

METAPHYSICALLY OPAQUE GROUNDING

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[DRAFT – DO NOT CITE OR QUOTE WITHOUT THE AUTHOR’S PERMISSION]

1. Introduction

Recent metaphysics has seen much interest in *grounding* – a relation of non-causal determination whereby a fact obtains *in virtue of* the obtaining of some other fact or facts. One recurring and largely unquestioned assumption in the discussion is that grounding is, in some sense, a particularly intimate metaphysical relation. In this vein, for example, Kit Fine calls grounding “the ultimate form of explanation” (2001, 16). Another common, and arguably related, idea is that grounding has some necessary connection with the especially *core* features of things: their essences or natures (Audi (2012), section III). In this article, I will be concerned with these ideas about grounding. I believe that certain interesting and widespread philosophical views are committed to there being cases of *metaphysically opaque grounding*: grounding that constitutes a less than maximally intimate relation, among other things because it does *not* go together with any essence or nature connections. Thus, for example, a moral non-naturalist might want to hold that a particular action is morally right *in virtue of* instantiating certain natural properties, while denying that the *essence or nature* of moral rightness involves anything natural. I believe that the notion of metaphysically opaque grounding has been neglected in the literature, and that it has important and interesting consequences for how to think about grounding. I also believe that a view of grounding which allows for metaphysically opaque cases is defensible.

My aims for this article are thus to introduce, spell out, and motivate interest in the general notion of metaphysically opaque grounding (section 2), demonstrate how opaque grounding has important consequences for our understanding of grounding and nearby phenomena (section 3), and to defend the possibility of opaque grounding from objections (section 4).

2. Metaphysically Opaque Grounding

In this section, I want to introduce the notion of metaphysically opaque grounding. I will start by defining it, before moving on to motivate why the notion is interesting.

I'll define opaque grounding with the help of three conditions. The first one is straightforward:

GROUNDING: [P] (at least partially) grounds [Q].

Every case of opaque grounding is a case of grounding. I take grounding to be the relation that holds between facts when one fact obtains *in virtue of* the obtaining of the other(s). (I take a logically atomic fact to be the instantiation of a property by an entity, or the holding of a relation between entities.¹ I follow the convention of forming names for facts by using square brackets: thus, “[*x* is *F*]” denotes the fact of *x*'s being *F*.)

Two further, and less self-explanatory, conditions will be needed to define opaque grounding:

IRREDUCIBILITY: [P] is not part of the metaphysical analysis of [Q].

ESSENTIAL ISOLATION: The essence of [Q] does not involve [P].

The ideology involved here takes some unpacking. When employing essentialist ideology, I intend it to be taken in the way rehabilitated by Kit Fine, where a condition φ 's being essential to x goes beyond φ 's merely being metaphysically necessary for x to exist.² On that usage, φ 's being essential to x rather amounts to φ 's being part of *what it is to be* x , φ 's being part of the *identity* of x , or φ 's being part of the *real definition* of x .

As for metaphysical analysis, I take it to apply in the first instance to properties and relations and by extension to facts. The metaphysical analysis of a property or relation F states which properties and/or relations F itself *consists in*. Suppose e.g. that being a vixen consists in being a fox and being female. The latter two properties then jointly make up the full metaphysical analysis of the property of being a vixen – being a vixen *just is* being a female fox. This then extends to facts in

¹ The assumption of grounding as a relation between facts is somewhat inessential here. I believe much of what follows applies, *mutatis mutandis*, to a framework where grounding is taken as a relation between true propositions – as per Bolzano ([1837] 2014) – or to one where grounding is treated by means of a sentential operator – see e.g. Fine (2012).

² See Fine (1994).

the obvious way: the facts [Red is female] and [Red is a fox] jointly make up the full metaphysical analysis of the fact [Red is a vixen].³

Metaphysical analysis, like essence, goes beyond mere metaphysical modality. I take it that F 's fully consisting in G and H amounts to something more than that being G and H is necessary and sufficient for being F . I suggest we view metaphysical analysis as a structural or constructional notion – when G and H make up the full metaphysical analysis of property F , F is built out of G and H by some appropriate property-forming operation, and contains them as constituents (and *mutatis mutandis* for relations and facts).⁴

Equipped with these pieces of ideology, I can now define the notion of metaphysically opaque grounding. Roughly speaking, $[P]$ opaquely grounds $[Q]$ just in case $[P]$ and $[Q]$ jointly satisfy GROUNDING, IRREDUCIBILITY, and ESSENTIAL ISOLATION. But we want to be able to apply the notion of opaque grounding in cases where several facts jointly ground another fact. We thus get the following:

$[P_1], \dots, [P_N]$ (fully) opaquely ground $[Q]$ =df.

(i) $[P_1], \dots, [P_N]$ fully ground $[Q]$; and

(ii) there is no fact f such that f is among $[P_1], \dots, [P_N]$ and f is part of the metaphysical analysis or involved in the essence of $[Q]$.

For convenience, I will also introduce a label for non-opaque, “standard” grounding. I will say that $[P_1], \dots, [P_N]$ (fully) transparently ground $[Q]$ just in case $[P_1], \dots, [P_N]$ fully ground $[Q]$, but do not fully opaquely ground $[Q]$.

Why care about opaque grounding? Part of what makes opaque grounding interesting is the non-standard picture of grounding that emerges if we take the notion seriously – something to be

³ For similar ideas, see King (1998), Schroeder (2005), Skiles (2012, chap. 3), Rosen (2015), and Goff (2017, chap. 2). Note that although Goff and I both employ the expression “metaphysical analysis” and use it in similar ways, it should not be assumed that our conceptions of metaphysical analysis overlap completely.

⁴ For something like this constructional view, see Skiles (2012, chap. 3), and Wilsch (2016, 3–4).

explored in section 3 below. A more straightforward *use* is that the notion of opaque grounding helps us capture the characteristic commitments of certain interesting metaphysical theories. I will now turn to explain how.

I believe certain important metaphysical theories are implicitly committed to cases of opaque grounding. Explicitly articulating the notion enables us to better recognize what is distinctive about the metaphysical commitments of those theories. The paradigm example I will use is that of *classical moral non-naturalism*. Classical moral non-naturalism (or just “non-naturalism” for short) is a theory in metaethics that I will take, insofar as its metaphysics is concerned, to be characterized by two commitments.⁵ The first one is a claim about the natures of certain properties (I will here use moral rightness as the example):

NATURE-COMMITMENT: The property of being morally right is a *sui generis* non-natural property whose nature does not involve any natural property. The property of being morally right is not reducible to or built out of any natural properties, and it lacks a real definition in terms of natural properties.

This commitment emphasizes a kind of metaphysical *separation* or distinctness between the normative property of moral rightness and natural properties. In this vein, Pekka Väyrynen writes:

[T]he non-naturalist thinks that at least some normative properties aren't identical to any natural or supernatural properties, nor do they have a real definition, metaphysical reduction, or any other such tight metaphysical explanation wholly in terms of natural or supernatural properties. (2018, 171)

⁵ The metaethical literature contains a variety of different versions of moral non-naturalism, which can vary considerably in their metaphysics. Though I will, for brevity, often talk about “moral non-naturalism” unqualifiedly, I only claim that a specific *form* of moral non-naturalism (one that I believe, however, to be both historically and contemporaneously influential) is committed to opaque grounding.

But moral non-naturalists *also* want to affirm a certain kind of connection between rightness in actions and select natural properties of those actions. More precisely, they are committed to:

EXPLANATION-COMMITMENT: *Instantiations* of the property of being morally right are *explained by* instantiations of natural properties. Whenever a token action *a* instantiates moral rightness, it does so *because* it instantiates some natural property – say e.g. the property of being happiness-maximizing. When *a* is morally right, this is *in virtue of* its being happiness-maximizing; *a*'s being happiness-maximizing *makes* it morally right.

This view (or at least an analogue applied to moral *goodness*) is endorsed by G. E. Moore, the key figure in analytic non-naturalism, when pushed by C. D. Broad to clarify his position:

[I] should never have thought of suggesting that goodness was “non-natural,” unless I had supposed that it was “derivative” in the sense that, whenever a thing is good [...] its goodness (in Mr. Broad’s words) “depends on the presence of certain non-ethical characteristics” possessed by the thing in question: I have always supposed that it did so “depend,” in the sense that, if a thing is good (in my sense), then that it is so *follows* from the fact that it possesses certain natural intrinsic properties, which are such that from the fact that it is good it does *not* follow conversely that it has those properties. (1942, 588)⁶

Thus, something like EXPLANATION-COMMITMENT is assumed already in the paradigm example of moral non-naturalism in analytic philosophy.

Since logically atomic facts are just instantiations of properties or relations, EXPLANATION-COMMITMENT straightforwardly entails an instance of GROUNDING, namely that [*a* is happiness-maximizing] grounds [*a* is morally right]. And since facts are partially built out of properties and

⁶ It might be worth stressing that in light of Moore’s famous commitment to the indefinability of “good”, his usage of “follows” here cannot be interpreted as denoting logical or analytic entailment but is more plausibly intended to express an explanatory connection.

relations, NATURE-COMMITMENT, which is formulated as a claim about properties, strongly supports certain commitments at the level of facts too. If the property of being morally right is not reducible to or built out of any natural properties and lacks a real definition in terms of any natural property, then the same should go for the relation between [*a* is morally right] and natural facts. A motivating impulse behind moral non-naturalism is the idea that the nature of moral reality is profoundly different from that of natural reality. It would make for a strange position to insist that moral properties are irreducible to natural properties, citing the typical non-naturalist considerations, while somehow accepting moral *facts* (instantiations of moral properties or relations) as consisting fully in natural facts. That combination of views would not do justice to the core motivations behind non-naturalism. Thus, any moral non-naturalist embracing IRREDUCIBILITY should similarly accept that [*a* is morally right] neither has a real definition in terms of, nor is reducible to, nor built out of, [*a* is happiness-maximizing]. In other words: classical moral non-naturalists are committed to [*a* is happiness-maximizing] opaquely grounding [*a* is morally right].

I think moral non-naturalism of this kind is a good example of an interesting metaphysical view that is committed to opaque grounding. You might, of course, think moral non-naturalism is false – perhaps because you’re a naturalist who denies that there are any non-natural properties or facts, or because you’re a moral nihilist who denies that there are any moral properties or facts whatsoever. But, firstly, non-naturalism is a popular theory in contemporary metaethics. And, secondly, whatever problems that kind of view faces, there does not seem to be anything obviously wrong with its grounding commitments, as they have been laid out above. This gives us reason to take the idea of opaque grounding seriously and explore its consequences.⁷ (In section 4 below, I will consider arguments to the effect that the idea of opaque grounding is somehow confused.)

⁷ Thus far, opaque grounding has been underexplored in the grounding literature. Rosen (2010, 130–33), discusses cases of opaque grounding under the monicker “Moorean connections”. Rosen’s discussion, however, is heavily centred around the issue of what grounds grounding facts themselves. Goff (2017) suggests that we interpret Moore’s moral metaphysics as committed to “a non-constitutive grounding relation, in which [sic] the facts about goodness are grounded in but ontologically additional to the non-

However, I do not think moral non-naturalism is the only interesting position committed to opaque grounding. Most straightforwardly, there are analogous non-naturalist views about other kinds of normative properties and facts that seem helpfully explicable in terms of opaque grounding. An aesthetic non-naturalist may well take beauty to be a *sui generis*, unbuilt property lacking a real definition in terms of natural properties, but still think that instantiations of that property must be grounded in instantiations of natural properties. Such an aesthetician would be taking [*o* is beautiful] to be opaquely grounded in whatever fact *makes o* beautiful. But theories committed to opaque grounding do not necessarily have to deal with the normative. For example, a set of metaphysical commitments structurally analogous to those of moral non-naturalism has some *prime facie* appeal in the philosophy of mind. For on the one hand, it is natural to think that phenomenal properties and physical properties have fundamentally different kinds of internal natures and essences. On the other hand, it is attractive to rule out the possibility of “zombie worlds” where creatures physically indiscernible from us exist without any phenomenal activity. Equipped with a notion of opaque grounding, a property dualist can take phenomenal properties to necessarily be instantiated in virtue of instantiations of physical properties, while simultaneously taking the natures of the two kinds of properties to be so radically different that no physical property ever figures in the metaphysical analysis or essence of any phenomenal property.⁸ Possessing a developed theory of opaque grounding allows us to articulate what sets this kind of dualism apart both from physicalist grounding views about the phenomenal as well as from more radical Cartesian forms of dualism.

Admittedly, all the potential cases of opaque grounding mentioned so far are controversial. For one potential example of opaque grounding that is widely recognized in the literature (though not widely recognized as involving opaque grounding), consider grounding in mereological cases. Let “*a*” name the table in front of me, and “*b*₁”, “*b*₂”, ... “*b*_{*n*}” name its parts. Many philosophers think

normative facts.” (p.43) However, Goff quickly sets the idea of “non-constitutive” grounding to the side without exploring its consequences or assessing its viability. (In section 3.1. below, I turn to the relation between opaque grounding and the idea that grounding is “constitutive explanation.”)

⁸ Rosen (2010, 132) mentions a similar example as an instance of what he calls “Moorean connections”.

facts about the existence and arrangement of b_1 - b_n ground facts like [a exists], as well as facts about the properties of a . But it does not seem very plausible that the essence or metaphysical analysis of [a exists] or of (for example) [a weighs 6 kilograms] should involve any facts about the existence or arrangement of b_1 - b_n . If this is right, we are here dealing with a grounding claim that is widespread, largely uncontroversial, and which (if true) constitutes an example of opaque grounding. At any rate, it should be clear that the general idea of metaphysically opaque grounding is a theoretically interesting option even outside the metaphysics of normativity.

3. Consequences

In this section, I want to draw attention to some ways in which the idea of opaque grounding affects widespread views about grounding and related topics. These consequences further illustrate the importance of the question of whether there is any opaque grounding.

3.1. Grounding and Constitutive Metaphysical Explanations

The first consequence concerns how close the relationship between a grounded fact and its grounds needs to be. It is an influential but rarely discussed idea that grounding constitutes a maximally strict or intimate explanatory connection between facts. I will call this the idea that grounding is *constitutive explanation*.⁹ In the following, I will articulate the core components of the idea, and argue that if there is opaque grounding, grounding cannot (always) be constitutive explanation.

3.1.1. Constitutive Explanation

It is a recurring theme in the grounding literature that one (or indeed *the*) characteristic feature of grounding is how *strict* or *close* a connection it is. Due to this, a correct grounding explanation is supposed to provide a form of understanding and illumination which is simply not attainable in

⁹ Fine (2012, 37) writes, with reference to grounding, that "I myself have long been sympathetic to this idea of constitutive determination or 'ontological ground'." Litland (2013, 20) writes "What's in question [in metaphysical explanation or grounding] is constitutive explanation". Dasgupta (2016, 381) talks of "*grounding* explanation – otherwise known as *metaphysical* or *constitutive* explanation".

other kinds of explanations.¹⁰ This renders grounding explanations particularly satisfactory and desirable in theorizing about the world. This idea is articulated in the following way by Kit Fine:

We may call an in-virtue claim a statement of *ontological* or *metaphysical ground* when the conditional [“Necessarily, if P then Q”] holds of metaphysical necessity and I shall talk, in such cases, of the antecedent fact or facts *grounding* or being a *ground* for the consequent fact. [...] Just as metaphysical necessity is the strictest form of necessity (at least as compared to natural and normative necessity), so it is natural to suppose that statements of metaphysical ground are the strictest form of in-virtue-of claim. In the other cases, we may sensibly ask for a stricter or fuller account of that in virtue of which a given fact holds. So in the case of the particle [“Necessarily, if the particle is acted upon by some positive force then it is accelerating”], for example, we may agree that the particle is accelerating in virtue of being acted upon by a positive force but think that there is some kind of gap between the explanans and explanandum which could – at least in principle – be filled by a stricter account of that in virtue of which the explanandum holds. But if we were to claim that the particle is accelerating in virtue of increasing its velocity over time (which is presumably a statement of metaphysical ground), then we have the sense that there is – and could be – no stricter account of that in virtue of which the explanandum holds. We have as strict an account of the explanandum as we might hope to have. [...] If there is a gap between the grounds and what is grounded, then it is not an explanatory gap. (Fine 2012, 38–39)

¹⁰ There is a question in the grounding literature of whether we should think of grounding as a relation that *backs* metaphysical explanations or as itself *identical* with metaphysical explanation. (For the former approach, see e.g. Schaffer (2016b); for the latter, see e.g. Fine (2012)). In this section, I ignore the details of this debate for reasons of convenience and move freely between talk of “grounding” and talk of “grounding explanation”. I believe nothing of substance in the discussion of the section hinges on this.

Elsewhere, Fine writes that grounding is distinguished from other explanatory connections “by being the tightest such connection” (2001, 15). These formulations articulate one crucial part of the idea that grounding is constitutive explanation:

ULTIMACY: If $[P_1], \dots, [P_N]$ (fully) ground $[Q]$, there is no “explanatory gap” between $[P_1], \dots, [P_N]$ and $[Q]$, and $[Q]$ is thereby given the strictest form of explanation possible.

Since the full ground of a fact need not logically or analytically entail the grounded fact, the talk of explanatory gaps in this context should not be understood merely in terms of logical or conceptual notions. What’s in question here is rather (the absence of) some *metaphysical* explanatory gap. But how are we to understand this?

The supposed power of grounding to bridge metaphysical explanatory gaps, I suggest, is closely connected with another aspect of constitutive explanation. It is here helpful to focus on how Fine, in the passage quoted above, contrasts the strictness of grounding explanation with that of causal explanation. The particle’s being acted upon by some positive force causally (or naturally) explains the particle’s accelerating, but this explanation is not maximally strict, and leaves the relevant kind of explanatory gap open. The (grounding) explanation of the particle’s accelerating in terms of its increasing its velocity over time, however, *is* maximally strict, and closes the explanatory gap. The key to this difference is that in a constitutive explanation, the explanandum fact *consists in* nothing more than the explanans. Hence Fine writes:

[T]he relation of ground is distinguished from [other explanatory connections] by being the tightest such connection. Thus when the truth of P causally explains the truth of Q , we may still maintain that the truth of Q consists in something more (or other) than the truth of P . (2001, 15)

Even though being acted upon by some positive force *makes* the particle accelerate, the former is not what the particle’s accelerating *consists in*, or *what it is*. So even though we can successfully explain, and thus come to understand, why the particle accelerates by citing its being acted upon by some positive force, this explanation still leaves an important gap in our understanding of the relevant fact. We can know what *causes* the fact to obtain without knowing its deeper inner nature

– what it *consists in* and really *is*. When we have a successful grounding explanation of the particle’s accelerating in terms of its increasing its velocity over time, by contrast, we possess an explanation that proceeds by specifying wherein the fact *consists*. In such a case, understanding *why* the fact obtains goes hand in hand with understanding *what the fact is*, wherein it *consists*. This, I take it, is the basic idea that underlies both the label “constitutive explanation”, and (more importantly) the thesis that grounding is the strictest and most intimate explanatory connection possible (i.e. the thesis of ULTIMACY). The idea is captured by the following principle:

CONSTITUTION: If $[P_1], \dots [P_N]$ (fully) ground $[Q]$, $[Q]$ consists in nothing more than $[P_1], \dots [P_N]$.¹¹

An important corollary to ULTIMACY and CONSTITUTION is that there is a straightforward connection between grounding and the highly coveted status of one fact’s being “nothing over and above” some other facts. It is a popular idea in the grounding literature that when $[P]$ (fully) grounds $[Q]$, $[Q]$ is *nothing over and above* $[P]$, and therefore constitutes a theoretical “free lunch”.¹² On the face of it, it’s unclear why this should be so. By the irreflexivity of grounding, $[P]$ and $[Q]$ are non-identical whenever one grounds the other, so a grounded fact is always something *numerically* additional to its grounds. Furthermore, explanation in general does not seem to secure “nothing over and above”-ness. Even if the window’s shattering has a full (causal) explanation in terms of Cicero’s throwing a rock against it (plus the necessary background conditions), the explanandum fact is clearly something “over and above” its explanantia. The key would seem to lie precisely in the supposed strictness of grounding, qua *constitutive* explanation. Thus Fine writes:

¹¹ Litland (2013, 20) writes “What’s in question is constitutive explanation: if ψ grounds ϕ then its being the case that ϕ consists in its being the case that ψ .” Fine (2012) clearly embraces the connection between constitutive explanation and *consisting in* in further passages: “[I]t is natural in [cases of grounding explanation] to say that the explanans or explanantia are *constitutive* of the explanandum, or that the explanandum’s holding *consists in nothing more* than the obtaining of the explanans or explanantia.” (p.39)

¹² See e.g. Schaffer (2009, 361), Sider (2015, 192).

[Ground] is the ultimate form of explanation; and it is perhaps for this reason that we are not inclined to think of the truth of a grounded proposition as a *further fact* over and above its grounds [...]. (2001, 16)

As we have seen, constitutive grounding explanation – by contrast with e.g. causal explanation – proceeds by identifying wherein the explanandum fact *consists*. Since this relation between explanandum and explanantia is supposed to close any metaphysical explanatory gap, it would seem appropriate to think of it as the tightest and most intimate connection short of numerical identity. If anything other than strict identity can secure the status of “nothing over and above”, constitutive explanation would seem to be it.

Taking a step back to consider the larger picture, the idea of grounding as constitutive explanation is undeniably attractive. On this picture, a grounded fact always consists in its grounds. This metaphysically highly intimate relation of *consisting in* guarantees that the grounded and its grounds are so closely linked that the grounding connection between them constitutes the “ultimate form of explanation”, where no stricter explanation is even *possible*. This maximal closeness between the grounded and its grounds finally allows us to treat the former as “nothing over and above” the latter, thus securing various theoretical benefits.

3.1.2. Opaque Grounding vs. Constitutive Explanation

I will now argue that if there is opaque grounding, this alluring picture of grounding cannot be right – it depicts, at best, a mere part of the landscape. If there are opaque grounding cases, none of the principles outlined above hold in full generality, and consequently, not all cases of grounding are cases of constitutive explanation.

Let us start with CONSTITUTION. Suppose that [*a* is happiness-maximizing] opaquely grounds [*a* is morally right], as on our now familiar form of moral non-naturalism. It then seems that the latter fact *does* consist in something more than the former. Clearly, [*a* is morally right]’s obtaining is *explained* by the obtaining of [*a* is happiness-maximizing], on the view in question. But as we have already seen, not just any explanatory relationship between facts suffices for one fact to *consist in* nothing more than another. For instance, a caused fact does not *consist in* its

causal explanantia taken together. One relation that clearly *does* suffice is metaphysical analysis: since being a vixen simply consists in being female and being a fox, [Red is a vixen] consists in nothing more than [Red is female] and [Red is a fox] jointly. It also seems plausible that certain relations (though it is hard to say precisely which) of essential involvement between facts would suffice for *consisting in*: if [Q] has the right kind of real definition in terms of [P₁] ... [P_N], then [Q] consists in nothing more than [P₁] ... [P_N]. But both these kinds of relations are ruled out by the non-naturalist. According to her view, the natural property instantiated in the ground is neither part of the metaphysical analysis nor part of the essence of the moral property instantiated in the grounded fact. Perhaps there are further relations that would suffice for one fact to consist in nothing more than another, but it is hard to see any natural sense in which (according to moral non-naturalism) the opaquely grounded fact [*a* is morally right] could *consist in nothing more than* [*a* is happiness-maximizing]. Thus, CONSTITUTION is false if there is opaque grounding.

ULTIMACY is equally hard to square with opaque grounding. When [*a* is happiness-maximizing] opaquely grounds [*a* is morally right], the explanatory situation is much the same as in causal cases. The non-naturalist can rightly claim to have provided an explanation of why [*a* is morally right] *obtains* – on her view, it obtains because [*a* is happiness-maximizing] obtains. But she is not offering that explanation as an account of wherein [*a* is morally right] *consists*. Indeed, she is explicitly *refusing* to give any account of wherein the moral fact *consists*, since she takes the property of being morally right to be an absolutely fundamental property. On her view, there is nothing further in which the property of moral rightness consists, and correspondingly, there is nothing further in which the fact [*a* is morally right] consists either. Thus, her grounding explanation of [*a* is morally right] in terms of [*a* is happiness-maximizing] is *not* of the strictest form possible. An account which proceeded by identifying grounds wherein [*a* is morally right] consisted would be stricter. But just like in a causal explanation, the opaque grounding explanation provides us with an account of why the explanandum fact obtains without illuminating the deeper inner nature of that fact, wherein it consists, or what it *is*. The metaphysical explanatory gap that constitutive explanation would close remains open despite our

access to the full grounds of the fact. This shows that if there are cases of opaque grounding, ULTIMACY cannot be true.

As one would expect in light of the preceding, the alleged connection between grounding and the notion of being “nothing over and above” some facts is also severed in opaque grounding cases. In such a case, the ground features neither in the essence nor in the metaphysical analysis of the grounded fact. As we have seen, this means that [Q] consists in something more than [P], and that there is an explanatory gap between the two, since [Q] has not been given the strictest possible kind of explanation. It is then exceedingly hard to see how committing to [Q] could carry no further theoretical cost than merely committing to [P] does. This is made vivid by considering the go-to example of opaque grounding. If moral rightness really is a fundamental property, the metaphysical analysis and essence of which does not involve happiness-maximization in any way, then [*a* is morally right] must be something over and above [*a* is happiness-maximizing]. Committing to the relevant opaque grounding claim involves committing to the existence and instantiation of a *further* property than merely committing to [*a* is happiness-maximizing] does – a moral property the nature and essence of which do not involve happiness-maximization. This non-naturalist metaphysics is supposed to be a paradigm example of an ontologically inflationary view on which moral facts are something “over and above” natural facts. If such a view could be combined with the idea that [*a* is morally right] is a “free lunch” relative to [*a* is happiness-maximizing], then clearly *anything* goes when theory-constructing with the help of grounding. So, plausibly, opaque grounding does not give us cases of one fact being “nothing over and above” its grounds.

3.1.3. Upshots

I have argued that opaque grounding is in conflict with the two principles that characterize the idea that grounding is constitutive explanation. If there is opaque grounding, CONSTITUTION and ULTIMACY both fail as universal claims about grounding. The attractive picture of grounding outlined above then cannot do full justice to the facts. A different picture emerges instead. On this picture, grounding does not automatically guarantee the most intimate connection imaginable between facts, flowing through their inner natures and rendering the grounded fact ontologically

innocent. In some cases, grounding instead looks more like the looser connection of causation. Much like causation, opaque grounding does not illuminate the identity of the explanandum (what that fact *is* and wherein it *consists*), nor does it make for any “ontological free lunch”. In such cases, grounding simply backs an explanation of why one fact obtains in terms of the obtaining of another – just like causation.¹³

A further consequence of the preceding concerns how grounding interacts with *modality*. If grounding were without exception constitutive explanation, a given fact could not differ in its grounds between different possible worlds. This is a consequence of the following plausible principle:

NECESSARY CONSTITUTION: If [Q] consists in nothing more than [P₁], ... [P_N], then necessarily, if [Q] obtains, then [P₁], ... [P_N] obtain.

Consider e.g. [Red is a vixen], and suppose it consists in nothing more than [Red is a fox], [Red is female] jointly. A fact cannot obtain unless everything wherein it *consists* also obtains. So [Red is a vixen] simply couldn't obtain unless [Red is a fox] and [Red is female] both obtain.¹⁴ Given the

¹³ For treatments of grounding that emphasize other aspects of similarity with causation, see Schaffer (2016b), Wilson (2018b). Shaheen (2017) argues that our *concept* of metaphysical explanation is derived from the concept of causal explanation via metaphorical extension.

¹⁴ This raises a potential worry about my interpretation of Fine's talk of “constitutive explanation”. Fine, like most friends of grounding, believes that disjunctive facts are grounded in their obtaining disjuncts and that existentially generalized facts are grounded in their witnessing facts. But *of course* Fine knows that the very same disjunctive or existentially generalized fact can have completely different grounds in different worlds! There are two different ways of going here that both seem defensible to me. The first one is to maintain Necessary Constitution as it stands, and insist that Fine simply has not consistently applied his conception of constitutive explanation when treating disjunctive and existentially generalized facts. (Doing so would involve *denying* that a disjunctive fact or existentially generalized fact is constitutively explained by the relevant disjunct or witness.) The second one is to qualify Necessary Constitution so that it does not apply to disjunctive and existentially generalized facts. This would not necessarily be *ad hoc*, since disjunctive and existentially generalized facts are special types of facts containing particular logical constituents (disjunction

common assumption that only obtaining facts exist, this amounts to a form of ontological dependence between [Red is a vixen] and its grounds – it is metaphysically impossible for the fact to exist without its grounds.¹⁵

However, since an opaquely grounded fact’s obtaining does not *consist in* the obtaining of its grounds, a case of opaque grounding need not be accompanied by any such relation of ontological dependence. In such a case, there *may* yet be ontological dependence. For example, a moral non-naturalist *may* hold that being happiness-maximizing is the *only possible* right-making property of actions. She will then be committed to the view that [*a* is morally right] cannot exist unless [*a* is happiness-maximizing] exists (given the assumption that only obtaining facts exist). But in that case, the commitment stems from her normative theory rather than from the metaphysics of grounding. And on other moral theories incorporating opaque grounding claims, [*a* is morally right] does not depend ontologically on any of its grounds. A moral non-naturalist may e.g. believe that there are distinct and independent properties F_1, \dots, F_N , instantiations of which each suffice to make an action morally right. In that case, [*a* is morally right] may *actually* be grounded in [*a* is F_1] while being possibly grounded in any one of [*a* is F_1] ... [*a* is F_N]. On this scenario, [*a* is morally right] does not ontologically depend on any of the facts [*a* is F_1], ..., [*a* is F_N] individually. This constitutes a further similarity between opaque grounding and causation. Even if [*a* is G] causes [*a* is H], the latter fact typically could have had a different cause, since the effect does not *consist in* the cause (even together with the relevant background conditions). In cases of non-constitutive grounding explanations, we can get the same kind of modal behavior. Thus, by severing the supposed link between grounding and constitutive explanation, we allow more theoretical options for philosophers who employ a notion of grounding.

and the existential quantifier, respectively). It is not implausible that these logical constituents contribute to the facts they enter into in such a way that the facts in question are exempt from the typical link between the *consisting in* relation and modality.

¹⁵ Tahko & Lowe (2016, §2) refer to this as “rigid existential dependence”. For discussions of the general relation between grounding and ontological dependence, see Schnieder (2017), Rydén (2018).

3.2. Opaque Grounding and Fundamentality

In this section, I will argue that if there is opaque grounding, this has interesting consequences for how we should think about the relation between grounding and fundamentality.

3.2.1. Opaque Grounding, Constituency and Fundamentality-Inducing Relations

Philosophers have long made appeal to a notion of priority, or relative metaphysical fundamentality. But it is an increasingly popular view in recent metaphysics that patterns of fundamentality are never brute, but are explained by facts involving grounding and possibly other relations of metaphysical explanation or “construction”.¹⁶ (Let us call such relations, whichever they may be, *fundamentality-inducing relations*. Possible candidates beyond grounding include e.g. relations like composition and constitution.). Thus e.g. all friends of grounding accept that if [P] grounds [Q], then [P] is more fundamental than [Q] – and though it is rarely explicitly stated, it is natural to think that in such a case, [P] is more fundamental than [Q] *because* the former grounds the latter. Strikingly, however, there is one way in which grounding and relative fundamentality differ: whereas grounding is most commonly taken to be a relation exclusively between facts (an approach I have followed in this article), relative fundamentality often holds cross-categorically.¹⁷ So one might think e.g. that the concrete individual Caesar is more fundamental than his singleton set {Caesar}, or that the numbers 3 and 4 and the successor relation are all more fundamental than the fact [4 is the successor of 3]. This raises the question of how grounding relates not only to fundamentality itself, but also to the other fundamentality-inducing relations.

A natural thought is that grounding is in a certain way constrained by other fundamentality-inducing relations. For when we consider various cases of grounding, there seems to be a systematic pattern at work: it seems that we only have grounding between facts when we have

¹⁶ See e.g. Jenkins (2013), Bennett (2017).

¹⁷ Most philosophers who deviate from this do so by taking grounding to be a relation between true *propositions* (see e.g. Bolzano ([1837] 2014), Fine (2001), Rosen (2010)), or by treating grounding by means of a sentential operator (see e.g. Fine (2012)). The only notable treatment of grounding as a cross-categorical relation is found in (some of) the work of Jonathan Schaffer (see e.g. Schaffer (2009)).

other fundamentality-inducing relations between *constituents* of those facts. Thus, e.g. [Caesar exists] grounds [{Caesar} exists], and there is also an object-level connection: Caesar *forms* the set {Caesar}, whereby the man is more fundamental than the set. [Red is a fox] and [Red is female] together ground [Red is a vixen], and there is a corresponding relation between the properties involved in the facts. Being a fox and being female jointly make up (what I have called) the full *metaphysical analysis* of being a vixen, so that the former two properties are more fundamental than the latter. For a final example, consider the way in which some appropriate combination of facts about the existence and arrangements of particles a_1 - a_N ground [Bo exists] (where Bo is the badger outside in the park). This grounding relation between facts too correlates with a metaphysical connection between constituents of the facts, for a_1 - a_N are more fundamental than Bo by *composing* him.

Cases like these make the following principle seem compelling:

CONSTITUENCY: Necessarily, if $[P_1], \dots [P_N]$ fully ground $[Q]$, then there are entities $x_1, \dots x_N$ and y such that $x_1, \dots x_N$ are constituents of $[P_1], \dots [P_N]$ and y is a constituent of $[Q]$, and $x_1, \dots x_N$ stand in some fundamentality-inducing relation to y .

Various philosophers in the literature have defended positions which commit them to CONSTITUENCY or something much like it. One example is Tobias Wilsch (2015; 2016), who defends a *deductive-nomological* analysis of grounding, and a constructional conception of metaphysical laws. On the deductive-nomological analysis, grounding just is determination in accordance with metaphysical laws. On the constructional conception of metaphysical laws, all metaphysical laws involved in grounding govern the behavior of *construction relations* – relations whereby “the *constructing* entities are more basic than the *constructed* entity, and the *constructed* entities exist in virtue of the *constructing* entities” (Wilsch 2015, 3300). Wilsch’s notion of a construction relation can thus plausibly be taken as equivalent to my notion of a fundamentality-inducing relation. The deductive-nomological analysis and the constructional conception of metaphysical laws together entail that whenever $[P_1], \dots [P_N]$ ground $[Q]$, there is some construction relation

holding between some constituent(s) of the grounds and some constituent(s) of the grounded fact – i.e., they together entail CONSTITUENCY.¹⁸

For another example, consider Kelly Trogdon (2018)’s attempt at illuminating grounding by connecting it to the idea of *grounding mechanisms*. Trogdon informally characterizes grounding mechanisms as “determination relations of a certain sort holding between constituents of grounding facts and constituents of the facts they ground”, and cites (among others) set formation, constitution, the determinate-determinable relation, and functional realization as examples of such determination relations (Trogdon 2018, 1290). Given the plausible assumption that determining entities render determined entities less fundamental, Trogdon’s determination relations are, in my terminology, all fundamentality-inducing relations. (He does not explicitly discuss the connection between determination relations and fundamentality.) The idea is then that many metaphysical explanations provide understanding of their target phenomenon by appealing to a specific grounding mechanism and thereby demonstrating “how the grounding connection runs.” Trogdon stops short of asserting that every case of grounding involves some grounding mechanism, and leaves open the possibility of “bare grounding” unmediated by any determination relation. However, he seems to believe that the plausible examples of bare grounding would be cases of grounding within the logical or conceptual domain, and expresses sympathy for the idea that in such cases, we are not really dealing with metaphysical grounding (Trogdon 2018, 1295; 2018, 1301–2). Trogdon’s view, at least when restricted to non-logical cases, thus seems very close to embracing CONSTITUENCY.

We have seen both that CONSTITUENCY possesses some prima facie intuitive appeal, and that, arguably, some philosophers have been committed to it. However, if there are the right kind of opaque grounding cases, CONSTITUENCY cannot be right. To see why, return to our go-to example of opaque grounding. On the non-naturalist view of moral rightness, the fact [α is morally right] is fully grounded in [α is happiness-maximizing]. At the same time, the non-naturalist holds that

¹⁸ This is not surprising, as CONSTITUENCY is similar to the “Ground to Constituent” principle which Wilsch (2015, 3296–97) suggests a plausible analysis of grounding should entail and explain.

the *property* of moral rightness is itself not reducible to or built out of any natural property or properties, including the property of being happiness-maximizing. Rather, she will think that the property of being morally right is an absolutely fundamental property, not metaphysically constructed out of anything else. Consequently, her grounding claim will be inconsistent with CONSTITUENCY. [*a* is happiness-maximizing] fully grounds [*a* is morally right] on her view, but there are no fundamentality-inducing relations connecting the constituents of the two facts. Those constituents are the token action *a*, the property of being happiness-maximizing, the action *a* (again), and the property of being morally right. Clearly, *a* cannot stand in a fundamentality-inducing relation to itself, since that would render *a* more fundamental than itself and thus violate the irreflexivity of relative fundamentality. And since moral rightness is supposed to be an absolutely fundamental property, it cannot (if the non-naturalist's position is right) be that the action *a* and/or the property of being happiness-maximizing (either singly or jointly) stand in any fundamentality-inducing relation to moral rightness. Thus, if an opaque grounding claim of this sort is correct, CONSTITUENCY is false.

3.2.2. Upshots

Whether CONSTITUENCY is true or false might seem like a narrow and specific issue, but the preceding discussion has a number of noteworthy consequences. The first one is that if there are the relevant kind of opaque grounding cases, this means that there can be non-fundamental instantiations of fundamental properties. As we have seen, the non-naturalist takes the property of being morally right to be absolutely fundamental, but holds that [*a* is happiness-maximizing] fully grounds [*a* is morally right]. Since grounding induces relative fundamentality (and logically atomic facts are simply instantiations of properties or relations), this amounts to recognizing a non-fundamental instantiation (namely the grounded fact [*a* is morally right]) of the fundamental property of moral rightness. Though the discussion in recent metaphysics has been more concerned with the possibility (or otherwise) of non-fundamental entities being involved in

fundamental facts, it is an interesting question too whether there can be non-fundamental instantiations of fundamental properties.¹⁹

Secondly, the preceding has consequences downstream for the relation between fundamentality and modality. It is a popular idea in metaphysics that fundamental entities should be freely modally recombinable: since all fundamental entities are wholly independent of each other, any possible way for one fundamental entity to be should be compossible with all the ways every other fundamental entity could be.²⁰ But if there are opaque grounding cases of the sort described above, they provide striking counterexamples to this idea. Suppose that any fact of the form [*x* is morally right] must be opaquely grounded in a fact of the form [*x* is happiness-maximizing] (i.e. being happiness-maximizing is the one and only possible right-making property).²¹ Then, despite being an absolutely fundamental property, moral rightness is not modally free relative to other absolutely fundamental properties. For it is not free to be instantiated in an action without being co-instantiated with whatever fundamental properties ultimately ground an action's being happiness-maximizing – it simply cannot come apart from those properties. Indeed, if – as seems plausible – being happiness-maximizing (or whatever property turns out to play the right-making role) is not a fundamental natural property (which seems plausible), the fundamental property of moral rightness will even be modally constrained by a *less* fundamental property (in addition to

¹⁹ Much interest in the question of non-fundamental entities in fundamental facts traces back to the “Purity” principle of Sider (2011, 106). (It should be noted that Sider’s own discussion of these issues is not framed in terms of grounding, though much of the subsequent discussion has been.)

²⁰ Thus e.g. Schaffer (2010, 40) writes that “If entities are metaphysically independent, then they should be modally unconstrained in combination”, and Bennett (2017, 190) writes that “The claim is therefore compelling: there is no reason to deny that fundamental (independent) entities are freely recombinable.” Although these claims are sometimes hedged so as to only apply to fundamental *concrete* objects (Schaffer) and *contingent* fundamental entities (Bennett) respectively, I think the general motivation for the view extends more widely.

²¹ It is generally agreed that moral (and other normative) properties cannot be instantiated brutally. The question is thus rather whether there is just one possible right-making property, or several.

being constrained by the fundamental natural properties that ultimately ground being happiness-maximizing)!²²

A possible reaction to these upshots is to question an implicit presupposition of mine, namely that opaque grounding is itself a fundamentality-inducing relation. It might be thought mysterious how [*a* is happiness-maximizing]’s grounding [*a* is morally right] can render the latter fact less fundamental than the former when there is no constituent of the grounded fact that is any less fundamental than any constituent of the ground. But while it is certainly possible to hold that the typical connection between grounding and relative fundamentality breaks down in opaque cases, I prefer to resist this conclusion. The connections between metaphysical explanation and relative fundamentality are pervasive, and an explanation-based account of fundamentality offers the best hope of making sense of this phenomenon. And even opaque grounding relations constitute (or back) explanatory connections between facts. My preferred way of going is rather to draw some further distinctions within our theory of fundamentality to dissolve the supposed mystery. On an explanation-based account, patterns of relative fundamentality are explained by relations of metaphysical explanation. But explanation is a very fine-grained phenomenon, and it is important to attend to precisely *what* the explanandum of the relevant metaphysical explanation is. When particles a_1 - a_N compose the badger Bo, this licenses an explanation of Bo’s *existence*, why he is an entity at all (rather than non-existent). But when [*a* is happiness-maximizing] opaquely grounds [*a* is morally right], what gets explained is why the fact *obtains* (as opposed to not obtaining).²³ We can recognize this difference in the explanatory target at the level of fundamentality, by saying that the particles a_1 - a_N are *ontically* more fundamental than Bo the badger, while [*a* is happiness-

²² Wang (2016) provides an extended critical discussion of the idea that fundamental entities are modally free of one another. None of her reasons for being suspicious of the idea relate to anything like opaque grounding, however.

²³ Note that since explanation is a hyperintensional phenomenon, it might be that some *x* explains the obtaining of a fact [P] without also explaining the *existence* of [P], even if facts must necessarily obtain to exist. (And on an approach to facts like mine, where atomic facts are instantiations of properties or relations, it makes the most sense to suppose that only obtaining facts exist.)

maximizing] is *alethically* more fundamental than [*a* is morally right] (on the opaque account), but not ontically more fundamental.²⁴ Having drawn this distinction, we can reconcile the view that grounding is always fundamentality-inducing with the feeling that there is something quite different about [*a* is happiness-maximizing]’s being more fundamental than [*a* is morally right] as compared to the particles *a*₁-*a*_N’s being more fundamental than the badger Bo that they compose.

4. Objections

In this section, I will briefly discuss some objections to the idea of opaque grounding. But there are certain kinds of objections I will not deal with here. Firstly, I will not be concerned with *general* skepticism about grounding.²⁵ I am happy to concede that if you have good reason to do away with grounding generally, this article is of little interest to you. Secondly, I will not deal with objections to the specifics of various substantive theories incorporating opaque grounding claims (such as e.g. moral non-naturalism, opaque property dualism about the mental, etc.). Arguably, there would be reason to believe the idea of opaque grounding to be fruitless and uninteresting if one had good reasons to reject all the theories committed to opaque grounding claims. But many of the objections to the theories in question will have nothing to do with opaque grounding as such.²⁶ In what follows I will instead be considering objections to very idea of opaque grounding.

First, according to some philosophers, normative grounding is distinct from metaphysical grounding.²⁷ If they are right, moral non-naturalism would involve normative grounding, and nothing could be concluded about the behavior of *metaphysical* grounding from consideration of such cases. This might lead one to think that the opaque grounding relation I’ve drawn attention

²⁴ I take it that the obtaining of a fact is sufficiently like the truth of a proposition to allow for extending the term “alethic” to cover it.

²⁵ For examples of general skepticism about grounding, see Hofweber (2009) and Daly (2012).

²⁶ Thus e.g. moral non-naturalism is often charged with being committed to objectionably metaphysically “queer” facts and properties. Even if this is a strong objection to moral non-naturalism, it does nothing to show that there is anything problematic about the idea that moral facts would be opaquely grounded in natural facts. For a discussion of the queerness argument, see Olson (2014, 79–138).

²⁷ See e.g. Fine (2012), Litland (2018).

to is not of any concern to metaphysics. I reject that. For what it's worth, I am skeptical that normative grounding is distinct from metaphysical grounding.²⁸ But even if it is, there are non-normative cases of opaque grounding one can rely on instead. Recall e.g. that I mentioned in section 2 the possibility of defending a dualist view about the relation between the physical and the mental which involves an opaque grounding claim. Such a claim would clearly not concern *normative* grounding. There is more to say on the interesting issue of grounding pluralism, but for present purposes it will have to suffice to note that even grounding pluralists should pay attention to opaque grounding.

One further line of resistance to opaque grounding might stem from the idea that it is part of the very *concept* of grounding that grounds are always involved in the metaphysical analysis or essence of what they ground. If this is true, whatever explanatory notion is involved in the alleged cases of opaque grounding would have to be distinct from grounding. There are at least two things to say in response. Firstly: even though many philosophers seem to assume that grounding is always transparent, there are also influential treatments of grounding in the literature which question that assumption or simply leave the issue open.²⁹ While such treatments may yet turn out to be mistaken on substantive grounds, there is no obvious reason to take them to be conceptually incoherent. Secondly: even if the extant concept of grounding did in fact turn out to include a requirement that grounding always be transparent, that would not necessarily show anything about which metaphysical relations there are or which of them hold. Perhaps the current concept of grounding should be revised or replaced in order to capture a more theoretically fruitful

²⁸ See e.g. Berker (2017). Lange (2018) provides an argument against the view that normative necessity is weaker than metaphysical necessity, thus undermining the obvious way of distinguishing normative grounding from metaphysical grounding.

²⁹ See e.g. Rosen (2010, 133) on “Moorean connections”; Schaffer (2016b, 83) writes “I should also flag that my treatment of grounding has not once mentioned a concept often thought central, namely that of *essence* [...] Those of us (including myself) who eye the notion of essence with suspicion may welcome its separation from grounding.”

and interesting relation. Either way, a mere appeal to concepts does not seem to settle any important metaphysical issue here.

A further possible worry is that once we sever any necessary connection between grounding and relations like metaphysical analysis or essential involvement, it is hard to see what distinguishes grounding from mere metaphysical necessitation. The question arises: if the grounds of a fact need not be part of the metaphysical analysis or essence of the fact, can we make sense of how grounding differs from merely modal connections? I think we can. The worry presupposes that the distinction only makes sense if grounding is necessarily transparent. But there is no clear reason to accept that. Firstly, we do not need to move beyond the uncontroversial platitudes about grounding to be able to distinguish it from modal phenomena. Grounding is crucially different from mere metaphysical necessitation by being a hyperintensional relation that necessarily connects to explanatory notions expressed by (*inter alia*) “in virtue of”, “because” and “due to” talk. Secondly, there are already treatments of grounding on the market that distinguish it from necessitation without relying on notions of essence or metaphysical analysis to do so.³⁰ Proponents of opaque grounding are free to help themselves to any of these treatments or to develop entirely new ones. The worry is unfounded.

Thus, none of the objections to opaque grounding discussed here seem forceful. While this does not conclusively show that there *is* opaque grounding in the world, there is no reason at this point to exclude the notion from our metaphysical theorizing.

5. Conclusion

In this article, I have introduced and spelled out the notion of metaphysically opaque grounding. I have argued that there are some widespread philosophical theories (such as classical moral non-

³⁰ Thus e.g. Schaffer (2016b), Wilson (2018a; 2018b) attempt to illuminate grounding by highlighting its many similarities to causation, and by developing a framework of structural equation models for grounding claims. None of these treatments makes appeal to the ideology of essence, metaphysical analysis or anything of the like. Schaffer (2016a) further discusses how a treatment of this sort can help dispel methodological worries about grounding.

naturalism) that are plausibly taken to be committed to opaque grounding claims. I have furthermore drawn attention to some important consequences the idea of opaque grounding has for our theorizing about grounding and nearby topics, and consequently why that idea is of interest. Finally, I have defended the notion from some general objections aimed at questioning its legitimacy and usefulness.

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