metaphysical possibility and whose elements together ground metaphysical necessity; but there might also be another such minimal group that includes metaphysical necessity and whose elements together ground metaphysical possibility.

This is not the end of the story, of course; to mention just one complication, the revised conditional claim will not adequately treat worlds in which there are infinitely many fundamental entities. But my point is more general: the grounding theorist has access to very rich formal resources in her attempt to construct a suitable conditional claim relating fundamentality to grounding. The fundamentality primitivist is welcome to try to rule out *every* conditional claim of this type, but this strategy does not seem especially promising.

For this reason I encourage the fundamentality primitivist to *accept* that there might well be some suitable conditional claim relating fundamentality to grounding. I encourage her to argue instead that the matching *explanatory* claim is false: to argue that it is fundamentality that

explains grounding, and not the other way around. In other words, the fundamentality primitivist might understand her claim that fundamentality cannot be fully characterized independently as the claim that fundamentality cannot be fully *explained* independently.

Regardless of whether the fundamentality primitivist heeds my suggestion, however, her view gains no support from the mere observation that the fundamental cannot be characterized independently. That has been the central moral of this paper.

REFERENCES

- Barnes, E. (2012). "Emergence and fundamentality." *Mind* 121 (484): 873-901.
- Berker, S. (forthcoming). "The unity of grounding." *Mind*.
- Cameron, R. (2016). "Do we need grounding?" *Inquiry* 59 (4): 382-397.
- Fine, K. (2001). "The question of realism." *Philosophers' Imprint* 1: 1-30.
- Fine, K. (2012). "Guide to ground." In *Metaphysical Grounding: Understanding the Structure of Reality*, eds. F. Correia and B. Schnieder (Cambridge: Cambridge University Press).
- Raven, M. (2016). "New work for a theory of ground." *Inquiry* (online first): 1-36.
- Rosen, G. (2010). "Metaphysical dependence: grounding and reduction." In *Modality: Metaphysics, Logic, and Epistemology*, eds. B. Hale and A. Hoffman (Oxford: Oxford University Press).
- Schaffer, J. (2009). "On what grounds what." In *Metametaphysics: New Essays on the Foundations of Ontology*, eds. D. Chalmers, D. Manley, and R. Wasserman (Oxford: Oxford University Press).
- Schaffer, J. (2016). "Grounding in the image of causation." *Philosophical Studies* 173 (1): 49-100.
- Wilson, J. (2014). "No work for a theory of grounding." *Inquiry* 57 (5-6): 535-579.
- Wilson, J. (2016a). "The unity and priority arguments for grounding." In *Scientific Composition and Metaphysical Ground*, eds. K. Aizawa and C. Gillett (London: Palgrave Macmillan).
- Wilson, J. (2016b). "Grounding-based formulations of physicalism." *Topoi* (online first): 1-18.