

Fundamentality and the grounds of self-identity

According to the *fact-grounding theory*, grounding obtains only between facts.¹ According to the *entity-grounding theory*, grounding can also obtain between entities of various other kinds: objects, properties, events, and so on.² It has recently been argued that we should prefer the entity-grounding view because the fact-grounding view requires a troubling disunity in our account of what grounds self-identity facts (§1).³ Here I rebut that argument: I show that the entity-grounding view is in the same boat, for it requires a similar disunity (§2). Where does that leave us, then – should we conclude that there is no unified account to be had? I believe not. My thought is that both of these disunities are merely apparent: once we distinguish between two senses of the term *fundamental*, any appearance of disunity is dispelled (§3).

1. The argument for the entity-grounding view

There is currently an orange mug on my table. It is self-identical. So is everything else: the color red, the number 4, the Big Bang. What grounds self-identity facts such as these?⁴ We can divide this into two questions. Let an *immediate ground* of a fact be a ground that is, so to speak, the very next link down the chain of grounding.⁵ This can be contrasted with an *ultimate* ground of a fact

¹ See for instance Rosen (2010); Fine (2012). Unless otherwise stated, I am always referring to *full* rather than *partial* grounding. I remain neutral about whether grounding is an operation (Fine 2012) or a relation (Schaffer 2009; Rosen 2010).

² See for instance Schaffer (2009); deRosset (2013).

³ See Wilhelm (2020).

⁴ My opponent assumes that there are facts about self-identity – (ibid, fn. 2). I will go along with that assumption.

⁵ To be precise, for x to immediately ground y is (i) for x to ground y , and (ii) for there to be no further fact z such that x grounds z and z grounds y .

– a ground that is at the bottom of the chain, as it were.⁶ (Though sometimes the immediate and ultimate grounds of a fact might be the same.) Now we can ask: what immediately grounds self-identity facts? And what ultimately grounds them?

Suppose that you are a fact-grounder. Then a natural starting point is this:

1. For all entities e , what immediately grounds $\langle e = e \rangle$ is $\langle e \text{ exists} \rangle$.

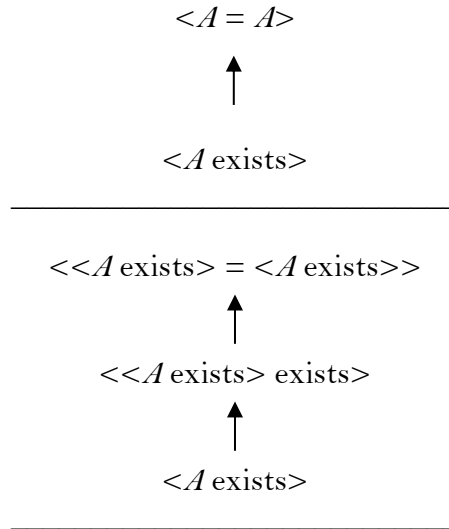
Consider for instance one of the fundamental particles, call it A , that makes up my orange mug. We will want to explain what grounds the fact that A is self-identical – letting angle brackets denote facts, we will want to explain what grounds $\langle A = A \rangle$. Claim 1 entails that $\langle A = A \rangle$ is immediately grounded in $\langle A \text{ exists} \rangle$. If we continue to follow the chain of grounding down, we will then discover the *ultimate* ground of $\langle A = A \rangle$, as well. Perhaps $\langle A \text{ exists} \rangle$ is fundamental, which would make this very same fact the ultimate ground of $\langle A = A \rangle$.

Now consider the fundamental fact that $\langle A \text{ exists} \rangle$. This fact, too, is self-identical. That is, $\langle \langle A \text{ exists} \rangle = \langle A \text{ exists} \rangle \rangle$. What are the immediate grounds, and the ultimate ones, of *this* self-identity fact? According to 1, the immediate ground is $\langle \langle A \text{ exists} \rangle \text{ exists} \rangle$. To discover the ultimate ground, we must identify what ultimately grounds $\langle \langle A \text{ exists} \rangle \text{ exists} \rangle$. A simple and appealing proposal is that for any fact $\langle p \rangle$, $\langle p \rangle$ grounds $\langle \langle p \rangle \text{ exists} \rangle$.⁷ If the fact-grounder accepts this proposal, she will say that the *ultimate* ground of $\langle \langle A \text{ exists} \rangle = \langle A \text{ exists} \rangle \rangle$ is $\langle A \text{ exists} \rangle$.

⁶ To be precise, for x to ultimately ground y is for x to ground y and for there to be no further fact z that grounds x .

⁷ Wilhelm (2020, p. 502) argues persuasively for this point.

Let us pull all of this together. Suppose we draw arrows to connect grounds (below) to what is grounded (above), and suppose we draw lines underneath ultimate grounds. Then the current version of the fact-grounding theory will look like this:



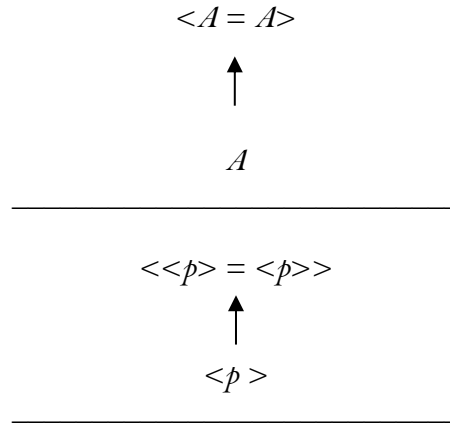
This raises a concern: this fact-grounding account seems to be troublingly disunified. The disunity does not show up at the level of *immediate* grounds. In both of the cases depicted above, what *immediately* grounds the fact that a particular fundamental entity is self-identical is the fact that that entity exists. Where the disunity shows up is at the level of *ultimate* grounds. $\langle A \text{ exists} \rangle$ is a fundamental fact, and what ultimately grounds its self-identity is itself. By contrast, A is a fundamental particle, but what ultimately grounds *its* self-identity is *not* itself. It is the fact that A exists. This is supposed to be worrisome. It is supposed to be *ad hoc* to say that different fundamental entities get their self-identities ultimately grounded in such different ways.⁸

The entity-grounding view is meant to do better. The idea is that it can accept:

2. For all entities e , what immediately grounds $\langle e = e \rangle$ is e .

⁸ Ibid, pp. 501-503. Note well that the concern is about the self-identity of *fundamental* entities.

Return to our fundamental particle A . What grounds $\langle A = A \rangle$? According to 2, the answer is just A . But A is, we have assumed, fundamental, so the *ultimate* ground of $\langle A = A \rangle$ is precisely the same – just A . Now consider any fundamental fact $\langle p \rangle$. What grounds $\langle \langle p \rangle = \langle p \rangle \rangle$? Claim 2 tells us that its immediate ground is $\langle p \rangle$. But, again, we have assumed that $\langle p \rangle$ is fundamental. Thus the *ultimate* ground of $\langle \langle p \rangle = \langle p \rangle \rangle$ is also $\langle p \rangle$. In a picture:



In sum, the entity-grounder can say that for *any* fundamental entity e , $\langle e = e \rangle$ has the same ultimate ground, namely e itself. The fact-grounder offers an account that is disunified by comparison. That is a reason to prefer the entity-grounding theory.

This is an ingenious argument. Is it sound?

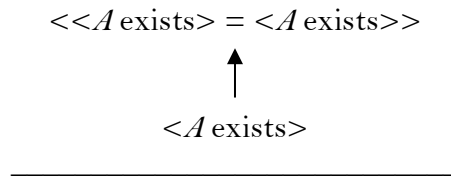
2. The entity-grounding theory reconsidered

Here is an interesting observation: for any actual entity e , there is a corresponding fact $\langle e \text{ exists} \rangle$. The observation iterates. Take some actually existing entity A , and you will find the fact $\langle A \text{ exists} \rangle$, the fact $\langle \langle A \text{ exists} \rangle \text{ exists} \rangle$, and so on *ad infinitum*. What is the relationship among all of these entities? If you are an entity-grounder, then the simplest and most natural view available to you is:

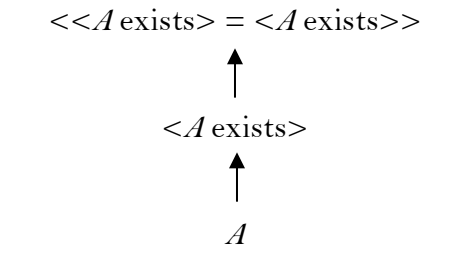
3. Any fact of the form $\langle e \text{ exists} \rangle$ is grounded in e .⁹

This turns out to generate a problem for the theory just developed – the entity-grounder’s theory of what grounds self-identity facts. It is easy to miss the problem, because our earlier discussion of the entity-grounding theory was purely schematic when it came to fundamental facts. We considered a representative fundamental fact $\langle p \rangle$, but we did not think about what $\langle p \rangle$ might be, exactly. Let us be more concrete.

Suppose that a particular particle, A , is fundamental. Then presumably there are some fundamental facts about A – say, $\langle A \text{ exists} \rangle$. Since $\langle A \text{ exists} \rangle$ is fundamental, the entity-grounder is supposed to say that its self-identity has the same immediate and ultimate ground, namely itself:



But this picture is inconsistent with 3. The picture says that $\langle A \text{ exists} \rangle$ is ungrounded. But 3 tells us that $\langle A \text{ exists} \rangle$ is grounded in A . I conclude that the entity-grounder should change her picture. The correct picture is this:



⁹ This is perfectly parallel to an argument offered by Wilhelm himself (ibid, p. 502).

And now the entity-grounder is committed to a disunity of the very same kind as the fact-grounder. She says that *some* fundamentalia, such as particle A , have their self-identities immediately and ultimately grounded in themselves. *Other* fundamentalia, such as $\langle A \text{ exists} \rangle$, have their self-identities immediately grounded in themselves but ultimately grounded in something else. That is, apparently, a strange rupture in her account of the grounds of self-identity facts about fundamentalia.

There is an obvious reply for the entity-grounder. She can say that facts like $\langle A \text{ exists} \rangle$ are never fundamental: $\langle A \text{ exists} \rangle$ is always grounded in A . With this reply in hand, the entity-grounder can keep her grip on the claim that for *any* fundamental entity e , $\langle e = e \rangle$ has the same ultimate ground, namely e itself. The unity of her theory is thereby restored. However, turnabout is fair play! The fact-grounder, in response to the charge of disunification, can say that particles like A are never fundamental: what are fundamental are only certain facts about them, such as $\langle A \text{ exists} \rangle$. This move, too, restores unity, for it lets the fact-grounder say that for any fundamental entity e (which will always be a fact), $\langle e = e \rangle$ has the same ultimate ground, namely e itself. Thus, even if the entity-grounder offers this response, she loses any advantage over the fact-grounder.

As it happens, I think that neither the entity-grounder nor the fact-grounder should restore unity in *quite* this way (although I will soon endorse a closely related proposal about how to restore unity.) As for the entity-grounder, I think that she should find it plausible that a fundamental fact *just is* a fact whose constituents are all fundamentalia. So consider $\langle A \text{ exists} \rangle$. By stipulation, A is a fundamental entity. What about existence? I find it immediately plausible that this, too, is fundamental. We might buttress this conclusion by suggesting that existence is perfectly natural, and that what is perfectly natural is fundamental.¹⁰ By this reasoning $\langle A$

¹⁰ See Sider (2011, pp. 170-171).

exists> would be a fundamental fact, blocking the entity-grounder's unifying move.¹¹ I would make a similar case to the fact-grounder: she should find it plausible that for a non-fact to be fundamental *just is* for it to be a constituent of a fundamental fact.¹² We have assumed for the sake of argument that <*A* exists> is a fundamental fact, so *A* would then be fundamental by the fact-grounder's lights.

The moral is that neither the entity-grounding view nor the fact-grounding view has any advantage here: when it comes to the ultimate grounds of self-identity facts involving fundamentalia, both theorists give *equally* disunified accounts. But this leaves us with a residual puzzle: why is there any disunity at all? Why can't we develop a satisfying and fully unified account?

3. A diagnosis

I think we can. In fact, I think we already have. We have just failed to realize it.

To see what I mean by this, consider the plausible principle that any distinct, contingently existing fundamental entities are freely recombinable – it is metaphysically possible to have either entity without the other.¹³ Now, *A* and <*A* exists> are certainly distinct: one is a particle, the other a fact. Both also exist contingently. But surely *A* is not freely recombinable with <*A* exists>. Any world that contains *A* will also contain the fact that *A* exists, and vice-versa. This is an argument that *A* and <*A* exists> cannot both be fundamental – *at least not in the same sense of that term.*

¹¹ I am grateful to [name removed] for suggesting this argument to me.

¹² See Rosen (2010, p. 112).

¹³ Wilhelm endorses this principle when it is restricted to fundamental (and presumably contingently obtaining) *facts* (ibid, fn. 3). I see no reason to make the restriction.

At the same time, it is plausible that A and $\langle A \text{ exists} \rangle$ can both be fundamental in *some* sense of the term *fundamental*. For there might be no non-fact that is more fundamental than A : A might be fundamental *among the non-facts*. At the same time, there might be no fact that is more fundamental than $\langle A \text{ exists} \rangle$: $\langle A \text{ exists} \rangle$ might be fundamental *among the facts*. All of this can be granted even if we think that only one of these entities – $\langle A \text{ exists} \rangle$ for the fact-grounder, A for the entity-grounder – is fundamental *in the strictest sense of that term*.

Thus I think that both parties to the debate should distinguish between a primary and a secondary sense of the term *fundamental*. The entity-grounder should say that A is fundamental in the primary sense; $\langle A \text{ exists} \rangle$ is not. $\langle A \text{ exists} \rangle$ is fundamental only in a secondary sense, in the sense of being *as fundamental as a fact can be*. Perhaps, to return to my earlier suggestion, what it is for a fact to be fundamental in this secondary sense is for it to be constituted purely by entities that are fundamental in the primary sense. Similarly, the fact-grounder should say that $\langle A \text{ exists} \rangle$ is fundamental in the primary sense; A is not. A is fundamental only in a secondary sense: it is as fundamental *as a non-fact can be*. Perhaps to be fundamental in this secondary sense is simply to be a constituent of a fact that is fundamental in the primary sense.

Now the appearance of disjunctiveness vanishes. The entity-grounder *does* offer a fully unified account of what ultimately grounds self-identity facts about *primary* fundamentalia: for any primarily fundamental entity e , $\langle e = e \rangle$ is ultimately grounded in e . The fact-grounder has a fully unified account, as well. She says that for any primarily fundamental entity e – which will always be a fact – $\langle e = e \rangle$ is ultimately grounded in e itself. In fact, stated at this level of abstraction, the entity-grounder's account is precisely the same as the fact-grounder's account.

4. Conclusion

Our framing question has been: what ultimately grounds the self-identity of fundamentalia? It is worth meeting this question with a simple, unified answer. This can be done by entity-grounders and fact-grounders alike, *as long as* they recognize a distinction between a primary sort of fundamentality and a secondary one.

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