

Grounding and Truthmaking

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1. Introduction

My dog Gomer is friendly. The truth of the claim that Gomer is friendly doesn't "float free" from how the world is. The claim is somehow made true. There are many questions to ask about this phenomenon, what has come to be called *truthmaking*. For example, does every truth have a truthmaker? What is the connection between truthmakers and the nature of truth? How are truthmaking and ontological commitment related? Let's focus, however, on another question that is arguably conceptually prior to others: just what is truthmaking?

The friendliness of Gomer is also highly derivative aspect of the world. It's somehow determined and explained by more fundamental phenomena. I assume that talk of determination in this context points to *grounding*, which is the topic of this handbook. My interest in this entry is how appealing to grounding might help us answer the what is truthmaking question.

Before getting into the details I should note some of the assumptions I'm going to make about grounding and truthmaking. While each of these assumptions has been challenged in the literature, they strike me as reasonable starting points. As for regimentation, I assume that grounding and truthmaking claims are to be formulated with the predicates 'grounds' and 'makes true' rather than sentential connectives such as 'because'. For more on the predicate vs. connective approaches to grounding, see Raven (this volume); for a discussion of these approaches to truthmaking, see Melia (2005). As for the ontological status of grounding and truthmaking, I assume that they're relations "out there" in the domain of our ontology rather being primitive pieces of ideology.¹ As for their relata, I assume that something is a ground, a grounded entity, or a truthmaker only if it's a fact (a worldly entity), and something is made true only if it's a proposition (a representational entity). Collections of one or

¹ Kment captures the idea behind ideology-driven views nicely: "It shouldn't be assumed that all ingredients of reality must be individuals, properties, or relations—or entities of any kind, for that matter. For example, it's possible that in order to describe reality completely, we need to use some primitive piece of ideology that relates to some aspect of reality that doesn't belong to one of these three ontological categories, and which may not be an entity at all" (2014, 150).

more facts ground other facts, and collections of one or more facts make true propositions.

Given these assumptions, here are two simple examples of what grounding and truthmaking claims look like: the fact that ball is burgundy grounds the fact that the ball is red, and the fact that the ball is burgundy makes true the proposition that the ball is red. Much of what I say in this entry can be recast with different starting assumptions about grounding and truthmaking, but I leave this as an exercise for the reader.

2. A simple proposal

Here is a common informal characterization of truthmaking: a fact makes a proposition true when the latter is true *in virtue of* the former. Different accounts of the truthmaking relation interpret the in-virtue-of talk here differently. Some, such as Armstrong (2004: Ch. 2), think that it points to metaphysical necessitation. Let Δ be a collection of one or more facts and $\langle p \rangle$ the proposition that p . According to what I'll call the necessity account of truthmaking, Δ makes true $\langle p \rangle$ just in case Δ obtains and it's metaphysically necessary that if Δ obtains then $\langle p \rangle$ is true.

There is, however, a straightforward problem for the this account concerning necessary truths. Suppose that it's metaphysically necessary that $1+1=2$. In this case, the proposition that $1+1=2$ is true no matter what. So it's true if, say, Socrates is a philosopher. Hence, it's metaphysically necessary that if Socrates is a philosopher then $1+1=2$. In this case the necessity account says that the fact that Socrates is a philosopher is a truthmaker for the proposition that $1+1=2$. But it seems that there is no truthmaker for $1+1=2$ that involves Socrates. The facts that anchor the truth of this proposition to the world, whatever they turn out to be, aren't about ancient philosophers.

Some, such as Lowe (2006: Ch. 12), claim that the in-virtue-of talk in the informal characterization of truthmaking instead points to a sort of dependence involving essences. According to what I'll call the essential dependence account of truthmaking, Δ makes true $\langle p \rangle$ just in case Δ obtains and it lies in the nature of $\langle p \rangle$ that if Δ obtains then $\langle p \rangle$ is true. This account doesn't face the same problem with necessary truths. While it's metaphysically necessary that if Socrates is a philosopher then $1+1=2$, it doesn't lie in the nature of the proposition that $1+1=2$ that if Socrates is a philosopher then $1+1=2$. This is because the essence of the proposition doesn't involve Socrates in particular. You might know everything there is to know about the nature of the proposition that $1+1=2$ without knowing anything about Socrates.

A problem for the essential dependence account, however, concerns the sorts of essence claims that it commits us to. Consider the proposition that someone is a philosopher. The fact that Socrates is a philosopher is presumably a truthmaker for this proposition. So a consequence of the essential dependence account is that it lies in the nature of the proposition that someone is a philosopher that if Socrates is a philosopher then someone is a philosopher. But this seems wrong. The essence of the proposition that someone is a philosopher, like essence of the proposition that $1+1=2$, doesn't involve Socrates in particular. You might know everything there is to know about the nature of this proposition without knowing anything about Socrates.

Given these and others problems with the necessitation and essential dependence accounts, it's natural to consider whether the in-virtue-of talk in the informal characterization points instead to grounding. With this in mind, consider the following simple grounding-theoretic account of truthmaking: Δ makes true $\langle p \rangle$ just in case Δ grounds the fact that $\langle p \rangle$ is true. Correia (2014), Fischer (2015), Jago (2018, Ch. 6), Rodríguez-Pereyra (2005; 2015), Rosen (2010), Schnieder (2006), and Tahko (2013) endorse similar proposals.² This proposal doesn't seem to have a problem with necessary truths. The fact that Socrates is a philosopher doesn't ground the fact that the proposition that $1+1=2$ is true. Grounds contribute to explaining what they ground, and clearly the former doesn't contribute to explaining the latter. And it doesn't commit us to implausible essence claims, at least in the absence of further argument. (See Zylstra (this volume) for discussion of potential connections between grounding and essence.) Is the simple grounding account of truthmaking otherwise plausible? In the next section I consider a potential problem for the account that concerns the theoretical role of truthmaking.

3. A problem

While notions akin to truthmaking arguably figure in everyday thinking, the technical notion of truthmaking belongs in our philosophical toolbox only if it's theoretically useful. (The same, of course, can be said of grounding.) So, provided that truthmaking does indeed belong in our toolbox, if a proposed account of the relation undermines the idea that truthmaking is theoretically useful, that's a clear strike against the account. There is a potential problem along these lines for the simple grounding account of truthmaking. You might think that if this proposal is correct then truthmaking isn't up to playing one of the central theoretical roles assigned to it, that of helping us evaluate the plausibility of metaphysical theses. Sider glosses this

² Among those who think that there is a definitional connection between grounding and truthmaking, it's generally agreed that the former is definitionally prior to the latter. Cameron (2010), however, is apparently an exception.

role as that of catching “cheaters,” where a cheater is someone who “...is unwilling to accept an ontology robust enough to bear the weight of the truths he feels free to invoke” (2001: 41).

How should we understand the evaluative role that truthmaking is supposed to play? Here’s a straightforward take on the matter: supposing that the true propositions concerning some subject matter have truthmakers, if a metaphysical thesis about this subject matter leaves us with no plausible story to tell about what makes these propositions true, this counts against the thesis. Armstrong (2004: Ch. 1) claims that truthmaking considerations undermine behaviorism in particular, so let’s work with this example. True propositions about behavioral dispositions presumably have truthmakers. Returning to Gomer, the functionalist about the mental claims that the property of being friendly is a functional property, the property of having some property or other that plays a specific causal role within Gomer’s cognitive economy. She can point to facts concerning the physical properties that actually play this role as a truthmaker for the proposition that Gomer is friendly. In rejecting the existence of internal mental states, however, you might think that the behaviorist is left with no plausible story to tell about what makes this proposition true. With respect to Ryle who defended a view similar to behaviorism, Armstrong writes, “What is there in the world in virtue of which these [dispositional] truths are true? Ryle had no answer” (2004: 3). If functionalism but not behaviorism has recourse to truthmakers for true propositions concerning behavioral dispositions, then the former is preferable to the latter, all other things being equal.³

Let’s return to the potential problem for the simple grounding account of truthmaking. It seems that various facts such as the fact that Gomer is friendly ground the fact that the proposition that Gomer is friendly is true. Given the simple grounding account, these facts are truthmakers for the proposition, and the behaviorist is free to appeal to them. Hence, given our take on the evaluative role of truthmaking, truthmaking doesn’t help us adjudicate between behaviorism and functionalism after all. And you might think that the same applies to other debates that truthmaking is supposed to help us with, such as the debate between the idealist about the physical and physicalist about the mental, and the debate between the presentist and eternalist about the temporal extent of reality. The thought is that, no matter how implausible a metaphysical thesis about some subject matter might be,

³ Armstrong himself endorses a version of the identity theory rather than functionalism as I’ve characterized it above, identifying mental properties with what the functionalist claims are their physical realizers—see Armstrong (1968: Ch. 6).

the advocate of that thesis won't be without truthmakers for the true propositions concerning that subject matter. Trivial truthmakers abound.

4. Appealing to fundamentality

How to proceed? One option is to revise the simple grounding account of truthmaking. The idea is to add further conditions that rule out the sort of trivial truthmaking described above. One such approach is to claim that all truthmakers are *fundamental*, where a fact is fundamental in the relevant sense just in case it isn't grounded. In this case, we can say that Δ makes true $\langle p \rangle$ just in case the facts among Δ are fundamental and Δ grounds the fact that $\langle p \rangle$ is true. Given this proposal, while the fact that Gomer is friendly grounds the fact that the proposition that Gomer is friendly is true, the fact that Gomer is friendly isn't a truthmaker for the proposition that Gomer is friendly, as this fact isn't fundamental. Both Schaffer (2010) and Cameron (forthcoming) propose grounding-theoretic accounts of truthmaking that appeal to fundamentality. Schaffer in particular claims that all truthmakers are fundamental—truthmaking is “the relation of grounding between substance and truth”, where substances are fundamental entities (310). And Schaffer's central rationale for this claim is that it resolves the problem of trivial truthmakers outlined above—he claims that “the restriction to fundamental entities is needed if ‘cheaters’ [such as the behaviorist] are to be caught” (319).

Given our characterization of the evaluative role that truthmaking is supposed to play in metaphysics, it's unclear, however, that the fundamentality account of truthmaking does any better than the simple grounding account in showing how truthmaking might play this role. Returning to the debate between the behaviorist and functionalist, the fundamentality account likewise undermines the idea that truthmaking is potentially useful here. The facts that the functionalist cites as truthmakers for the proposition that Gomer is friendly concern his cognitive economy, which consists of ordinary mental states like his belief that he will get to play fetch soon. The functionalist (and everyone else) denies that such facts are fundamental.

Moreover, if all truthmakers are fundamental, then it seems that we need to have a good sense of what the fundamental facts are like before truthmaking considerations can provide any guidance in adjudicating between competing theories. Consider, for example, the debate between the idealist about the physical and physicalist about the mental. Suppose we have a good grip on what the fundamental facts are like—let's say that we have reason to think that none are mental in nature. The problem is that in this case we already know which thesis is the more plausible (physicalism), so truthmaking considerations are otiose in this context. Merricks (2007: 35) makes a

similar observation about accounts of truthmaking formulated so as to rule out truthmakers that appeal to “suspicious” properties.

Aside from not helping show how truthmaking has an important evaluative role to play in metaphysics, there are other concerns for the fundamentality account. One is that it undermines potential theoretical applications of truthmaking outside the domain of metaphysics. Consider semantic theories cast in terms of truthmaking (Fine, this volume). The relevant truthmakers in this case are typically non-fundamental in nature—the meaning of “There is a chair over there”, for example, is thought to consist of truthmakers involving ordinary macroscopic objects. So the fundamentality account in effect says that truthmaker semantics is wrong even before we consider any of the details.

Another potential problem for the fundamentality account concerns its underlying assumptions. For any fact to the effect that a particular proposition is true, let’s say that it’s a *truthmade* fact just in case the proposition it concerns has a truthmaker. A consequence of the fundamentality account is that all truthmade facts have fundamental grounds. Why think that all such facts are grounded in this way?

Let *metaphysical foundationalism* be the view that all grounded facts are grounded by fundamental facts. (See Bliss (this volume) and Dixon (this volume) for more on metaphysical foundationalism.) It seems that in the actual world every semantic fact is grounded—there are no fundamental semantic facts. If this is right, then every truthmade fact is grounded. Provided that every truthmade fact is grounded, you might think that every truthmade fact has a fundamental ground because you think that metaphysical foundationalism is true. Indeed, it’s unclear how else we might go about motivating this claim.

So what? Well, the fundamentality account aims to specify the nature of truthmaking so it carries metaphysical necessity—the proposal is if true then true in all metaphysically possible worlds. So it looks like we have reason to believe that every truthmade fact has a fundamental ground only if both metaphysical foundationalism and the claim that every semantic fact is grounded are if true then true in all metaphysically possible worlds. It’s not absolutely clear, however, why we should think that worlds in which fundamental semantic facts obtain are metaphysically impossible. Compare: while the physicalist claims that no fundamental mental facts actually obtain, she typically grants that worlds in which such facts obtain (e.g. worlds in which our minds are roughly as Descartes conceives of them) are metaphysically possible. And Cameron (2008) argues that we at most have reason to believe that metaphysical foundationalism is contingently true—while the thesis is actually true, there are metaphysically possible worlds in which it’s false. (See Fisher

(2015), Jago (2018, Ch. 5), Merricks (2008), and Mulligan (2007) for further critical discussion of the project of tying truthmaking to fundamentality.)

5. Resolving the problem

So far we've considered two grounding-theoretic accounts of truthmaking. And we've seen that truthmaking on neither proposal plays the evaluative role that it's supposed to, given our take on what this role comes to. What are our options for addressing this issue? One option is to revise the simple grounding account of truthmaking in some way we've yet to consider. For example, Griffith (2014) and Saenz (forthcoming) reject the simple grounding account but defend grounding-theoretic accounts of truthmaking that don't appeal to fundamentality. Griffith argues that truthmaking is to be defined in terms of a species of grounding rather than grounding *per se*, and Saenz argues that the simple grounding account needs to be supplemented with considerations involving the idea that true propositions correspond to their truthmakers. (Neither of their discussions, however, directly engages with the problem concerning the evaluative role of truthmaking that has guided our discussion.)

Another option is to reject the idea that truthmaking is to be defined in terms of grounding in the first place. If you're sympathetic with truthmaking but skeptical of grounding, this option is for you. Heil (forthcoming), for example, articulates a pro-truthmaking, anti-grounding view. (And see Koslicki (this volume) and deRosset (this volume) for discussion of skepticism about grounding.) Note, however, that the proponent of grounding might also reject grounding-theoretic accounts of truthmaking. Audi (2012), for example, is a proponent of grounding but proposes a grounding-free take on truthmaking that appeals to the idea that true propositions correspond to obtaining facts.

Still another option is accept the simple grounding account of truthmaking (or the fundamentality account, provided that its other potential problems can be addressed satisfactorily) but reject the idea that truthmaking has an important evaluative role to play in metaphysics. For example, you might argue that grounding *tout court* is important to metaphysics, and truthmaking as a special case of grounding is useful only outside the domain of metaphysics. While Fine doesn't think that truthmaking is a special case of grounding, he endorses a similar view. Fine (2012) sees grounding and truthmaking theorists as disagreeing about which relation should take pride of place in metaphysics, as they offer competing takes on the general phenomenon of what accounts for what. He sides with the grounding theorist, joking that "...truthmaking is fine as a guide to metaphysics as long as we junk the relata on the left, the things whose existence *makes* true, the relata on the right, the things *made*

true, and the relation of *making* true (2017: 556). But at the same time he argues that truthmaking has important theoretical applications outside the domain of metaphysics (Fine: this volume).

A more radical option is to reject the idea that there is truthmaking altogether. Tallant (2018) defends a striking version of this approach. He argues that truthmaking is a grounding-theoretic notion, and, as there is no grounding there is no truthmaking!⁴

Let's explore a different approach. Assay (2017) argues that grounding and truthmaking theorists are best interpreted as having different, compatible theoretical objectives within the domain of metaphysics. So perhaps we've simply mischaracterized the evaluative role that truthmaking plays in metaphysics. What might a different take on this role look like?

To get us started, here's a simple proposal: supposing that the true propositions concerning some subject matter have *grounded* truthmakers, if a metaphysical thesis about this subject matter leaves us with no plausible story to tell about what these truthmakers are like, this counts against the thesis. Returning to the debate between the behaviorist and the functionalist, true propositions about behavioral dispositions presumably have grounded truthmakers. So it's not the case that any truthmaker for the proposition that Gomer is friendly is fundamental. Assuming that true propositions are about their truthmakers, the idea is that at least part of what this proposition is about doesn't concern how the world is fundamentally speaking. Now, the behaviorist and functionalist can agree that the fact that Gomer is friendly is a truthmaker for the proposition that Gomer is friendly. We've seen that the functionalist claims that there is a further truthmaker for this proposition, one concerning the physical properties that actually play the relevant causal role definitive of being friendly. And the functionalist reasonably claims that these facts ground the fact that Gomer is friendly. So the functionalist has a plausible story to tell according to which there are grounded truthmakers for the proposition that Gomer is friendly. The behaviorist, by contrast, doesn't have such a story to tell. With respect to the fact that Gomer is friendly, apparently part of her view is that this fact *doesn't* have grounds, as behavioral dispositions are brute.⁵

⁴ Surprisingly, Tallant elsewhere conceives of metaphysics as "...the quest for truthmakers" (2017: 3).

⁵ Perhaps the evaluative role of truthmaking can also be reconceived in terms of minimal truthmaking—see O'Conaill & Tahko (2015) for discussion.

There is, however, a potentially more interesting way we might revise our initial take on the evaluative role that truthmaking plays in metaphysics. This will require some stage setting, so bear with me. How do we evaluate grounding claims? One way to do so is to specify the modal consequences of grounding and then ask whether the facts involved in a given grounding claim are modally connected in right way. Let physicalism about the mental be the thesis that the mental facts are grounded by non-mental physical facts (perhaps together with facts that are neither mental nor physical such as indexical and totality facts). (See Brighouse (this volume) for more on the connection between grounding and physicalism.) Many claim that grounding carries necessity in the following sense—if Δ (fully) grounds some fact, then it's metaphysically necessary that if Δ obtains then the grounded fact obtains. (See Skiles (this volume) and Kovacs (this volume) for more on the connection between grounding and necessity.) Some argue that the non-mental physical facts, however supplemented with additional non-mental facts, don't metaphysically necessitate the mental facts. (See Chalmers (2009) for one argument along these lines.) If they're right then physicalism is false, provided that grounding carries metaphysical necessity.

There is another way to evaluate grounding claims. Many implausible claims to the effect that Δ grounds A seem implausible in part because we have no sense of how Δ is supposed to ground A. This is the case, for example, with respect to the claim that the fact that Gomer is friendly grounds the fact that Socrates is a philosopher. A comparison to causal mechanisms will be helpful here. Suppose we're dealing with a subject matter like biochemistry in which causal relations have underlying causal mechanisms, and suppose I make a claim about what causes a neurochemical event such as the release of neurotransmitters. If we have no idea what sort of underlying causal mechanism might be operative in this case, this counts against my causal claim.

The physicalist claims that mental facts like Gomer is friendly are grounded by physical facts. It seems that we should endorse such claims only if we have a general sense of how the physical facts might ground the mental facts. And note that we've already seen in broad outline one way things might go in this case. Let's say that property P *realizes* property Q on an occasion just in case P plays thus-and-so causal role on that occasion and Q is a functional property, one defined in terms of this very role (Baysan, 2015). The functionalist claims that, when neurochemical facts ground mental facts, property constituents of the former realize property constituents of the latter. Returning to Gomer, the idea is that, whatever

neurochemical facts ground the fact that Gomer is friendly, some fact among the former has as a constituent some physical property that realizes the property of being friendly.

Some, of course, object to this story about how physical facts ground the mental facts, arguing that mental properties aren't functional properties. Indeed, it seems that the point of departure for the so-called explanatory gap challenge to physicalism is our general impression that there just is no plausible story to tell about how physical facts might ground the mental facts. But, whether or not functionalism and physicalism more generally speaking are true, the important point for our purposes is this: there are cases in which considerations about how Δ grounds A are relevant to whether we should think that Δ grounds A in the first place (Schaffer, 2016b; Trogdon, 2018).

What does this have to do with truthmaking and its evaluative role in metaphysics? The idea is that various relations in addition to realization make similar contributions to the evaluation of grounding claims, and truthmaking is among these relations. The overall suggestion is that pointing to truthmaking relations can help us assess the plausibility of grounding claims in a way that is analogous to how pointing to causal mechanisms can help us assess the plausibility of causal claims.

There is a potential concern, however, with the package of views consisting of the simple grounding account of truthmaking and this broadly mechanistic proposal about its evaluative role. Suppose you ask, "How does Δ ground A?" and I respond by pointing out that Δ grounds A. It's clear that my simple response doesn't really answer your question. Generally speaking, establishing *that* Δ grounds A doesn't show *how* Δ grounds A. According to the simple grounding account of truthmaking, truthmaking is a special case of grounding. So you might think that a more complicated response to your question according to which truthmaking is part of what yokes Δ and A together isn't much of an improvement on my simple response. By contrast, you might think that relations like realization are potentially relevant to understanding how grounding takes place precisely because they aren't merely special cases of grounding.

I concede that there are cases in which Δ grounds A and yet underlying truthmaking relations don't speak to how Δ grounds A. Suppose you ask, "How does the fact that the ball is burgundy ground the fact that the proposition that the ball is burgundy is true?" And suppose I respond by pointing out that the fact that ball is burgundy makes true the proposition that the ball is burgundy. Given the simple grounding account of truthmaking, my response doesn't add much of interest, as I've in effect just reiterated the initial grounding claim.

There are, however, cases in which Δ grounds A and underlying truthmaking relations do speak to how Δ grounds A. Let's consider a simple case. Let $\langle p \rangle$ be the proposition that the singleton of thus-and-so statue (the set whose sole member is the statue) exists. Consider the following grounding claim: the fact that thus-and-so clay exists (together with other facts) grounds the fact that $\langle p \rangle$ is true. Is this claim plausible? Well, it seems that we should endorse it only if we have a general sense of how the first fact is supposed to ground the second. There is potentially more than one way to approach the matter of how the connection runs in this case. One approach that I won't consider here appeals to substantive grounding principles based on structural equation models—see Schaffer (2016a; 2016b; 2017) for discussion. The approach I would like to highlight focuses on various underlying relations that yoke these facts together: there is a constituent of the fact that thus-and-so clay exists (the clay) that stands in the material constitution relation to a constituent of the fact thus-and-so statue exists (the statue); the statue stands in the set formation relation to a constituent of the fact that the singleton of the statue exists (the singleton of the statue); and the fact that this set exists itself stands in the truthmaking relation to a constituent of the fact that $\langle p \rangle$ is true ($\langle p \rangle$). Provided that the relations of material constitution, set formation, and truthmaking are indeed instantiated in this way on this occasion, it seems that we have a fairly good grip on how the fact that thus-and-so clay exists grounds the fact that $\langle p \rangle$ is true. (See Wasserman (2015) for more on material constitution; see Fine (2010) and Lewis (1991: Ch. 1) for more on set formation.)

6. Conclusion

We began by considering a simple proposal about the connection between grounding and truthmaking—the simple grounding account—according to which truthmaking is a special case of grounding. Then we considered a potential problem for this proposal concerning the evaluative role of truthmaking. We considered one way of revising the proposal—the fundamentality account of truthmaking—in an effort to resolve the problem, but we saw that this proposal has a similar problem as well as various other problems. Then we considered other options for responding to the problem. We focused on one option in particular, that of revising our conception of the evaluative role of truthmaking. We ended up with what I take to be a fairly attractive package of views—the simple grounding account of truthmaking and a broadly mechanistic conception of the evaluative role of truthmaking in metaphysics.

I'll close by noting two potential directions of future research concerning the connection between grounding and truthmaking (provided that what I've said in this entry is on the right track). The first concerns the various relations we can appeal to in specifying how some facts ground another fact. I suggested above that

truthmaking is such a relation. But what if anything unifies these relations beyond the fact that they potentially contribute to our understanding of how grounding takes place? Addressing this question may shed light on what truthmaking has in common with other familiar relations from metaphysics as well as what's distinctive about it. A related question: in addition to the ones we've mentioned, what further relations speak to how the connection runs between grounds and what they ground?

The second issue concerns the evaluation of truthmaking claims rather than grounding claims more generally speaking. Provided that truthmaking is a special case of grounding, what sorts of considerations are relevant to the evaluation of truthmaking claims themselves? If it makes sense to speak of how some fact makes a proposition true, then perhaps we can reiterate the strategy discussed above for evaluating grounding claims. In this case, we would need to look for underlying relations that yoke truthmakers together with either the propositions they make true or facts to the effect that those propositions are true.

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