

# Kind-Dependent Grounding

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ABSTRACT: Are grounding claims fully general in character? If  $a$  is  $F$  in virtue of being  $G$ , does it follow that anything that's  $G$  has to be  $F$  for that reason? According to the thesis of **Weak Formality**, the answer is 'yes'. In this paper, however, I argue that there is philosophical utility in rejecting this thesis. More exactly, I argue that two outstanding problems in contemporary metaphysics can be dealt with if we maintain that there can be cases of 'kind-dependent grounding', and, moreover, that once we allow for the possibility of such cases (in order to solve these problems), we must also hold that **Weak Formality** is false. The paper turns crucially on two main ideas, *viz.* (a) that each object instantiates a fundamental kind, which can determine certain of the properties it can have, and (b) that grounding relations can hold conditionally. As we will see, it is only in light of these two ideas that we can make sense of the notion of kind-dependent grounding that is central to this paper.

**Keywords:** Metaphysical Grounding; Fundamental Kinds; Coincident Objects; Thinking Parts Problem; Metaphysics.

If somebody claims of something named or unnamed that it moves, or runs or is white, he is liable to be asked the question by which Aristotle sought to define the category of substance: *What is it that moves (or runs or is white)?* Perhaps one who makes the claim that something moves does not need to know the answer to this question in order to enter his claim. It is not hard to envisage circumstances in which he can know that it moves without knowing what the thing is. Yet it seems certain...that, for each thing that satisfies a predicate such as 'moves', 'runs' or 'white', there must exist some...kind to which the item belongs and by reference to which the 'what is it' question could be answered.

— Wiggins, D. (2001, p. 21)

[C]ertain conditions may produce a background to other conditions having a determinative role even though they do not themselves have a determinative role.

— Fine (2015, p.311)

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# I Introduction

Suppose that  $a$  is F in virtue of being G. Does this mean *everything* that's G is F for that reason?

It would initially seem so. As Rosen (2010) writes:

If Fred is handsome in virtue of his symmetrical features and deep green eyes, then anyone with a similar face would have to be handsome for the same reason. Particular grounding facts must always be subsumable under general laws, or so it seems. (2010, p. 132)

Audi (2012) delivers the same verdict:

Let us suppose that you have a (defeasible) reason to believe that P in virtue of a certain sensory experience...It is not peculiar to you that when you have this experience, it grounds a reason of the relevant sort. Anyone with an experience of the same kind will have a reason of precisely the same kind. [Thus] grounding relations do not vary from instance to instance of the properties involved in the facts in question. Similarly, they do not vary from world to world. (2012, pp. 103—104)

Following Rosen (2015), let us refer to the principle gestured towards here as **Weak Formality**.<sup>1</sup> This states that if some (possible) object  $a$  is F in virtue of being G, then if any possible object  $b$  is G,  $b$  is F in virtue of being G.<sup>2</sup>

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<sup>1</sup> For the stronger principle, **Formality**, see Rosen (2010, p. 131).

<sup>2</sup> Cf. Rosen (2015, p. 199): **Weak Formality** 'tells us that if some possible thing is green in virtue of having a certain spectral reflectance profile, then as a matter of necessity, anything with that profile is green in virtue of possessing it'.

<sup>3</sup> The more general debate regarding **Weak Formality** is analogous to the corresponding the

**Weak Formality** is certainly intuitive. However, I'll argue that there's philosophical utility in *rejecting* it, by claiming that there's something to be gained from allowing for cases of 'kind-dependent grounding', whereby once such cases are admitted, we must reject **Weak Formality**, its intuitiveness notwithstanding.<sup>3</sup>

I first consider a passage from Rosen (2015), which suggests a way in which **Weak Formality** might fail. I then sketch out the core notion of kind-dependent grounding, before arguing that such cases show **Weak Formality** to be false. My strategy thenceforward will then be to display the utility of allowing for cases of kind-dependent grounding, by showing how this helps solve two metaphysical problems. The central claim is that since the notion of kind-dependent grounding does valuable metaphysical work, we should allow that such cases occur and that **Weak Formality** is false.

I expect not everyone to agree that the problem cases I present constitute genuine metaphysical problems. (And some will no doubt dispute the assumptions that generate them.) I also suspect some philosophers to not like the solutions to the problems I offer. (Some may even have solutions of their own they prefer.) Yet, the hope is that those who do see genuine problems here, and who see *some* merit in my proposed way of resolving them, will see genuine utility in appealing to kind-dependent grounding, and thus in rejecting **Weak Formality**.

*Roadmap.* First I say some more about the notion of grounding itself (§2). Then, I set out the aforementioned passage from Rosen (2015), discussion of which will

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<sup>3</sup> The more general debate regarding **Weak Formality** is analogous to the corresponding the debate between Davidson (1980) and Anscombe (1981) regarding whether causation is general or singular. (For a helpful account of this debate see Hitchcock: 1995.)

help us work towards the key notion of kind-dependent grounding (§3). Along the way, we'll encounter the idea that each object instantiates a fundamental kind, which can determine (in some cases) the properties it may have, plus the idea that grounding claims can hold conditionally. The following two sections then put the notion of kind-dependent grounding to work in connection with two important metaphysical problems (§§4—5). The final section concludes (§6).

## 2 Grounding

Many philosophers believe that in addition to causation, we should recognise another determinative relation that's constitutive in character, and which obtains between facts *at a time* rather than events *over time*.<sup>4</sup> This relation is widely referred to as 'grounding', claims of which are typically expressed via the 'in virtue of' locution. (I employed this notion in (§1) when formulating **Weak Formality**.) Since there's already a vast literature on this topic, my introductory remarks will be kept brief.<sup>5</sup>

To say that some fact  $\Gamma$  grounds another fact  $\Delta$  is to say that  $\Delta$  obtains in virtue of  $\Gamma$ . That is, it's to say that the latter fact constitutes the ontological basis for the former fact. So if  $\Gamma$  grounds  $\Delta$ , then  $\Gamma$  is the more fundamental of the two, and  $\Delta$  is

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<sup>4</sup> I assume here, for ease of exposition, that causation relates events—but nothing turns on this assumption. As for facts, I am thinking of these as worldly entities—along the lines of Fine (1982) and Audi (2012). However, the views I develop in this paper might be expressed equally well on the assumption that facts are true propositions—and hence representational entities rather than 'bits of reality' (for a theory of grounding that presupposes this latter view see Rosen: 2010).

<sup>5</sup> Some key papers here include Audi (2012), Fine (2001, 2012a), Rosen (2010) and Schaffer (2009, 2016). (But many more could be cited.)

the less fundamental (and more derivative).<sup>6</sup> Moreover, if  $\Gamma$  grounds  $\Delta$ , then there's a non-causal, constitutive sense in which  $\Delta$  holds *because*  $\Gamma$  does.

To use a metaphor from Schaffer (2016), the relation between grounding and causation can be thought of like so: whilst causation drives the world through time, grounding drives the world through levels. Causation takes us from an event occurring at one time to an event occurring at a later time. The former event is thus causally generative of the latter. Whereas grounding takes us from a more fundamental fact to another, less fundamental fact. The former fact is then ground-theoretically generative of the latter.

As this brings out, both causation and grounding are 'building' or 'generative' relations (cf. Bennett: 2011), and hence relations of determination. Moreover, both relations back distinctive types of *explanation*. If event  $e_1$  causes event  $e_2$ , then  $e_2$  occurs because  $e_1$  occurs—in a causal sense of 'because'. Likewise, if fact  $\Gamma$  grounds distinct fact  $\Delta$ , then  $\Delta$  obtains because of  $\Gamma$ —in a constitutive sense of 'because'.<sup>7</sup>

Unlike some authors, I don't identify grounding with metaphysical explanation. (Although the latter relation can, of course, also be expressed with phrases like 'because' and 'in virtue of'.) In my view, just as we should distinguish the causal relation from the causal explanations it backs, so we should distinguish grounding from the metaphysical explanations it backs. Accordingly, just as 'causation' and 'causal explanation' are distinct, so too 'grounding' and 'metaphysical explanation' are distinct. (For more on this matter see Schaffer: 2016.)

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<sup>6</sup> Plausibly, grounding can be one-one, many-one, and perhaps even many-many. But here I am interested in one-one cases. (Throughout I follow let ' $\Gamma$ ' and ' $\Delta$ ' stand for arbitrary individual facts.)

<sup>7</sup> For more on the relation between grounding and causation see Schaffer (2016) and Wilson (2017).

I've been writing as if grounding is a relation on facts. I'll continue to assume this in what follows. (However, I will also speak loosely of, e.g., 'x's Gness grounding x's Fness'. This should be taken as an informal expression of the claim that: the fact that x is F is grounded by the fact that x is G.) Note, however, that this assumption is contestable in various ways. Most of what I say here could probably be reformulated without the assumption that grounding is a relation between facts (were one to disagree with this idea). But I'll assume the truth of this throughout.

I'll close with some remarks about the logical properties of the grounding relation. It's standard to assume that grounding is reflexive, asymmetric, transitive, and well-founded. We thus obtain a well-founded partial ordering over the domain of facts. Now to me it seems plausible to think of grounding this way. Yet nothing I say here turns on that being right. (I note the standard assumptions just to help the reader gain a sense of what grounding is supposed to be.)

This completes my initial exposition of the grounding relation. (I'll spare the reader a list of examples of grounding. There are enough in the literature.<sup>8</sup>) Accordingly, we can now turn to the main purpose of this paper. The aim is to discuss the following principle: **Weak Formality**. Let's write 'Fa' to denote *the fact that a is F*. And let's write 'Ga < Fa' for the claim that the fact that *a* is G (fully) grounds the fact that *a* is F.<sup>9</sup> The principle can then be stated precisely as follows:

**Weak Formality:**  $\exists(x) (Gx < Fx) \rightarrow \forall(y) ((Gy \rightarrow (Gy < Fy))$

It's this plausible-looking principle that I'll be suggesting we ought to reject.

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<sup>8</sup> But see esp. Rosen (2010, pp. 111–112) and Schaffer (2012, pp. 52–54.)

<sup>9</sup> Here as throughout, I have in mind the notion of 'full' not 'partial' ground. (On this distinction see Fine: 2012a, Schaffer: 2012 and Rosen: 2010.) The '<' notation is due to Fine (2012a).

### 3 Kind-Dependent Grounding

**Weak Formality** looks *prima facie* plausible (cf. §1). And as we saw, it is accepted by Rosen (2010) and Audi (2012). Yet in more recent work, Rosen (2015) expresses scepticism regarding **Weak Formality**:

**Weak Formality** is not self-evident. It amounts to the claim that when  $Ga$  grounds  $Fa$  in some particular case, the capacity of the first fact to ground the second derives entirely from the distinctive powers of the predicable  $G$ , and not from the combination of  $G$  and  $a$  together. But why shouldn't there be cases in which  $G$  and  $a$  conspire to make it the case that  $Fa$ , in part thanks to  $G$  and its distinctive powers, but also in thanks to  $a$  and its distinctive powers. (2015, p. 199, emphasis in the original)<sup>10</sup>

The suggestion here apparently is that there could be cases wherein there's some difference between items  $a$  and  $b$ , whereby although both  $a$  and  $b$  are  $G$ , only  $a$  is  $F$  for that reason. Specifically, the thought is that there might be some difference between  $a$  and  $b$ , such that when  $a$  is  $G$ ,  $a$  is  $F$  *in virtue of* being  $G$ , although when  $b$  is  $G$ , it's not so that  $b$  is  $F$  for that reason.

This suggestion is intriguing, but also light on detail. For it to be fully fleshed out, we must answer this question: what difference could there be between  $a$  and  $b$ , whereby whilst both are  $G$ , only one is  $F$  for that reason?

The rest of this sub-section answers this question. The core idea is that in some cases, there's a difference between *the kinds of object  $a$  and  $b$  most fundamentally are*, whereby since  $a$  is one kind of object, its possession of  $G$  makes it so that it is  $F$ ,

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<sup>10</sup> I have edited this passage, replacing instances of the schematic ' $\Phi$ ' with instances of the schematic ' $F$ '. This is just to bring Rosen's notation in line with my own. Nothing of substance turns on these changes.

whereas since *b* is another kind of object, its possession of *G* does *not* make it so that it is *F*. I begin by setting out the broadly Aristotelian idea of a ‘fundamental kind’.

### 3.1 Fundamental Kinds

There is a view, broadly Aristotelian in spirit, whereby all objects belong to (only) one (most specific) fundamental kind. We can introduce this idea like so.

Intuitively, there is a difference between saying *what a thing is* as opposed to merely saying *how it is* (cf. Fine: 2012b, p. 10; Wiggins: 2001, p. 31). This intuitive thought can be regimented by saying that to specify merely *how* something is, one has to merely list its properties, whereas to specify *what* something is, one needs to *specify its fundamental kind* (i.e., to state what sort of thing *x* most fundamentally and essentially is). E.g., to say that *x* is an animal or a person is (arguably) to say *what x is*, it is to specify *what kind of object we are dealing with*. But the claim that *x* is white merely says *how x happens to be*. One specifies one of the object’s properties; but fails to disclose its fundamental kind. (See Wiggins: 1980, 2001 and Baker: 2000, 2007 for a recent defence of this picture.)

In this paper, I take this basic framework for granted (the rationale being: it can do valuable metaphysical work). I assume also one particular element of the framework, *viz.*, that fundamental kinds can determine, in at least some cases, what properties their instances can have.<sup>11</sup> One way to showcase the plausibility of this idea is

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<sup>11</sup> N.b., my view is consistent with claiming that even if being a *K* is what enables *x* to have (or disables *x* from having) certain properties *F*, *G*, *H*, *x*’s being a *K* might not play this kind of role with respect to *all of x’s properties*. For it might be that e.g. even if *x*’s being a *K* is what enables *x* to be *F* and/or disables *x* from being *G*, there are some properties that *x* has/lacks which *x*’s being a *K*



via examples. If e.g.  $x$  is a proposition, then plausibly,  $x$  is essentially and most fundamentally so. It is plausible, therefore, to think it's *because*  $x$  is a proposition that  $x$  can have certain features and not others. For instance, a proposition may be true or false, but neither red nor blue. Plausibly, this is because propositions are not the kind of thing that can be coloured, but are the kind of thing that can have truth-values. We can therefore explain why propositions can have truth-values but not colours by appealing to what kind of thing they most fundamentally are.

Manifold further examples are possible. A sphere may be misshapen, but not ungrammatical. A wedding can be joyous or boring, but not prime of even. A heap of sand (plausibly) can't survive a change in parts, whereas animals and plants seemingly can. All these differences in properties, quite plausibly, are traceable in some sense to the fundamental kind the relevant item instantiates.

In general, then, the kind of object something most fundamentally is can determine the properties it may have. That is the view I am adopting.<sup>12</sup>

If we allow that fundamental kinds may determine what properties their instances may have, then it appears we should grant also that fundamental kinds determine which grounding relations their instances are/aren't able to enter into.<sup>13</sup>

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has *nothing whatsoever to do with*. Indeed, my view is even consistent with some kinds failing to do any metaphysical work conditioning which properties a thing can/cannot instantiate—so that what properties a thing has turns out to turn not at all on its fundamental kind. (However, what I do need is for kinds to play the roles assigned to them in (§4) and (§5) in order to solve the relevant puzzles.)

<sup>12</sup> However, it must be understood in the right way. The kind of thing something is determines which non-basic properties it may have *for some properties and in some cases, i.e. regarding some kinds*. So I *do not* say that a thing's fundamental kind fixes its modal profile entirely, so that  $x$ 's being fundamentally a  $K$  determines the full range of properties  $x$  is able to have. E.g. perhaps  $x$  could not have had another origin than the one it has. This is surely a fact about the properties  $x$  can/cannot have that does not trace to its fundamental kind. Cf. fn. 11 above. (As for non-basic/basic properties: a property  $F$  is non-basic for  $x$  iff there isn't a more basic property  $G$  in virtue of which  $x$  has  $F$ . A property  $F$  is basic for  $x$  iff it is not non-basic for  $x$ , so that there is no property  $x$  has  $F$  in virtue of.)

<sup>13</sup> But note again that this need not always be so. Perhaps some kinds do not determine what properties a thing can have in virtue of what other properties. Cf. fn. 11 and fn. 12. I need claim only that this sometimes happens—and that it happens in the relevant cases in (§4) and (§5).

If, for example, an object  $x$  is of fundamental kind  $K$ , and if for that reason, it is unable to have the property of being  $F$ , then it follows that  $x$  cannot be  $F$  in virtue of being  $G$ . Moreover, this will be so even if  $x$  is  $G$ , and, importantly, even if other things, which are not  $K$ 's, are  $F$  in virtue of being  $G$ .<sup>14</sup>

Return now to the case involving  $a$  and  $b$ . The challenge we faced was to locate some relevant difference between these objects that could underwrite the fact that only  $a$  is  $F$  in virtue of being  $G$ , although both  $a$  and  $b$  are  $G$ . My suggestion—given that fundamental kinds can determine what properties their instances may have, and thus determine what grounding relations their instances may enter into—is that the relevant difference between  $a$  and  $b$  is one of fundamental kind.

Suppose that  $a$  is most fundamentally a  $K$ , whilst  $b$  is most fundamentally a  $K^*$ , whereby  $K$ s are able to be  $F$ , but  $K^*$ s are not. Suppose also that both  $K$ s and  $K^*$ s can be  $G$  (as witnessed by the fact that both  $a$  and  $b$ , a  $K$  and a  $K^*$  respectively, are  $G$ ). In this situation, I claim the difference in fundamental kind between the objects can underwrite the fact that whilst  $a$  and  $b$  are both  $G$ , only  $a$  is  $F$  for that reason. (Given that  $a$  is the kind of thing that can be  $F$ , whilst  $b$  is not, it is only  $a$  that can be  $F$  in virtue of being  $G$ , even though both  $a$  and  $b$  are  $G$ .) Thus, it is the difference in fundamental kind between  $a$  and  $b$  that makes it so that  $Ga$  grounds  $Fa$ , even though even whilst  $b$  is  $G$ , it is false that  $Gb$  grounds  $Fb$ .

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<sup>14</sup> It might be, of course, that in some cases, if a thing is unable to have the grounded property because of the kind of thing it is, then for the same reason, it cannot have the grounding property. However, we should not assume in advance that all cases are like this. Perhaps in some instances, a thing can have the grounding property even though it cannot have the grounded properties that the grounding property is able to ground. Moreover, I shall be arguing in this paper (in (§3) and (§4) respectively) that at least two types of problem-case arise when some  $x$  is the kind of thing that can be  $G$  but not the kind of thing that can be  $F$  and therefore *not* the kind of thing that can be  $F$  in virtue of being  $G$ —even though other things (of other fundamental kinds) are  $F$  due to being  $G$ .

This is the beginning of the account I want ultimately to defend. As things stand, however, important details must be filled in. Consider, for example, the role that fundamental kinds play in the story. Are they to be conceived as partial grounds—so that when *a* is F in virtue of being G, *a* is F partly in virtue of being G *and* partly in virtue of being a K? Or is the role of fundamental kinds something different? Well, the answer has to be the latter, if the notion of kind-dependent grounding is to perform genuinely interesting work. For it is hardly news that one thing can be F partly in virtue of being G even if this isn't so for all the Gs and even if some Gs fail to be F entirely. But the really interesting possibility, introduced at the outset of this paper, and suggested in the passage from Rosen (2015), is that one thing might be F *solely* in virtue of being G, even though there are some Gs that are not F *for that reason*. But if we want to make good on this possibility, then we cannot assign to fundamental kinds the role of partial grounds; but must assign instead some alternative role.

So: how are we to model the fact that *a*'s being of kind K somehow determines that *a* is F in virtue of being G, without treating the fact that *a* is a K as a partial ground of the fact that *a* is F (alongside the fact that *a* is G)? I suggest we should appeal to the claim that grounding relations can hold conditionally (in a sense articulated below). The role of fundamental kinds with respect to the relevant grounding relations can then be conceived as that of enabling/disabling those grounding relations to obtain/from obtaining. (For instance, I will later claim that the statue is beautiful but the lump of clay it is coincident with is not. To make sense of this, I'll argue, we should say that whilst the statue is beautiful in virtue of having some microphysical property the lump shares, the lump is not beautiful in

virtue of having that property, since it, unlike the statue, is *not the kind of thing* that can be beautiful, and so cannot be beautiful in virtue of the microphysical property it shares with the statue. Moreover, the idea will be that kinds here play the role of conditions, not grounds; a distinction introduced in the next sub-section.<sup>15)</sup>

### 3.2 Conditional Grounding

In the literature on causation, a distinction is sometimes drawn between causes and conditions.<sup>16</sup> That is, it is sometimes claimed that there are cases wherein an event A causes a further event B only given that some background condition is met. Absent this further condition, so the idea goes, and A would not be able to cause B. (That is, whilst A would still obtain, it would not cause B.) As an example, one might claim that striking the match caused the fire only given that the background condition of oxygen being present was met. On this view, were oxygen to have been absent, striking the match would not have caused the fire. So whilst (the event that is) the striking of the match would still have occurred, it would have been unable to cause the fire, due to the absence of a necessary background condition on this event performing its causal work, *viz.* the presence of oxygen.

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<sup>15</sup> The notion of conditional grounding is not my own. However, it has recently been put to work in a variety of theoretical contexts. For example, Fine (2014, 2015) argues that we need to make use of conditional grounding in order to properly model the role that existence facts play with respect to the holding of diachronic identities. Moreover, both Ralf Bader (manuscript-a) and Ted Sider (independently) argue that we should appeal to conditional grounding (which Sider calls ‘grounding-qua’) in order to handle the problem of truth-grounding universal generalisations. Lastly, Bader (2015) has argued that we need the notion of conditional grounding in order to properly model the way in which reasons can vary across contexts (in this connection cf. Dancy: 2004, Ch. 3). In this paper, I will show how we can use the notion of conditional grounding to handle two further theoretical problems drawn from contemporary metaphysics, see §§4—5. (The notion of conditional grounding is also somewhat similar to the notion of an ‘anchor’ in Epstein: 2015, which is again something that’s not a ground but that enables other things to do their grounding work.)

<sup>16</sup> For relevant discussion here see Bader (manuscript-b), Dancy (2004, Ch. 3) and Schaffer (2005). A classic source of scepticism about the distinction is Mill (1950, p.244).

To be clear, the thought here is not that conditions are just partial causes. Rather, if C is a condition on A causing B, then, rather than being a further cause of B, C is that which enables the causal relation to hold between A and B in the first place (due to enabling A to do its causal work in generating B). From this idea, it follows that things can play a role in generating events without playing a causal role. For, instead of playing a causal role, things can act as background conditions, which enable the causal relation to obtain between the effect and the cause due to enabling the cause to perform its causal work.<sup>17</sup>

I think a similar distinction can be drawn in the case of grounding.<sup>18</sup> What we can claim is that, just as, in some cases, (at least on the view set out above), event A causes event B only given that background condition C is met, so too, fact  $\Gamma$  grounds fact  $\Delta$  *only given that some condition  $\Phi$  is met*. In short, the idea is that just as background conditions might be relevant to the production of an event without themselves being causes of that event, so too background conditions might be relevant to the obtaining of a fact without themselves being grounds of that fact. As Fine (2015, p.311) summaries: '[C]ertain conditions may produce a background to other conditions having a determinative role even though they do not themselves have a determinative role'. And as Bader (manuscript-a, p.4) writes: '[n]ot everything that plays a role in making it the case that something else is the case needs to

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<sup>17</sup> As an anonymous referee points out there is the view that ultimately the causes/conditions distinction is merely pragmatic and so has no real metaphysical weight (cf. Schaffer: 2004). Now, whilst I do not accept this view myself, I don't argue against it here. For all I need is that the reader recognise the cogency of a view whereby conditions are not causes but play a distinct, *sui generis* non-causal role of enabling/disabling causal relations between events to obtain/from obtaining. This can then be claimed as analogous to the view about grounds and conditions soon to be introduced later in the paper. (For an argument that we should recognise conditions as *sui generis* enablers/disablers on causal relations cf. Bader: manuscript-b) and Dancy: 2004, Ch. 3.)

<sup>18</sup> For those who stress the ways in which grounding and causation are alike, such as Schaffer (2016) and Wilson (2017), this idea should seem especially plausible, at least given that causation can be conditional in the relevant way (cf. here Fine: 2015, p.311). For advocates of conditional grounding see Bader (2015, manuscript-a), Fine (2014, 2015) and Sider (manuscript, esp. §2.3.2).

play a grounding-role'. For 'things can also be relevant by being conditions that must be satisfied for other things to do their grounding work'.

To make sense of conditional grounding, we must distinguish the different roles things can play in making a fact obtain. Let  $\Gamma$  conditionally ground  $\Delta$ , whereby the condition on this grounding relation holding is that  $\Phi$  obtains. In this case, the grounding relation obtains solely between  $\Gamma$  and  $\Delta$ . However, it holds between these facts only given that the condition,  $\Phi$ , is met. Moreover,  $\Gamma$  and  $\Phi$  play fundamentally different roles in making  $\Delta$  obtain: whereas  $\Gamma$  plays a grounding role,  $\Phi$  plays the role of a condition, i.e., whereas  $\Gamma$  acts as the ground of  $\Delta$ ,  $\Phi$  acts as the condition on the grounding relation between  $\Gamma$  and  $\Delta$  obtaining (the condition's role in making  $\Delta$  obtain being to enable  $\Gamma$  to do its grounding work, rather than acting as even a partial ground for  $\Delta$ .)

Conditions, then, are not to be treated as partial grounds (just as conditions in the causal case are not to be thought of as further causes, at least on the view sketched above). Rather, they are to be understood as playing different roles entirely to grounds.<sup>19</sup> Specifically, they should be thought of as playing a *sui generis* role in helping to make it the case that certain facts obtain, by enabling the grounding relation to hold between the grounding and the grounded fact.<sup>20</sup> Consequently, to un-

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<sup>19</sup> In the causal case, one might want to allow the cause/condition distinction to stand, but treat it in a deflationary way and hold that really, conditions are just partial causes (cf. fn. 17). One could of course hold an analogous position regarding the ground/cause distinction. In my view Bader (2015, manuscript-a) makes a convincing case (via appealing to absences) that a robust distinction between grounds and conditions can be drawn. However, one should keep in mind that by drawing a genuine and robust (so not merely pragmatic) distinction between conditions and grounds, one can do valuable metaphysical work, as will be proven in this paper (see §§4—5). So let's assume that grounds are *sui generis* enablers/disablers on grounding relations obtaining. We can then reveal the important metaphysical work that this distinction can do.

<sup>20</sup> Compare Sider on the notion of 'grounding-qua' (Sider's term for conditional ground): 'grounding-qua statements [i.e. statements of conditional ground] must be understood as *sui generis*, in that they cannot be defined as meaning that [a certain collection of facts]  $A_1 \dots$ , together with the further statement that they satisfy the condition, ground B in the orthodox sense. The further state-

derstand conditional grounding, we have to draw a robust distinction between grounds and conditions, whereby conditions simply enable the relevant grounding relations to obtain. (I take this assumption as unproblematic here. But I realise that one could contest the grounds/conditions distinction in various ways.)

This is of course all rather schematic (but see the example at the end of (§3.1)). However, in (§4) and (§5), we will see two putative examples of conditional grounding at work. In these cases, the condition on the grounding relation holding will be that the object be fundamentally a certain kind of thing.

### 3.3 Kinds as Conditions

With the notion of conditional grounding introduced, return to the case of the two objects  $a$  and  $b$ . Suppose that whilst  $a$  is the kind of thing that can be  $F$ , the same is not true of  $b$ . For this reason, (so the idea goes),  $a$  is  $F$  in virtue of being  $G$ , whilst  $b$  is not, although both items are  $G$ . The question we're now engaged with is: how are we to model this, i.e., how should we think about the role of fundamental kinds in making it so that  $a$  is  $F$  in virtue of being  $G$  whilst  $b$  is not? My suggestion is that we model this using the notion of conditional grounding, treating fundamental kinds as conditions. On this view, when  $a$  is  $F$  in virtue of being  $G$ , the grounding relation holds only given the condition that  $a$  is fundamentally a  $K$ . The fact that  $a$  is a  $K$  thus acts as an enabling condition on  $a$  being  $F$  in virtue of being  $G$ . That  $a$  is  $G$  is consequently the sole and full ground of the fact that  $a$  is  $F$ . Whereas that  $a$  is a  $K$  is simply what enables this grounding relation to obtain. As for  $b$ , that  $b$  is a  $K^*$

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ment [i.e. the condition] is not part of the ground of  $B$ ; rather it is in light of the further statement [condition] that  $A_1, \dots$  ground  $B$ ' (Sider: manuscript, p.37).

acts as a disabler on  $b$  being F in virtue of being G. Given that  $b$  is of kind  $K^*$ , and given that unlike  $K$ s,  $K^*$ s cannot be F, it follows that  $b$  cannot be F, and hence cannot be F in virtue of being G. So, although  $b$  is G,  $b$  is not F in virtue of being G, since  $b$  is not the kind of thing that can be F.

Let's say that in general, cases where  $x$  is F in virtue of being G, but only on the condition that it's fundamentally a  $K$ , are cases of *kind-dependent grounding*. As we will see, once we allow that cases of kind-dependent grounding are possible, we can see that **Weak Formality** has to be rejected. For **Weak Formality** entails that if two things are G, and one of them is F in virtue of being G, then both are F in virtue of being G. However, this is not so if cases of kind-dependent grounding are possible. For it might be that whilst both things are G, only one of them is the kind of thing that can be F, so only one of them is the kind of thing that can be F in virtue of being G.<sup>21</sup>

In the following two sections, I explain how two outstanding problems within contemporary metaphysics can be handled when viewed as cases of kind-dependent grounding. This will provide us with broadly abductive reasons for accepting that cases of kind-dependent grounding are possible and that **Weak Formality** is false.<sup>22</sup>

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<sup>21</sup> Strictly speaking, **Weak Formality** is not proven to be false given *only* the bare possibility of cases of kind-dependent grounding. What is also needed is for it to be possibly the case that (i) things that are G are F in virtue of being G (so long as they are things of the right kind), and that (ii) two things,  $x$  and  $y$ , are both G, even though only one of them is the kind of thing that can be F (in virtue of being G). The following two sections of this paper in effect provide the basis for a broadly abductive argument to the effect that cases of this kind are indeed possible.

<sup>22</sup> Certain variations on the notion of kind-dependent grounding may also be of interest. E.g. in place of kind-dependent grounding, one might consider the idea of essence-dependent grounding, or form-dependent grounding, etc. In general, for any  $\phi$  such that plausibly, what properties a thing is able to have is (at least in part) determined by its  $\phi$  (its kind, its essence, its form, its mode of composition, etc.), one could defend the possibility of  $\phi$ -dependent grounding. In this paper I focus on the idea that grounding can be conditional on kinds, but if one prefers one can develop the idea using essence or form (etc.). Much the same work could be done with these variant forms of  $\phi$ -dependent grounding.



Before moving on, one further thing must be said regarding fundamental kinds. Earlier, I said that in specifying x's fundamental kind, one specifies what sort of being x essentially and most fundamentally is. That is, one says not merely *how* x is, but rather *what* x is. What I now want to add is that fundamental kinds are in my view *not grounded*, and indeed are *not even apt for grounding*.<sup>23</sup> In general, for some features of an object, one can explain why the object has that feature in more basic terms. When it comes to fundamental kinds, however, I think no such explanation can be given. When a thing is fundamentally a K, this fact about it is not only not grounded, but is not even apt for being grounded. That is, it is 'autonomous' in the sense of Dasgupta (2014). As Dasgupta argues, it looks plausible to think that the essential truths about an object are amongst the truths about that need not be grounded in the way that other truths about it might. Accordingly, since specifying the fundamental kind of an object is to specify what sort of thing it essentially is, there is no need to say what grounds its fundamental kind. Thus, on this picture, fundamental kinds are *not even being apt to be grounded* and *for this reason* lack grounds.<sup>24,25</sup> (One could perhaps also take kinds as fundamental with equal plausibility—my reasons for not doing this are given in fn. 25 and fn. 32).

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<sup>23</sup> Strictly speaking, I need the claim that *some* fundamental kinds are like this, whereby the relevant fundamental kinds are those that figure in generating the problem cases with which this paper deals (in (§4 and §5)). But plausibly a claim of this kind ought to be fully general.

<sup>24</sup> Again, this view of matters is not uncontroversial. The sceptical reader, however, is asked to keep in mind that this claim forms part of a larger class of views, which (I argue) collectively generate a satisfactory solution to two important and as yet unresolved metaphysical problems. (It should be noted also that, as I have said earlier in the paper, most of what I say *could* also be said within a framework wherein fundamental kinds are grounded and so are *not* basic or 'autonomous'; but as I mention later in the paper this view gives rise to problems see fn. 25 below and also fn. 32 in (§4).)

<sup>25</sup> This latter view, in fact, i.e. that kinds are autonomous, forestalls the objection (that in (§4) or (§5) the reader might be tempted to raise, perhaps by asking this question: why not treat (fundamental) kinds as partial grounds rather than *sui generis* conditions, thus doing without the extra ideology (of conditions in addition to partial grounds)? The answer would then be: *because fundamental kinds*, being autonomous, stand outside of the grounding hierarchy altogether, and so are not apt to play the role of grounds (but *can* act as conditions). (Thus if one says that fundamental kinds *are* in need of grounding (i.e. are non-basic), one can no longer forestall this important objection in the

This view of matters is not uncontroversial. Indeed, for some kinds, it may seem much more plausible to think that there must be some ground-theoretical explanation as to why the object is the kind of thing it is. This suggests an objection.<sup>26</sup> Consider the kind *statue*, which one might plausibly take to be a fundamental kind in my sense (in saying that *x* is a statue one thereby says *what* *x* is, not merely how it is; indeed below, in (§4), I at least write as if I agree with this.) Now Fine writes:

Surely...there must be some [ground-theoretic] account of what is involved in being a statue or a piece of clay, from which it should then be apparent why a given object is the one rather than the other. (2008, p. 125)

So the worry is: not all fundamental kinds can be autonomous, since at least some of them clearly demand ground-theoretic explanation.

There are various ways to respond to this objection. But my main reply is this. As we will see in the next section, with the assumption being challenged by the objector about fundamental kinds in the background, i.e. that fundamental kinds are autonomous, we can solve two important metaphysical problems that are presently unresolved. This, I submit, is one reason—and indeed in my view, it’s the *main* reason—to accept that kinds are non-grounded, intuitions to the contrary aside. (In short: abductive reasons override intuitions.<sup>27</sup>)

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elegant aforementioned way. The same is true if one says that kinds are fundamental rather than autonomous and so are within the grounding hierarchy despite as it happens lacking in grounds.)

<sup>26</sup> Thanks here to an anonymous referee.

<sup>27</sup> Cf. Lewis’s (1986) defence of modal realism: the theoretical work that Lewisian possible worlds are said to do is meant to override the intuition that *of course no such worlds exist*.

Now doubtless, there are other ways to reply to this worry. But for reasons of space, I will not set out these further replies in any detail. I also think the one I have just mentioned is the best of those available. So at this point let us move on.<sup>28</sup>

I shall assume, then, in what follows that fundamental kinds are not in need of grounding due to being ‘autonomous’ and thus outside the grounding hierarchy. Again, the main reason (I claim) to accept this view is because of the theoretical work it can do. (However, one *could* have a view whereby fundamental kinds are non-basic and still solve the puzzles of (§4) and (§5) in the same way (see fn. 33), but this view is problematic for reasons given in fn. 25 and fn. 32. Likewise, one could also have a view on which they are fundamental rather than autonomous, but once more I explain why this view is not preferable in fn. 25 and fn. 32.)

## 4 Coinciding Objects

Many believe that distinct material objects can coincide, i.e., wholly occupy the same region of space and be composed of the same microphysical parts at once. Consider e.g. a statue and the lump of clay making it up. The statue seems unable to survive being squashed, for plausibly it must have a certain form or structure in

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<sup>28</sup> I’ll mention one other reply suggested to me by an anonymous referee would involve adapting an idea of Bennett (2004). The idea would be to say, presumably, that for every possible fundamental kind, there is an actual object that has it. I could then claim that there is no need to explain why any object instantiates the kind it does—just as Bennett does in her paper (albeit with modal properties in place of kinds). The trouble, however, is that this reply entails a plenitudinous view whereby every matter-filled region of space is literally ‘chocka’ with distinct coincident objects (as Bennett puts it). But whilst I’m not against coincidence as such, I do worry about there being masses of co-located objects. This kind of view also leads to various problems, e.g. the many-persons problem (Chihara: 1994) and the personite problem (Johnston: 2016). (Relatedly, as [anonymous] pointed out to me, bringing in these legions of objects reintroduces the mighty host of conscious beings I try to avoid having to accept in (§5).) Lastly, this view may even undermine the entire enterprise of giving real definitions ‘of the things themselves’ (cf. Leslie & Johnston: manuscript), which has been so central to much contemporary metaphysics.

order to exist, one it would lose if it were squashed. But the lump *could* survive being squashed. Accordingly, the statue and the lump differ in properties, and so by Leibniz's Law are distinct.<sup>29</sup> Given this fact, the most plausible thing to say it seems is that they are distinct yet coincident objects.

Or consider a person and her body. The person wouldn't survive even a gentle death; with death the person *ceases to be*. The body, however, could well survive a gentle death. Accordingly, the person and her body are distinct. Again, given this fact, the most plausible view is that the person and her body are distinct, coincident items (see Sosa: 1987, pp. 156—157 and Johnston: 2007, p. 57).<sup>30</sup>

In the next sub-section, I focus on cases involving coincident objects which instantiate different *fundamental kinds* (so I set aside alleged cases of 'same-kind coincidence').<sup>31</sup> Specifically, I focus on coincident objects that differ in (at least some of) their non-basic properties. The trouble, as we will see, is that it's difficult to make sense of how coincident objects *could* differ in such properties. Indeed I'll argue that order to make sense of this, we must allow for cases of kind-dependent grounding and reject **Weak Formality**.

The following sub-section deals with an objection. What will emerge is the idea that plausibly, the kind of item something is can determine not only which non-basic properties it can have, and so which non-basic properties it can have in virtue of which more basic ones, but also which of its more basic properties can act as

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<sup>29</sup> Some philosophers have tried to resist this line of argument by appealing to 'predicational shifts' (though see Fine: 2003 for some powerful criticisms of this move). Others have tried the considerably more radical option of rejecting Leibniz's Law, by appealing to some form of relative identity (for further discussion of these matters see Burke: 1994 and Noonan: 1991).

<sup>30</sup> Manifold similar examples could be given here. E.g., it is often said that a person would 'go with the brain' in a brain-transplant case, whilst the body would stay on the operating table. This again would appear to establish the distinctness of these items (cf. Shoemaker: 2004).

<sup>31</sup> In fact, I follow Locke (1690) and Wiggins (1980, 2001) in holding that there are no such cases. (Contrast Fine (2003) and Johnston (2006) for arguments to the contrary.)

grounds for its less basic ones. This will bring out a further way in which **Weak Formality** might fail.

#### 4.1 The Problem

Focus on the statue/lump case. These items are *fundamentally different kinds of object*: one is a statue, the other a lump (of clay). Now it's often said that there's a problem regarding *how* the statue and the lump could differ in kind, since they are composed of the same microphysical parts. However, there is only a problem here if we assume that what kind of thing something (fundamentally) is depends on its microphysical profile. Yet I deny that assumption. In my view, there is *nothing* that explains why an object is the kind of thing it is (cf. §3.3). The fact that an object is most fundamentally an item of kind K is not explicable in more basic terms. There is no ground for the fact that x is fundamentally a K (and not a K\*).<sup>32</sup>

Accordingly, in my view, we can accept unproblematically that the statue and the lump are (fundamentally) different kinds of thing.<sup>33</sup> However, this is not to say that coincident items pose no problems at all. Indeed, that such items can and do differ in their non-basic properties poses a real problem that demands a solution.

Note first that when it comes to material things, it's plausible to think their non-basic properties are (ultimately) grounded in underlying basic microphysical

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<sup>32</sup> Notice that one cannot solve the problem of explaining why coincident objects x and y differ in kind despite being microphysically alike in the way that I just did unless one treats them as being autonomous and hence no even apt for being grounded. This is the second of the two reasons mentioned above for not endorsing the view the kinds are ungrounded, the first having been given in fn. 25 in (§3) of this paper. (Well, one could also treat them as fundamental rather than autonomous: but then one will find it harder to treat kinds as conditions rather than partial grounds, cf. fn. 25).

<sup>33</sup> It might also be that there is some way of explaining why objects differ in kind despite sharing their microphysical properties. In that case, we would not need the assumption that kinds are autonomous in order to handle the problem just raised. However, there are other reasons for doing so. See fn. 25 and fn. 32.)

properties. If  $x$  is a material object and if  $F$  is some non-basic property of  $x$ , then plausibly there is some microphysical property  $M$   $x$  has such that  $x$  is  $F$  in virtue of having  $M$ . This view is standardly referred to as Microphysicalism.<sup>34</sup>

We now focus on an example. Consider the fact that whilst the statue is beautiful, the lump it is coincident with is not. We thus get:

- (1) The statue is beautiful.
- (2) The lump is not beautiful.

The trouble is that from the plausible premise that *being beautiful is a non-basic property*, plus Microphysicalism, we can derive a contradiction from (1) and (2). At least, this is given that **Weak Formality** holds.

#### THE ARGUMENT

By Microphysicalism, (1) implies:

- (3) There is some microphysical property,  $M$ , such that the statue is beautiful in virtue of having  $M$ .

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<sup>34</sup> Compare the thesis of Mereological Supervenience in Kim (1993). In effect, Microphysicalism is the ground-theoretic analogue of Kim's thesis of Mereological Supervenience. (As I am sure Kim would recognise, it is something like Microphysicalism that rationalises Mereological Supervenience in the first place—since for Kim, supervenience relations merely suggest the presence of interesting dependence relations like grounding but are not themselves such relations (see .g. Kim: 1993: 167).

(In general, the microphysical properties of an object are a function of the properties and relations of the object's microphysical parts. Accordingly, microphysical properties can be both intrinsic and extrinsic, at least on my view of matters.)

Now since grounding is factive, claim (3) entails:

(4) The statue has microphysical property M.

But the statue and the lump are coincident, and so composed from the same microphysical parts. Hence, the lump has all the same microphysical properties as the statue (given Leibniz's Law). Thus:

(5) The lump has microphysical property M.

Yet **Weak Formality** tells us that if some possible object  $a$  is F in virtue of being G, then if any possible object  $b$  is G,  $b$  is F in virtue of being G. So from this thesis, plus (3), we can derive:

(6) If any object whatsoever has microphysical property M, then it is beautiful in virtue of having M.

However, (5) and (6) entail:

(7) The lump is beautiful in virtue of having microphysical property M.

And since grounding is factive, claim (7) entails:

(8) The lump is beautiful.

The problem: (1) and (8) engender the contradiction that the lump both is and isn't beautiful. Moreover, the problem is quite general. For given Microphysicalism and **Weak Formality**, we end up facing this issue whenever coincident objects differ in terms of some non-basic property.

One way to react here would be to reject Microphysicalism. Another option would be to claim that all differences between coincident objects are ungrounded (fundamental) differences. However, these moves seem implausible. Moreover, there is a better way. For, we can instead put to work the notion of kind-dependent grounding (see §3). We can then reject **Weak Formality**, and block the inference from (5) and (6) to (7).

My response depends on the intuitive claim that *whilst the statue is the kind of thing that can be beautiful, the same is not true of the lump of clay*. Now I will just say here that this claim feels correct to me. If something is a statue, it is the sort of thing that can be beautiful, whereas if something is a lump (of clay), then it is not the kind of thing that can be beautiful.<sup>35</sup> Let us suppose that we accept this claim.<sup>36</sup> Then if we grant that being beautiful is a non-basic property of the statue, and also

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<sup>35</sup> One might argue to the contrary that whenever lumps of clay and statues are coincident, both items will be beautiful. But this is not a worry for me, for whilst it would show, were it true, that lumps are *not* the kind of thing that cannot be beautiful, it would also show that beauty, at least when it come to statues and lumps, is not one of the properties apt to generate instances of problem I am concerned with. (More generally, whenever the constituting item shares the non-basic property with the constituted item, then we do not have an instance of the problem I am dealing with.)

<sup>36</sup> Again, one could also accept a variation on this claim, according to which the statue but not the lump is able to beautiful because it has a certain form, or manner of composition,...etc.



grant Microphysicalism, we must accept that there's some microphysical property, M, in virtue of which the statue is beautiful. However, if the statue is only able to be beautiful given it's *the kind of thing able to have this property*, then what we have is a case of kind-dependent grounding. That is, we have a case wherein, although (3) is true, it is true only given that the object in question (the statue) is a certain *kind* of thing. It follows that claim (3) is more perspicuously written as follows:

(3\*) There is some microphysical property, M, such that the statue is beautiful in virtue of having M, whereby this grounding relation holds only given that the statue is the kind of thing it is.

On this view, whilst the statue *is* beautiful in virtue of having M, that the statue has M makes it so that it is beautiful only given that it meets the condition of being a certain kind of thing. Call the particular statue x. We can then put this point by saying: the fact <that x has M> grounds the further fact <that x is beautiful> only given that x meets the condition of *being the kind of thing that can* be beautiful (which it does, given that x is a statue). In short, x's fundamental kind enables the grounding relation to obtain between the *grounding* fact <that x has M> and the *grounded* fact <that x is beautiful>.

This view implies that having microphysical property M is not *sufficient* for being beautiful. For in addition, an item must meet the condition of being the sort of thing that *can instantiate* the property of being beautiful. Thus, were something not to *not* be the kind of thing that can be beautiful, then even if it had microphysical property M it would not be beautiful for that reason. So **Weak Formality** fails,

and the same is true for the more specific (6). For, if being beautiful requires being a certain kind of thing, then being beautiful in virtue of having microphysical property M requires being a certain kind of thing as well.

Instead of (6), however, what is true is something more like:

(6\*) If any object whatsoever has microphysical property M, then *if* that object is the kind of thing that can be beautiful, it is beautiful in virtue of having M.

This reformulation then suggests a more general re-formulation **Weak Formality**.

Again, that principle was stated in the following way earlier in the paper (§1):

**Weak Formality:**  $\exists(x) (Gx < Fx) \rightarrow \forall(y) (Gy \rightarrow (Gy < Fy))$

I now suggest that we replace this principle with the following: (letting ‘ $K_F$ ’ stand for the predicate ‘is the kind of thing that is able to be F’):

**Kind-Dependent Formality:**

$\exists(x) (Gx < Fx) \rightarrow \forall(y) (Gy \ \& \ K_{Fy} \rightarrow (Gy < Fy))$

Let us sum up. Once we recognise that cases of kind-dependent grounding, we can resolve in a compelling way a problem that arises for those who claim that there are differences in non-basic properties between coincidents. This strategy, however, requires rejecting **Weak Formality**, replacing it with **Kind-Dependent Formality**.

Thus, there is motivation for rejecting the former principle, and replacing it with the latter—at least for those with certain background metaphysical commitments (those that in fact many contemporary philosophers share).

Moreover, it seems that this basic strategy can be employed to solve a whole range of similar problems. For if we grant Microphysicalism, then we face exactly the same problem whenever we wish to allow that coincident objects differ regarding any non-basic property. So since it seems plausible to think that whenever such objects differ in their non-basic properties in this way, this is traceable to some difference in fundamental kind, we can employ the same basic strategy as above in order to avoid contradiction when wishing to claim that the coincident objects genuinely differ in terms of the non-basic property.<sup>37</sup>

For instance, by appealing to the kind-dependent grounding strategy, we might be able to make headway with the longstanding problem regarding modal differences between material things. For it is plausible to hold that these modal differences are in some way at least traceable to a difference in fundamental kind.<sup>38</sup> We might also be able to make headway with the important problem as to how persons and their bodies manage to differ in consciousness. For plausibly, this

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<sup>37</sup> It is of note that if indeed we can maintain that whenever coincident objects differ in terms of some non-basic property, this can always (at least in some sense) be traced back to a difference in fundamental kind between them, then we can offer a compelling answer to what Koslicki (2004) calls the ‘similarity problem’. (We could even make headway with this problem if we claimed that many, if not all, cases of coincidents differing in non-basic properties involves the property-differences tracing to their kinds.) Essentially, the problem is to explain not only how the coincident objects manage to differ in certain ways, but also why in certain respects they are the same. That is, we have to explain why some properties (like mass) are shared, whilst others are not shared (like beauty). My answer is that the shared properties are either those that are not kind-dependent or those that are kind-dependent but that can be had by both statues and lumps. Whereas those that are not shared are “kind-dependent properties” that can be had only by statues and not lumps/only by lumps and not statues. Given this view, I submit, we can offer a plausible and principled account as to why (e.g.) the statue and the lump differ with respect to certain properties but not others.

<sup>38</sup> Cf. Fine (2008, p. 106) ‘we ask how it is possible for the piece of alloy to survive being moulded into the shape of a sphere but not possible for the statue, then the answer which most naturally suggests itself is that it is because the one is a piece of alloy and the other is a statue of Goliath that they enjoy the capacities or incapacities for variation in shape that they do.’

difference seems traceable in some sense to the fact that whilst the person is the kind of thing that can be conscious, the same is not true of the body.<sup>39</sup>

## 4.2 An Objection

I now want to deal with an objection.<sup>40</sup> Consider the following case. We have a piece of metal constituting a statue. In this particular case, the piece of metal is not valuable, but the statue is. But one might think that it is just not true that things of the kind *piece of metal* are (in virtue of their kind) unable to be valuable. For perhaps some pieces of metal are valuable whilst some others are not.

The more general problem is this. It might be that x and y are coincident and so share microphysical properties. Yet they differ in non-basic property F. My way to avoid contradiction is to claim that if, say, x lacks F whilst y has it, then x is the kind of thing that cannot be F, and so cannot be F in virtue of the base properties it shares with y (§4.1). But perhaps this won't cover all cases. For perhaps whilst x is not F, other things of the same fundamental kind as x are in fact F.

Let's grant for the sake of argument that such cases are possible. My response is to invoke a different way in which fundamental kinds can condition what grounding relations objects can enter into. Consider the case of the piece of metal that is not valuable—the one that is coincident with a statue that is valuable. By Microphysicalism, plus **Weak Formality**, the piece of metal ought to be valuable when it is not. Yet I cannot respond by saying that the piece of metal is not the kind of

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<sup>39</sup> Indeed, it just *sounds wrong* to say that my body is thinking. As David Wiggins writes, in connection with the idea that we human persons are identical with our bodies, so that our bodies are thinking beings with the same full range of mental capacities as ourselves '...there is something extremely unnatural—so unnatural that the upshot is simply falsity—in the proposition that people's bodies play chess, talk sense, know arithmetic, or even run or jump or sit down.' (Wiggins: 1980, pp. 163-164, cf. Fine: 2008, p. 115 and Johnston: 2007, p. 55.)

<sup>40</sup> I thank an anonymous referee for raising it.

thing that can be valuable and so not the kind of thing that can be valuable in virtue of the microphysical property M that makes the statue valuable, granting that some pieces of metal can be valuable. What can be said, however, is that pieces of metal are not the kind of thing that can be valuable *in virtue of microphysical property M*. Regarding those pieces of metal that are valuable, *they* must be valuable in virtue of having different base properties than those pieces of metal that are *not* valuable. And so they must be valuable in virtue of having different base properties to that base property the piece of metal coincident with the statue (the one that is not valuable) shares with that statue, namely, microphysical property M.

N.b. this view is not *ad hoc*. For if kinds can determine what non-basic properties a thing can have, should they not also be able to determine which base properties can (conditionally) ground certain of their non-basic properties? Moreover, this view has the virtue of explaining why some instances of a kind can have non-basic property F whilst others cannot (if indeed this can be so). The answer is: their kind determines that certain base properties can make them F whilst others can't.

We now see another way in which **Weak Formality** might fail. This thesis claims that if x and y both have G, and if x is F in virtue of being G, then both must be F in virtue of being G. I showed one way in which this might be false in (§4.1). The second reason I now offer why this thesis might be false is that there might be cases wherein x lacks F and y has it, yet whilst x is the kind of thing that can be F, it is not the kind of thing that can be F in virtue of being G—even if it is the kind of thing that can be F in virtue of being H, or J, etc. Again, this means that fundamental kinds can determine not only which non-basic properties a thing can have, and hence which non-basic properties a thing can have in virtue of which

base properties, but also which base properties are able to make instances of the relevant kind have certain non-basic properties.<sup>41</sup>

## 5 Thinking Parts

I have argued that the notion of kind-dependent grounding can do useful metaphysical work within the context of a view that allows for non-basic differences between coincident entities (§4). In this section, I show that this notion can also do valuable work even if we don't countenance coincident things. My strategy will be to consider a problem that arises even if we don't allow for coinciding objects, before explaining how appealing to kind-dependent grounding can solve it.

The problem is known as the 'thinking parts problem'.<sup>42</sup> The trouble is that whilst it seems like I'm the only conscious being in my vicinity, there's an argument that I—like all other human persons—contain a 'mighty host' of conscious beings within my borders. Yet clearly this is absurd. As Merricks (1998, p. 63) writes: '[t]here is not a mighty host of conscious, reflective, pain- and pleasure-feeling objects now sitting in my chair, now wearing my shirt, now thinking about this paper'.

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<sup>41</sup> This response might require us to modify **Weak Formality** even further. For instead of replacing it with **Kind-Dependent Formality**, we might now need to replace it with (letting ' $K_G$ ' stand for the predicate 'is the kind of thing such that, if it is G, then it is F in virtue of being G'):

**Kind-Dependent Formality\***

$$\exists(x) (Gx < Fx) \rightarrow \forall(y) (Gy \ \& \ (K_F y \ \& \ K_{Gy}) \rightarrow (Gy < Fy))$$

I propose, however, not to dwell on this further modification in what follows.

<sup>42</sup> There are several discussions of this problem in the literature, which differ from one another in various ways. See e.g. Burke (2003, 2004), Dorr (2003), Hawley (1998), Kovacs (2010), Merricks (1998; 2001, Ch. 4), Noonan (1998), Olson (1995), Robinson (2006) and Sider (2003). See also Blatti (2016), Madden (2016) and Olson (2007, Ch. 9) who discuss the issue within the context of the personal identity debate.

The problem turns on two plausible ideas. The first of these is that at least some of our conscious properties are intrinsic. (In general, a property is intrinsic just in case the things that have it do so solely in virtue of how they are in themselves, and not in virtue of how they are related to other (disjoint) things. But this no analysis of intrinsicity.) Many arguments for this premise may be given—here I'll just note two considerations.

First, it seems intuitive to think that there could be a 'lonely' object that is conscious (cf. Merricks: 1998, 2001). That is, it seems that something could be conscious despite being the only object that exists. This suggests that at least some conscious properties are intrinsic properties. For if a lonely being can be conscious, then there are at least some conscious properties that a lonely being can have. These properties would then appear to be intrinsic. (In general, if a property passes the 'isolation test'—i.e., if it's instantiable by a lonely object—this is a strong indicator that it's intrinsic.)

Second, there is the intuition that an intrinsic duplicate of one of us would have to be conscious. Consider for example 'swampman', an intrinsic duplicate of one of us 'forged by fortuitous happenings in a swamp' (cf. Hawthorne: 2006, n. 11). Many of us share the intuition that swampman would have to be conscious, due to being an intrinsic duplicate of a conscious being (one of us). This again suggests that there are at least some intrinsic conscious properties. For it tells us that at least some such properties are necessarily shared by intrinsic duplicates, and all theories

of intrinsicality should admit that being necessarily shared by duplicates is at least a good indicator of intrinsicality.<sup>43</sup>

The second core premise concerns the *grounds* of our intrinsic conscious properties. The core claim is that if a material thing has some conscious property F, then there is some *intrinsic microphysical property* M, such that the object has F in virtue of having M. This second premise flows from three ideas. The first is the idea that consciousness is a non-basic property of persons—i.e. a grounded property that is always had in virtue of some other more basic property. The second is the idea, already encountered in (§4), that the non-basic properties of material objects are grounded in their microphysical properties (Microphysicalism). The third idea is that in general, intrinsic properties have intrinsic grounds. Given the first two claims, it follows that when a person has a conscious property, she has this property in virtue of having some more basic microphysical property. The third idea then ensures that the microphysical properties that ground our intrinsic conscious properties are themselves intrinsic.

Now consider some arbitrary human person, P. And let ‘P-minus’ denote that large proper part of P that consists of all of P minus his left foot. (N.b. clearly P and P-minus are distinct, for no object is identical to one of its proper parts. And things that are distinct are necessarily so.) Lastly, consider some other human person, Q, which has all of the same intrinsic microphysical properties as P.<sup>44</sup>

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<sup>43</sup> On some theories, being necessarily shared by intrinsic duplicates is *sufficient* for (and even definitive of) intrinsicality. However, we need not presuppose any of these claims here.

<sup>44</sup> For present purposes, we can think of the intrinsic microphysical properties of an object as being a function of its individual intrinsic properties of, and the spatiotemporal and causal relations obtaining between, its microphysical parts (cf. Merricks: 1998). Given this conception of an intrinsic microphysical property, there is no barrier to supposing that two persons (or a person and a large proper part thereof) might be intrinsic microphysical duplicates.



We now suppose that Q loses his left foot and survives.<sup>45</sup> This means that Q is no longer an intrinsic microphysical duplicate of P, but rather an intrinsic microphysical duplicate of P-minus. Consequently, Q and P-minus now share all their intrinsic microphysical properties.

Now from the first premise set out above—that at least some of our conscious properties are intrinsic—we can suppose that Q instantiates (after the loss of his left foot) some intrinsic conscious property C. Then, given the second core premise, which tells us that intrinsic conscious properties always have intrinsic microphysical grounds, we can then infer that Q has C in virtue of having some intrinsic microphysical property M. So we get:

- (1) Q has intrinsic conscious property C in virtue of having intrinsic microphysical property M.

This then implies:

- (2) Q has intrinsic microphysical property M.

But Q and P-minus share intrinsic microphysical properties. Therefore, from (2), we get:

- (3) P-minus has intrinsic microphysical property M.

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<sup>45</sup> There is a delicate question as to what happens here. For my preferred answer see Author-a (XXXX).

But by **Weak Formality**, we can infer from (1) that:

- (4) If any object whatsoever has intrinsic microphysical property M, then it has conscious property C in virtue of having M.

From (3) and (4) we then infer:

- (5) P-minus has conscious property C in virtue of having intrinsic microphysical property M.

And this entails:

- (6) P-minus has conscious property C.

And this implies:

- (7) P-minus is conscious.<sup>46</sup>

At this point, we have proven that the human person, P, contains a conscious proper part, namely, P-minus. But the reasoning here could easily be extended to prove, not only that P-minus contains a whole multitude of such conscious parts, but also

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<sup>46</sup> I assume here that having at least one conscious property is sufficient for being conscious. Given that conscious properties are determinates of the determinable *consciousness*, this claim follows from the more general idea that having a determinate of some determinable is sufficient for having the determinable itself.

that the same is true for every one of us. It is in this way that we end up with the absurd result that each one of us contains manifold conscious beings.<sup>47</sup>

There are various ways in which one might respond to this problem. One could contest the (implicit) idea that human persons are complex material beings—and hence the kind of thing that can have intrinsic microphysical properties.<sup>48</sup> Or one could deny that there are any intrinsic conscious properties, holding instead that all such properties are extrinsic (Burke: 2003, Hawley: 1998, Sider: 2003). One could also hold that whilst there are some intrinsic conscious properties, such properties are *not* grounded in more basic microphysical properties (Merricks: 1998, 2001). Finally, one could dispute the idea that there are such entities as P-minus in the first place (Olson: 1995, cf. Olson: 2007, Ch. 9). That is, one could contest the claim that we human persons have large undetached proper parts.

It seems to me that each of these options is rather radical. It is certainly radical to hold, in line with either the first or the last option, that we aren't complex material things, and/or that we do not have large undetached proper parts. The more plausible view is surely that we are complex material things, with various large proper parts, including heads and an upper-halves, etc. It also looks quite radical to hold either that there are *no* intrinsic conscious properties, or that such properties are not microphysically grounded. We are therefore left with but one option: reject **Weak Formality** and thereby block the inference from (1) and (3) to (4).

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<sup>47</sup> This conclusion is absurd in and of itself. But it also gives rise to various troubling ethical problems and absurdities. See Johnston (2016) and Unger (2004, 2006).

<sup>48</sup> Compare here Unger (2004, 2006) and Zimmerman (2003), who, in connection with two other problems which seem to over-generate conscious beings, advocate adopting an immaterialist view on which we human persons are immaterial entities. (Compare also Robinson: 2006, who recommends that we deny that we are material beings, and hold instead that we are *events* constituted by the activities of such beings, in order to handle the thinking parts problem. Kovacs: 2010 offers an interesting discussion and critique of this idea.)

This is the answer to the thinking parts problem I recommend.<sup>49</sup> On this view, there is a difference in *fundamental kind* between we persons and our large proper parts, such that whilst we human persons are the kind of object that can be conscious and have mental properties, the same is not true of our (large) proper parts.<sup>50</sup> Given this view, it follows that all conscious properties are “kind-dependent properties”, which can be had only by things of certain kinds. We can then claim that when the person, Q, has conscious property C, she has this property in virtue of intrinsic microphysical property M *only given that* she is the sort of object able to instantiate conscious properties. If this is right, then it follows that (1) is more perspicuously written as:

(1\*) Q has intrinsic conscious property C in virtue of having intrinsic microphysical property M, whereby this grounding relation holds only given that Q is the kind of thing that it is.

Moreover, claim (4) will have to be rejected, in favour of:

(4\*) If any object whatsoever has intrinsic microphysical property M, then *if* that object is the kind of thing that can be conscious, it has conscious property C in virtue of having microphysical property M.

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<sup>49</sup> I have developed this answer to the thinking parts problem in more detail elsewhere. See Author-b (XXXX).

<sup>50</sup> This view presupposes no particular view about what kind of thing we human persons most fundamentally are. It states only that *whatever kind of thing we are*, things of that kind are able to be conscious (at least in propitious circumstances), whilst the same is not true of our large proper parts.

Just as before, accepting (4\*) in place of (4) implies that we should abandon **Weak Formality**, and replace it with **Kind-Dependent Formality** (cf. §4 above).

The crucial point here is that if (4\*) is true instead of (4), then we can no longer obtain (5), (6) and (7), and hence, we can avoid the conclusion that each of us contains a mighty host of conscious proper parts. Moreover, we do not have to make any of the radical moves noted above that other authors have made.

Thus, on the proposed view, our intrinsic conscious properties are grounded by intrinsic microphysical properties. Moreover, there are large proper parts of human persons that share these intrinsic microphysical properties. However, these large proper parts do not instantiate intrinsic conscious properties, despite instantiating their (conditional) microphysical grounds. This is because such properties can only be instantiated by things of a certain kind. Since the large proper parts of human persons are not the kind of thing that can be conscious—a claim that seems to be intuitive enough—it follows that the large proper parts of human persons do not have any conscious properties, despite some of them having all the necessary microphysical properties.<sup>51</sup>

Rejecting **Weak Formality**, therefore, and replacing it with **Kind-Dependent Formality** provides us with an attractive way to handle the thinking parts problem.

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<sup>51</sup> One might wonder whether this view is really consistent with taking some of our conscious properties to be intrinsic. After all, this view seems to imply that Lewisian duplicates (things that have precisely the same perfectly natural properties and relations) can differ in terms of these properties (we can imagine a person and a proper part of some person that are Lewisian duplicates), yet one could reasonably take this to show that none of these properties is intrinsic. I have tackled this objection elsewhere, and so I won't address it here (see Author-c: XXXX). Suffice it to say that so far as I can see, the present proposal does not in any way impugn the claim that at least some of our conscious properties are intrinsic. (Note for instance that on the present view, the allegedly intrinsic conscious properties only ever have intrinsic grounds. This is arguably sufficient to show that such properties are intrinsic. Note also that whilst my proposal makes the instantiation of intrinsic conscious properties in some sense dependent on an object's fundamental kind, this does not threaten the status of those properties as intrinsic. Things would be otherwise if fundamental kinds were extrinsic. However, fundamental kinds are intuitively intrinsic to their instances.)

For if the former principle is replaced by the latter, then, given the intuitive claim that whilst persons are the kind of thing that can be conscious, the same is not true of their (large) proper parts, it follows that *even though persons and the large proper parts thereof can have the same intrinsic microphysical properties*, it is only ever the persons, never their parts, that are conscious in virtue of having such properties. Therefore, since the thinking parts problem arises even for those who don't believe in coincident things, there may be reason for *everyone*—not just those who accept coincident objects—to hold that **Weak Formality** fails, and that the closest thing that holds instead is **Kind-Dependent Formality**.

It might be noted, moreover, that this reply to the thinking parts problem can be extended to handle a wholerange of related problems, which arise whenever two or more material objects (that differ in kind) fail to share some non-basic intrinsic property whilst being intrinsic microphysical duplicates. For whenever such cases arise, e.g. when intrinsic duplicates *x* and *y* are such that *x* has intrinsic property *F* and *y* lacks it, we can say that whilst the objects share their microphysical properties, these properties can do their grounding work only in the case of *x* and not in the case of *y*, for it is only *x* that is the kind of thing that can instantiate the relevant non-basic intrinsic property in question.<sup>52</sup>

The solution to the thinking parts problem developed here, therefore, suggests a more general style of a reply to a broader range of problems. These share a common structure: they arise whenever two material objects (that differ in kind) are intrinsic microphysical duplicates and yet differ regarding some non-basic intrinsic property.

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<sup>52</sup> Think for example of the statue and an intrinsic microphysical duplicate of it which is a mere proper part of some larger block of marble. Intuitively, only the statue is intrinsically beautiful. I suggest we can account for this, despite the fact that it has the same intrinsic microphysical properties as the embedded hunk of marble, and whilst preserving Microphysicalism, by saying that only the statue is the kind of thing that can be intrinsically beautiful.

## 6 Conclusion

The thesis of **Weak Formality** tells us that if one thing *a* is F in virtue of being G, then any possible object that is G is F in virtue of being G. What I have argued here is that despite its intuitive appeal, one can plausibly reject this principle, by appealing to cases of kind-dependent grounding. Specifically, I have argued that there is theoretical utility in treating certain cases as being cases of kind-dependent grounding, whereby these cases show that **Weak Formality** fails.<sup>53</sup>

To do this, I have focused on two metaphysical problems. The first arises if we grant (as many philosophers do) that coincident objects (of different kinds) can differ in terms of their non-basic properties. The problem is that since the properties are non-basic, it is hard to see how the coincident entities could fail to share them, without ending up facing contradiction. The second problem arises even without the assumption that entities can coincide. Here the trouble is that it can apparently be shown that each of us contains manifold conscious parts. Yet evidently this is not so.

What I have tried to show is that both problems can be given elegant solutions if we appeal to the notion of kind-dependent grounding, and thence reject the principle of **Weak Formality**. I submit that this gives us good reason to reject this principle, and to believe that there are genuine cases of kind-dependent grounding.

In short, we began by asking whether it is so that if one thing, *a*, is F in virtue of being G, does it follow that *everything* that is G must be F for that reason? The an-

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<sup>53</sup> I also argued, in (§4.2), that Weak Formality might fail because whilst two coincident objects *x* and *y* are G, and whilst *x* and *y* are both the kind of thing that can be F, the reason *x* is F (in virtue of being G) and *y* is not is that only *x* is the kind of thing for which Gness is an Fness-grounding property. Cf. here fn. 41.

swer is that there appears to be good reason not to accept this. For it appears that maintaining otherwise, by holding that there can be cases of kind-dependent grounding, has theoretical utility, insofar as it enables us to solve a range of metaphysical problems. (It may even be serviceable for solving problems I have yet to consider. I would encourage the reader to explore whether or not this is the case.)

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