Pluralism, Alternate Composition Cases, and Conditional Grounding

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Abstract: This paper discusses a challenge to the pluralist thesis that complex objects depend for their properties on the properties and inter-relations of their basic proper parts. The paper argues that to resolve the challenge, pluralists should reject the widely held idea that grounds necessitate, holding instead that grounding relations can hold conditionally (and hence contingently), and more specifically that the intrinsic properties of composite objects are only conditionally grounded in the properties and relations of their proper parts, whereby the conditions involve extrinsic factors. Notably, this proposal has the surprising consequence that (at least some) genuinely intrinsic properties can have extrinsic conditions on their instantiation.

> [W]hatever can be said about a complex can be said without mentioning it by setting forth its parts and their mutual relations.
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> — Russell, B. 1959: 117)

1 Introduction

Many philosophers accept the pluralist thesis that complex wholes depend upon their parts not only for their existence but also for their properties. One way to make the latter idea more precise is by means of the following grounding principle:

Pluralist Grounding Principle

If some complex object O has some property F, and if O is composed of certain basic parts the XXs, then the fact that O has F is grounded in the more basic fact that the XXs are Φ (where being Φ is a matter of the XXs instantiating certain properties and/or standing in certain interrelations to one another).[1]

Unlike *monists*, *pluralists* claim that wholes are posterior rather than prior to their parts, insofar as the properties of wholes are grounded in the properties and relations of their basic parts, rather than things being the other way around. More specifically, pluralists claim that facts about the properties instantiated by complex wholes are ultimately grounded in facts concerning only the basic proper parts of those wholes and hence in facts that do not mention the wholes themselves, but

[1] For the relevant notion of metaphysical grounding see, among many others in the vast grounding literature, Audi (2012); Fine (2012); Moran (2018: §3); Rosen (2010); Schaffer (2009).

rather just their parts, namely by means of specifying the relevant properties that those parts instantiate and/or the interrelations that they stand in to one another.[2]

My aim in this paper is to set out a challenge to pluralism, so conceived, turning on what I shall call *alternate composition cases*, as well as a plausible and widely held *necessitation principle* governing the grounding relation. As we will see, if alternate composition cases are possible, and if the necessitation principle holds, then an instance of the pluralist grounding principle concerning material wholes and their intrinsic properties, is false, which entails that the pluralist grounding principle itself fails in its full generality. By way of answering the challenge, the paper develops a view on which grounding relations can hold conditionally (i.e., subject to certain background conditions being met), which entails that the necessitation principle is false. The theory also has the further and surprising consequence that genuinely intrinsic properties can have extrinsic conditions on their instantiation.[3]

2 The Challenge

The putative challenge concerns a particular instance of the pluralist grounding principle, which focuses on material wholes and their intrinsic properties. The principle I have in mind, which, I take it, is entailed by the more general principle, is:

> (X) If some composite object O has some (restricted) intrinsic property F, then (i) there are some particles the XXs that compose O and (ii) the fact that O has F obtains virtue of the fact that the XXs instantiate certain individual intrinsic properties and/or bear certain interrelations to one another.[4]

It is assumed here that the particles composing material wholes (composite objects) are grounded in the features of the basic particles composing them. The relevant properties of the basic particles are their intrinsic ones, and the relevant relations are those they bear to one another. This is because intrinsic properties can only ever have intrinsic grounds, so that if O is intrinsically F, this must be grounded only in the way that the XXs composing O are intrinsically, i.e. in and of themselves.

The challenge also turns on two further principles, the first of which captures the plausible idea that *grounding facts necessitate the facts they ground*, so that if one fact Γ grounds another fact Δ, then, necessarily, if Γ obtains then Δ obtains as well. While there are various ways to motivate this principle (cf. Bennett 2011; Skiles 2016; Trogdon 2013), here it suffices just note its intuitive plausibility. After all, as

[2] Strictly speaking, we can distinguish two pluralism/monism contrasts. First, we can distinguish the view that the whole depends upon its parts for its existence from the view that the parts depend upon the whole for their existence. Second, we can distinguish the idea that the whole depends for its features upon the features of its parts from the view that the parts depend for their features upon the features of the whole. It is the second pluralism/monism contrast I have in mind when I employ these terms in this paper. Of course, the second claim entails the first, if Kant is wrong and existence is a genuine property. The converse is not so; however, given the first view, it would be natural to hold the second o too. For discussion cf. Schaffer (2016) and Sider (2008).

[3] N.b. while the present paper focuses on pluralism, it is of note that a structurally similar challenge can be developed for monism. For reasons of space, this is left as an exercise to the reader.

[4] Following Merricks (1998), to avoid distracting counter-examples, the above principle restricts intrinsic properties to those that are *pure* and *qualitative*, and atomic inter-relations to those that are *spatio-temporal and causal*. For further discussion cf. Gilmore (2009); Moran (2021: fn. 1).

Dasgupta (2014) explains, it is highly plausible to think that in general, *grounds settle*, so that if Γ grounds Δ, then whenever Γ obtains, it is thereby *settled* that Δ obtains as well (cf. Fine 2012: 38-39). We thus arrive at the following:

Necessitation Principle

If one fact, Γ, grounds another fact, Δ, then, necessarily, if Γ obtains, Δ obtains.

The second further principle turns on the (metaphysical) possibility of *alternate composition cases*. Consider some material object O, and let O be composed of some particles the XXs. We can suppose that in world *w* (wherein O happens to reside), the XXs compose O whilst satisfying some complex condition Φ. (Here satisfying Φ will be a matter of the XXs having certain individual intrinsic properties and/or relations to each other, i.e., it will be a matter of the XXs having a certain intrinsic arrangement.) We can then further suppose that in some other possible world *w**, which does not contain O, the XXs exist and still satisfy Φ. (In such a world, the XXs will likely compose some other object, O*, distinct from O, though this supposition is not necessary for the present argument to go through.[5]) This constitutes what I am calling an alternate composition case. In general, such cases obtain when we have a complex item composed of some parts arranged in a certain way, such that those very parts could still be arranged in that way yet while failing to compose that particular object. I take it, moreover, that it is easy to generate such cases in regards to complex material wholes and the particles that are their basic proper parts. For it is easy to imagine that we have some particles the XXs satisfying some complex intrinsic condition Φ in one world *w* whilst composing some particular item O, and that these same particles might satisfy that same complex condition Φ in some other world *w** (which does not contain O) while also composing some distinct object O*, or, perhaps, while failing to compose any object at all.

Here is an example that ought to show that alternate composition cases are possible (cf. McKay 1986; Skiles 2015). Suppose that O is composed by some particles the XXs, and that the XXs are Φ, whereby this is a matter of having a certain intrinsic arrangement. (Let O be some human animal, say, and let the XXs be its constituent atoms.) Surely it could happen that O is destroyed whilst the XXs continue on. It might then happen that later, the XXs reunite and come to compose another object O*, whilst once again meeting condition Φ. Given this, however, it would appear that 'intra-world' alternate composition cases are possible; and from here it is an easy step to see that 'inter-world' such cases ought to be possible as well.[6] Accordingly, we now arrive at out third and final principle, namely, the:

Alternate Composition Principle

Alternate composition cases are possible. That is, it could happen that some XXs compose O in *w*, whilst meeting condition Φ (which is a matter of having certain intrinsics and/or interrelations) and yet those same XXs might exist in *w** (which does not contain O) whilst still meeting condition Φ.

[5] What one thinks about the counterfactual cases will depend in part on one's views about whether composition is necessary or contingent. For relevant discussion see Cameron (2007).

[6] Note, moreover, that the argument to follow could be run using either an intra-world or an inter-world alternate composition case.

Our challenge to the pluralist turns on the thought that these two principles, i.e., the Necessitation Principle and the Alternate Composition Principle, are incompatible with (X) and hence with the pluralist grounding principle. In other words, these three principles form an inconsistent triad. Hence, to the extent that the former two principles are plausible, there is a case for thinking that the Pluralist Grounding Principle is false, and that pluralism must be given up (or at least, and more modestly, suitably revised).

To see why these three principles jointly constitute an inconstant triad, consider the following line of reasoning. Let O be any ordinary composite object—a human animal, say, or a table or a rock. And let there be some XXs such that these XXs are the basic particles composing O. Lastly, let O instantiate some intrinsic property F. It follows from the Pluralist Grounding Principle that there is some complex condition satisfied by the XXs—call it 'Φ'—such that O instantiates intrinsic property F in virtue of the fact that the XXs are Φ. We thus end up with:

1. The fact that O has F is grounded by the fact that the XXs are Φ.

Consider now the Necessitation Principle, which implies, given claim 1., that it is impossible for the XXs to be Φ without it being so that O is F. We thus obtain:

2. It is not possible for the XXs to be Φ and for O not to be F.

The trouble now is that the Alternate Composition Principle implies the negation of 2. For, given this principle, there is a world wherein the XXs are Φ and yet where O does not exist, and so in which O is not F. In this way we arrive at:

3. It is possible for the XXs to be Φ and for O not to be F.

Of course, 2. and 3. clearly entail following contradiction, namely:

4. [It is not possible for the XXs to be Φ and for O not to be F] & [it is possible for the XXs to be Φ and for O not to be F]

Thus, our three principles, namely the Pluralist Grounding Principle, the Necessitation Principle, and the Alternate Composition Principle, form an inconsistent triad, since when taken together, they entail a contradiction. It follows that one of them must be false. Moreover, since the Alternate Composition Principle looks solid, and since the Necessitation Principle is very plausible and widely endorsed, the puzzle puts at least some pressure on the Pluralist Grounding Principle, and hence on the general pluralist view that the properties of wholes are always grounded in the properties and relations of their parts.[7,8]

[7] One might initially think that this contradiction can be avoided if one adds further parameters into the relevant facts, e.g., if one adds parameters for times and/or worlds. This kind of move, however, is not ultimately going to succeed, as Skiles (2015) persuasively argues. (All this move does is force one to reformulate the original argument; that is, what we end up with if we pursue this line of response is not a solution but simply a more complicated version of our initial problem.)

[8] One might think that the puzzle does not arise given a counter-part-theoretic account of modality. Suppose that in w the XXs compose O and that the XXs are Φ. Then consider a world

In this paper, my goal is to defend pluralism from this prima facie challenge, by explaining how pluralists can coherently reject the necessitation principle.[9] To make this work, I shall appeal to the notion of conditional grounding; that is, to the idea that one fact can ground another only given that certain background conditions are met. To begin with, however, by way of working towards this position, I will first consider a related 'contingentist' response to our problem (which has been suggested by Skiles 2015), before arguing that whilst this proposal is on the right track, it requires supplementation if we are to have an adequate response.[10]

3 Against Necessitation

This section begins by considering the 'contingentist' response to the challenge for pluralism based on the view set out in Skiles (2015). I then note a problem facing this response, before suggesting a way of supplementing Skiles' reply by means of appealing to the notion of 'conditional grounding'. In this way, we arrive at my proposed response to the problem; a response that allows us to preserve both the Pluralist Grounding Principle and the Alternate Composition Principle.

3.1 Contingent grounding

Alex Skiles (2015, §3), in the course of arguing against what we have called the Necessitation Principle, considers a similar problem to the one we have set out above. In his view, to deal with the problem we are considering, we should simply deny that grounds necessitate. In other words, the view is that instead of being grounding *necessitarians*, as many grounding theorists are, we should instead be grounding *contingentists*. Let us therefore refer to this as *contingentist response*. On this response, the Necessitation Principle fails, because in least certain cases, even if one fact Γ can ground some further fact Δ even if Γ fails to necessitate Δ.[11]

We can distinguish two kinds of contingentism. *Strong contingentism* implies that *no* grounding facts necessitate the facts they ground. *Weak contingentism*, by contrast, implies only that *some* grounding facts fail to necessitate the facts they

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w* containing the XXs wherein the XXs are also Φ. In w*, the XXs will plausibly compose an object, call it O*, given that the XXs compose an object in w and arranged in precisely the same way. (This would follow from a plausible 'locality' constraint on composition, as discussed for example in Laan 2010 and van Inwagen 1990). Given the Pluralist Grounding Principle, O* will also be F (in virtue of the XX's being Φ). Moreover, O* will plausibly be a counter-part of O. Hence, w* will be a truth-maker for the claim that O is possibly F (a property that w* shares with w); and one might think that this precludes w* from being a truth-maker for premise 3. The issues here are delicate, and I propose to glide past them. Counter-part theorists may want to pursue this option, though note that they would also have to hold that composition is necessary, so that there is no world in which the XXs are Φ but don't compose anything at all (and hence don't compose anything that is a relevant counter-part of O). My own views are that counter-part theory is wrong and that composition is contingent, so I am interested here in finding an alternative defence of pluralism.

[9] Note that the resulting strategy may be of interests to monists too, given that one can generate a version of the present challenge in a monistic setting using the Necessitation Principle and a type of case not too dissimilar from what I am calling alternate composition cases. Cf. n.3.

[10] For a related challenge to pluralism, see deRossett (2010; 2023); Taylor-Grey (2023).

[11] For discussions of the idea that at least some grounding relations can hold contingently see Bennett (2011); Chudnoff (manuscript); Leuenberger (2014); Richardson (2021); Trogdon (2013).

ground. That is, it implies that we might have a case wherein although Γ grounds Δ, it is not the case that necessarily if Γ obtains then Δ obtains well—which of course leaves open whether there are also be cases wherein there is some fact Γ* that grounds some fact Δ* such that necessarily if Γ* obtains then Δ* obtains as well.

To my mind, strong contingentism looks implausible. Consider, for instance, the situation wherein *a* is scarlet, and moreover wherein *a* is red in virtue of being scarlet. Is this not a clear counter-example to strong contingentism? For it is surely true that if indeed *a* is red in virtue of being scarlet, then necessarily, if any item *x* is scarlet, that *x* is red in virtue of being scarlet. After all, it would appear to lie in the nature of being scarlet that things with this property are red for that reason.[12] Accordingly, if *a* is red in virtue of being scarlet, then necessarily if *a* is red, *a* is scarlet, this being an instance of the more general principle just stated. Thus, it seems the most that we can accept is weak contingentism. That is, we should maintain at most that whilst in some cases, the grounding fact necessitates the fact that it grounds, this is not so regarding every true grounding claim there is.

The last, however, raises a challenge (cf. Skiles 2020). For, *some* cases of grounding involve necessitation, while other claims do not, we should expect there to be some *explanation* as to why this is so, i.e. some general account as to why it is that certain grounding facts fail to necessitate the facts that they ground, given that other grounding facts do just that. After all, it can hardly just be a brute matter that whilst in some cases, when Γ grounds some fact Δ it is necessary that if Γ holds then Δ obtains, in yet other cases when Γ* (≠ Γ) grounds Δ* (≠ Δ) it is not the case that necessarily if Γ* obtains then Δ* obtains as well. In other words, there has to be some reason why Γ necessitates Δ whilst Γ* does not necessitate Δ*.

To see this, suppose that, following Skiles (2015), we endorse the following view. In certain cases, e.g. when *a* is red in virtue of being scarlet, we have a case in which the grounding fact necessitates the fact it grounds. But in certain other cases, necessitation fails. In particular, in the set of cases that generate trouble given our three principles in the background—the Pluralist Grounding Principle, the Necessitation Principle, and the Alternate Composition Principle—we have a situation wherein the grounding fact fails to necessitate the fact it grounds, so that we have a case of contingent grounding. Now it is true that this view makes our problem from (§2) disappear; for now, we can no longer derive claim 2. So, we don't end up with a contradiction, for we can no longer conjoin 2. with 3. in order to end up with the contradictory conclusion 4. However, this view is problematic, insofar as it leaves open an unanswered question. The trouble is that we must now explain just why necessitation fails in the relevant cases, given that some grounding relations do involve necessitation (even if some others don't). To illustrate the problem further, we can explicitly contrast the following two grounding claims:

(G1) This pillow, *a*, is red in virtue of being scarlet.

(G2) This composite object, O, is F in virtue of its particles (the XXs) being Φ.

[12] *Contra* Audi (2012: 103), however, I deny that whenever <x is G> grounds <x is F>, it lies *G* has a nature such that if anything is G, then it is F for that reason. Cf. Moran (2018, 2021, 2023).

On the weak contingentist response, (G2) is a contingent grounding claim whilst (G1) is not. That is, the fact that the pillow is red in virtue of being scarlet entails that if the pillow is scarlet in any possible world, then it is red in that world too; whereas the fact that O is F (e.g. that some animal is *shaped about like so*) in virtue of the XXs being Φ (e.g. in virtue of the fact that the particles composing the animal have such and such an intrinsic arrangement) *does not* entail that if the XXs are Φ in any possible world then O is F in that world. The present point is that intuitively, there ought to be some explanation for the difference here. Yet the (weak) contingentist line of response, all by itself at least, provides no explanation whatsoever. Indeed, it leaves us no resources to even begin to account for the difference.

There are two lessons to extract here. First, that strong contingentism must be rejected. Second, that merely adopting weak contingentism does not suffice for handling the challenge to pluralism that this paper is concerned with. For, first, weak contingentism by itself tells us only that some grounding facts fail to necessitate the facts they ground, without specifying which facts. What would be needed for a solution, however, is the claim that facts such as <the XXs are Φ> fail to necessitate facts of the form <O is F> (recall the argument in the previous section). And, second, even if we do claim that facts about parts (such as the fact that <the XXs are Φ>) fail to necessitate the relevant facts about their wholes (such as the fact <O is F>), we would need an account as to why exactly necessitation fails across these cases, given that some grounding facts do in fact necessitate their grounds.

This all being said, I think that that the weak contingentist response (as advanced by Skiles) is still very much on the right lines, and that we should respond to our problem by rejecting the Necessitation Principle precisely as the contingentist claims that we should. In my view, then, the right way to proceed is to supplement the contingentist response with further resources. In particular, I think we should appeal to the notion of conditional grounding, in order to resolve the explanatory problem highlighted above. This is the goal of the next sub-section.

3.2 Conditional Grounding

How could it be that some grounding relations, such as the one involved in (G1), involve necessitation, whilst other grounding relations, such as the one involved in (G2), do not. This sub-section offers an answer to this question which invokes the notion of conditional grounding. With the apparatus of conditional grounding on the table, we can then develop an answer to the anti-pluralist challenge.

Let us begin by introducing the notion of conditional grounding.[13] The core idea is that in certain cases, one fact Γ might ground another fact Δ only given that a certain background condition C is met. The thought here is that were C not to be met then Γ would be unable to perform its grounding work in generating Δ, and hence, in general, unless C is met it will not be the case that Δ obtains (in

[13] The notion of conditional grounding is neither new nor (entirely) my own. Moreover, it has recently been put to work in a wide range of theoretical contexts. See Bader (2015, manuscript-a); Fine (2015, 2016); Moran (2018, 2021); Cf. also Dancy (2004: Ch. 3); Epstein (2015); and Sider (2020), who each employ very similar machinery (despite using different terminology).

virtue of Γ obtaining).[14] On this view, as well as recognising grounding relations, we must also recognise conditions that can enable certain grounding relations to obtain (or that can fail to enable those relations to obtain/ disable them from obtaining, namely if the conditions are not met). In turn, this means that we must recognise a robust distinction between grounds and conditions. Thus, the idea *is not* that conditions on grounding relations are simply further partial grounds. Rather, the idea is that grounds are one thing and conditions are something else. As Sider (2020) notes, on the present view, we must conceive of conditions as *sui generis* elements that play a distinct role to grounds in making it the case that certain facts obtain. In Sider's words: '[S]tatements of conditional ground 'must be understood as *sui generis*, in that they cannot be defined as meaning that [a certain collection of facts] A1..., together with the further statement that they satisfy the condition, ground B in the orthodox sense. The further statement [i.e. the condition] is not part of the ground of B; rather it is in light of the further statement [condition] that A1,...ground B' (Sider 2020: 47).[15]

Here it is worth contrasting a similar idea that often comes up in the causation literature. Suppose I cause an explosion by lighting a match. Here we have a causal relation between two events: (1) the explosion and (2) the striking of the match, whereby the latter causes the former. Now arguably, this causal relation holds only conditionally, i.e. only given that a certain background condition is met, namely, that there is oxygen present in the atmosphere. For if this condition were not met, then my striking the match would not cause the explosion. In this case, one could well argue that we do not really have a robust distinction between causes and conditions, but rather that what we really have, at the fundamental level, is just two partial causes for one effect: the striking of the match and the presence of oxygen being the partial causes, and the explosion being the effect they jointly produce.[16]

If there are cases of conditional grounding in my sense, however, then conditions cannot be treated in an analogous way, i.e. simply as further partial grounds of the fact being grounded. That is, if there are cases of conditional grounding, then there are cases where one fact grounds another *only given* that a background condition is met, whereby this condition is not a partial ground of the relevant grounded fact, but is rather a *sui generis* enabler on the grounding fact being grounded by its grounds (and so on that fact holding *simpliciter*, given at least the absence of back-up conditions and of back-up grounds; cf. here n. 14).

Before moving on, it might be useful to have a (putative) example of conditional grounding at work. To this end, consider the problem of grounding

[14] That said, there could be cases wherein Δ still obtains even if C isn't met, namely in cases were either (i) Δ has a 'back-up ground', so that if Γ fails to ground Δ then Γ* nevertheless will, or else in cases wherein (ii) there is a back-up condition C* such that even if C fails to hold if C* is met then Γ grounds Δ. In what follows, however, we can prescind from complications of this sort.

[15] Sider prefers to talk of 'grounding-qua' rather than 'conditional ground'. The basic idea, however, is the same. Let C be a sui generis condition on Γ grounding Δ. Then when C is met, we have a case wherein Γ grounds Δ only *qua* the obtaining of C. So, for instance, if x is F in virtue of being G only given that x is also H, then it is only qua being H that x is F in virtue of being G.

[16] Note, however, that if one does think a robust distinction between causes and conditions can be drawn, then given the strong similarities between causation and grounding as generative relations (cf. here Schaffer 2016 and Wilson 2017) this arguably gives us further reason to think that one can draw a robust distinction between grounds on the one hand and conditions on the other.)

accidental universal generalisations (often attributed to Russell 1918). Suppose that in possible world *w*, as matter of contingent fact, all swans are white (of course this cannot be the actual world, since our world contains black swans). Let us stipulate, also, that in *w*, there are three white swans: S1, S2 and S3. In this scenario, it is extremely tempting to say that the accidental universal generalisation <All swans are white> is both true and also grounded by the congeries of facts <S1 is white>, <S2 is white>, <S3 is white>. For in general, it is tempting to think that universal generalisations are grounded by their instances. However, a plausible variation on the Necessitation Principle (extended so as to deal with many-one grounding claims) would imply that any world wherein S1 is white, S2 is white, and S3 is white must be a world wherein all swans are white. Yet this is obviously not so, for there is clearly a possible world wherein there is an extra swan, call it S4, whereby this swan is not actually white, and yet which co-exists with S1, S2 and S3 (which of course *are* all white). The point is that in this world, it is not so that all swans are white. Hence the problem: it seems clear that universal generalisations are grounded in their instances; yet, it also appears that accidental generalisations cannot be so grounded, or at least not if grounds necessitate the facts they ground.

In reply to this problem, both Ralf Bader (manuscript-a) and Ted Sider (2020) have (independently) suggested what is essentially the same solution, which involves giving up the relevant necessitation principle. In other words, it involves saying that whilst (in *w*) <all swans are white> is grounded by the congeries of facts <S1 is white>, <S2 is white>, <S3 is white>, it does not follow that in all worlds wherein these three grounding facts obtain it is also true that all swans are white. That is, these grounding facts only contingently (many-one) ground the relevant accidental generalisation that all swans are white.

Here is the view on some more detail. First, it is asserted that the instances do indeed fully ground the relevant generalisation. However, it is then is added that, as Sider would put it, they only do so *qua* being all of the instances there are. Or as Bader would say: the instances ground the generalisation, yet only given that a certain condition is met, namely, that there be no further instances (no further swans). Accordingly, in worlds wherein these are not all of the instances, they will not ground the accidental universal generalisation that all swans are white.[17]

What I propose to do here is to employ a similar solution to the problem faced by the pluralist, again involving conditional grounding. Before getting to this, however, let us return to the explanatory challenge that we must face if we are to maintain that whilst (G1) is a grounding claim involving necessitation (G2) is not.

(G1) The mug is red in virtue of being scarlet.
(G2) Composite object O is F in virtue of its particles the XXs being Φ.

[17] I'm not claiming that this is the *best* available solution to the problem of grounding accidental generalisations. But note how it improves on the idea that among the *grounds* of the generalisation is a 'totality fact' entailing that *there are no more swans* (as in Armstrong 2004). The trouble is that such 'totality facts' are not plausible candidates to be among the fundamental facts. Eventually, therefore, we'll need an account on which generalisations are not even partly grounded in such facts.

One important thing to note is that whilst (G1) is an *intra-object grounding* claim, (G2) is an *inter-object grounding* claim (for this distinction see Bader, this volume).[18] The crucial point is that when it comes to (G1), the mug itself shows up in both the grounding and the grounded fact. It is the fact that the mug is red that is grounded by the fact that the mug is scarlet. We thus have an intra-grounding claim. Regarding (G2), however, there is no single object that shows up both in the grounding fact and the fact that is grounded. Rather, we have the XXs in the grounding fact and the composite object O in the grounded fact. We thus have an *inter-object grounding claim*. These claims are therefore importantly different. Moreover, this difference, I want to say, already suggests that whilst (G1) will conform to the Necessitation Principle, (G2) will likely not, due to the fact that in general inter-grounding claims will be associated with back- ground conditions that must be satisfied if the relevant relations are to obtain.[19]

One reason why this is so is that when we have an inter-object grounding claim, the grounding fact will often not even be sufficient for the *existence* of the entity involved in the fact that it grounds.[20] In the case that we are interested in, however, the reason that necessitation will fail is rather that the relevant inter-object grounding claim is such that even if that the grounding fact obtains, there are substantive mereological conditions that must be met if the grounded fact is to hold in virtue of the grounding fact. To see this, consider again (G2). What is going on here, I claim, is this: the grounding fact does not necessitate the grounded fact since there is a contingent mereological condition that must be met if the one fact is to ground the other. For again, what (G2) states is that the fact that O is F is grounded by the fact that the XXs are Φ. However, it is clear that for this grounding relation to hold the XXs must compose O and be O's parts. After all, were the XXs not to compose O and yet be Φ, then naturally O would not be F in virtue of the XXs being Φ. Hence, the right way to think about (G2) is in terms of the notion of conditional ground. And so that claim is most perspicuously written as:

(G2*) The fact that the XXs are Φ grounds the fact O is F *given the condition* that the XXs compose O.

We can now see why the grounding fact involved in (G1) but not the grounding fact involved in (G1) fails to necessitate the fact it grounds. The reason is that the latter grounding claim holds conditionally, whereby the condition that has to be met is a contingent one that is not met in all metaphysically possible worlds. The explanatory challenge raised earlier in connection with these two claims can thus be met. For what explains the difference here is that whilst the fact that the mug is

[18] This distinction is I think of deep (albeit as yet unrecognized) importance to the theory of grounding. It is also in effect the ground-theoretic analogue of Kim's neglected but deeply important distinction between single-domain and multiple-domain supervenience (see Kim 1993).

[19] This is not to say that there are *no* inter-object grounding claims such that the grounding fact necessitates the fact it grounds. I just mean to say that often this is not so, and that moreover this is a generally a *structural* feature of inter-object grounding claims (for reasons I shall presently set out). Likewise, I don't mean to say that there are no intra-object grounding claims that are conditional and contingent. (In fact, I claim that there *are* conditional intra-object grounding relations in Moran 2018, 2021.)

[20] This is I think one of a range of important lessons to extract from deRossett (2010, 2013).

scarlet unconditionally grounds the fact that the mug is red, the fact that the XXs are Φ only conditionally grounds the fact that O is F, whereby the condition is that the XXs compose O, which is a contingent mereological condition (i.e., the XXs need not compose O in all worlds where they are Φ, as per our discussion in §2).[21]

At this point, we have all of the tools that we require to resolve our initial problem. But we have also learnt something important about the inter-object grounding claims that the Pluralist Grounding Principle commits us to, and in particular claims such as (X) on which our challenge to the pluralist depends. For whenever a composite object O has some intrinsic property F in virtue of some YYs having certain properties and/or standing in certain relations, the relevant grounding relation will hold only given that those YYs compose the complex item *X*. Or put another way: it is only *qua* composing the relevant complex that the instantiation of Φ by the YYs will make it so that the complex item has the relevant property.

3.3 Solving the Problem

This sub-section explains how we can solve our central problem whilst preserving the Pluralist Grounding Principle and without having to claim that alternate composition cases are impossible. What we must do, I claim, is reject the Necessitation Principle by appealing to the machinery of conditional grounding.

Let us briefly recap the argument from (§2). First, we derive the following claim from (X), itself entailed by the more general Pluralist Grounding Principle:

1. The fact that O has F is grounded by the fact that the XXs are Φ.

Now I believe we should accept this claim. However, by the Necessitation Principle, it follows that whenever the XXs are Φ, O is F. Thus, we end up with:

2. It is not possible for the XXs to be Φ and for O not to be F.

The trouble is that by the Alternate Composition Principle we know that:

3. It is possible for the XXs to be Φ and for O not to be F.

And so accordingly, via conjunction introduction we end up with:

4. [It is not possible for the XXs to be Φ and for O not to be F] & [it is possible for the XXs to be Φ and for O not to be F]

[21] I want here to flag a potential objection that I deal with below in (§4). For the sake of simplicity, why not just treat the alleged condition here as a partial ground of the fact? Perhaps the main reason is that the condition is an extrinsic one: it is an extrinsic matter that the XXs com- pose O (rather that some other object O*). Yet instantiations of intrinsic properties can only have intrinsic grounds. Accordingly, the fact that O has F cannot be grounded in the fact that the XXs compose O along with the fact that they are Φ. Rather, we have to filter out the extrinsic requirement that the XXs compose O as a mere condition due to the fact that intrinsic properties must have intrinsic grounds. (There would be no problem here, of course, if it were intrinsic to the XXs that they compose O. However, there is good reason to think that this is not the case, cf. n. 26 below.)

In this way we reach contradiction. So once again, something must give.
Again, it is my view that we should reject the Necessitation Principle. Specifically, I believe that we should maintain that there can be contingent grounding claims, due to the fact that there can be claims of conditional grounding, whereby whether or not the condition is met is a contingent matter. Indeed, I think this is precisely the case regarding claims like 1. in the above argument. The key idea is thus that this claim would actually be much more perspicuously written as follows:

1*. The fact that O has F is grounded by the fact that the XXs are Φ, on the condition that the XXs compose O.

However, given that it is a contingent matter that the XXs compose O (as is brought out by 3., another claim we should accept, since we should accept the Alternate Composition Principle), it follows that we can reject the move to:

2. It is not possible for the XXs to be Φ and for O not to be F.

The argument, therefore, fails; for we can no longer conjoin 2. with 3. in order to reach the contradiction as expressed by 4., which is what shows that our three principles form an inconsistent triad. Again, the principle to be rejected is the Necessitation Principle. Moreover, we can reject this principle in a plausible and principled way. For there is good reason to think that the grounding claims entailed by the Pluralist Grounding Principle will be always conditional in nature, whereby the conditions are at least partly both mereological and contingent.

4 Intrinsic Properties and Extrinsic Requirements

I have thus far set out a solution to the problem that we began with. The key is to view certain mereological relations as conditions on certain grounding relations obtaining, and to do this, in particular, in all cases wherein some composite object has an intrinsic property in virtue of some particles having a certain intrinsic arrangement.[22] What I want now to draw out is that, given our focus on intrinsic properties and on the composite objects that have them, the proposed reply has the consequence that certain intrinsic properties of composite objects can have extrinsic requirements on their instantiation. The trouble with this, of course, is that intrinsic properties cannot have extrinsic grounds. Accordingly, what we need is a way of viewing the extrinsic requirements here not as grounds of the relevant fact (i.e., the fact the composite object has the intrinsic property) but in some other way.

In my view, what we should say is that the relevant requirements are to be treated as *conditions* on the relevant property being instantiated, rather than as being *grounds* of that property being had. The idea, as will become clear in what follows, is that can we can thereby filter out the extrinsic requirements as mere

[22] Cf. the related idea that multiple-domain supervenience theses require a co-ordination relation which in cases of part-whole supervenience is often a mereological one (cf. Bader: 2013a). This serves to strengthen the analogy between single-domain and multiple-domain supervenience on the one hand and intra-grounding and inter-object grounding claims on the other (cf. n. 18 above).

conditions and thus respect the idea that instantiations of intrinsic properties necessarily have intrinsic grounds (cf. Moran 2021: §4 for further related discussion).

In fact, there is independent reason for thinking that certain intrinsic properties have extrinsic conditions on their instantiation in this way (cf. Bader: manuscript-b; Moran 2021). Consider for instance a statue that is (intrinsically) beautiful. And then consider some proper part of some block of marble which happens to be an intrinsic microphysical duplicate of the statue.[23] Plausibly, the proper part of the block of marble is not itself beautiful (intrinsically or otherwise). And yet it seems to have all that it takes at the microphysical level for being intrinsically beautiful; for after all, at the microphysical level, it is intrinsically just like an intrinsically beautiful object, i.e. the statue it is an intrinsic microphysical duplicate of.

How could this be? In my view, what we should say is that the statue is intrinsically beautiful in virtue of having certain intrinsic base properties which the mere proper part of the block of marble shares. The idea is that the statue is intrinsically beautiful in virtue of having those intrinsic base properties, yet only given the condition that it is a certain kind of thing: namely *a statue*, and hence the kind of thing that can be beautiful. Given this view, we can then say that the embedded proper part within the block of marble fails to be intrinsically beautiful in virtue of exemplifying the intrinsic base properties that it shares with the beautiful statue due to being a *mere proper part of some block of marble*, which makes it fail to meet the condition of being the kind of thing that can be beautiful.

Suppose we accept this view of matters. Since the property of being intrinsically beautiful is obviously and trivially an intrinsic property, we apparently have a case where an item has an intrinsic property in virtue of having certain intrinsic base properties, despite the fact that there is an extrinsic *condition* on the grounding relation obtaining and hence on that intrinsic property being had.[24,25]

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[23] Items *x* and *y* are intrinsic microphysical duplicates iff the atoms composing *x* are just like the atoms composing *y* in terms of their individual intrinsics and their relations to each other.

[24] One might wonder whether this strategy really preserves the intrinsicality of the relevant property. To this I say: the strategy at hand allows the relevant property to be such that whenever it is had, it is had solely in virtue of intrinsic factors. However, if a property always and necessarily has intrinsic grounds, then it is surely intrinsic. (One might also worry that this strategy allows us to misclassify extrinsic properties as intrinsic, e.g. take the extrinsic property E* that is the conjunction of intrinsic property I and extrinsic property E. If we treat E as a mere condition on E* being instantiated, and I as the full ground, then we seemingly turn E* (as if by magic) into an intrinsic property! This is the problem of spurious intrinsics, which I have addressed in great detail elsewhere (see my [omitted-c]). However, the basic response here involves noting that all cases of spurious intrinsics will involve treating genuine grounds as mere conditions. For instance, with the example just mentioned, it is clear that E is a partial ground of E* and not a condition on E* being instantiated, for in general conjunctive properties like E* are had *in virtue of* their conjuncts. Thus, their conjuncts are genuine grounds and would hence be *misclassified* as mere conditions.)

[25] One might also worry that this strategy is incompatible with certain plausible definitions or analyses of intrinsicality that have been defended elsewhere (thanks to an anonymous referee for pressing this objection). Consider for example the Lewisian account on which he plausible thought that intrinsic properties are those preserved across perfect duplicates. On the proposed account, certain intrinsic properties will fail to be preserved across duplicates thanks to those duplicates differing in terms of whether they meet the relevant extrinsic conditions on having that property. In reply, I note that it isn't clear just what the cost is, in the present context, of denying that Lewisian duplicates can differ in intrinsics, given that we can plausibly replace the Lewisian account with a ground-theoretic account (a la for instance Bader 2013b and Rosen 2010) on which intrinsic properties are those that only ever have intrinsic grounds. Indeed, the duplication account of

Note that this this intended only as an example, to bring into view the possibility that an object might have an intrinsic property in virtue of having some intrinsic base property whilst also having that property only given that it meets a certain extrinsic condition. The crucial point is really just that this general claim—that there can be cases of this kind—is not incoherent, since it does not violate the maxim that intrinsic properties (or rather instantiations thereof) must have (and only ever have) intrinsic grounds. For on the view in question, the relevant extrinsic requirements are 'filtered out' as mere conditions on certain grounding relations obtaining, and, consequently, are not themselves treated as grounds. Accordingly, the reader does not actually have to accept the above view regarding the statue and the embedded lump of marble. Rather, one need only to recognise the coherence of cases of wherein intrinsic properties have extrinsic requirements on their instantiation, whereby the extrinsic requirements are viewed as mere conditions. (The above example of the statue is merely meant to offer an illustration of such a case.)

I have argued so far that we can make sense of an intrinsic property being had in virtue of intrinsic base properties whereby there are extrinsic requirements on its instantiation that are to be viewed as conditions. With this in mind, we can address an important worry that one might have regarding the proposed response to our central problem (from §2).[26] The worry, essentially, is that my account introduces needless ideologically complexity. For my reply to our problem introduces the ideology of *sui generis* conditions on grounding relations obtaining, whereas this is not—so the thought goes—in fact necessary. For really, all that we need is the already recognised distinction between full grounds and partial grounds. On this alternate and allegedly simpler view, the way to solve our problem is to amend the Pluralist Grounding Principle, and the more specific principle (X) that it entails so that the latter, in particular, now claims states that states when a composite object O exemplifies some intrinsic property F, this is so *partly* in virtue of the fact that the XXs that com- pose O are Φ (i.e. that they have such and such an intrinsic arrangement), and *partly* in virtue of the fact that those XXs actually compose O. We thus avoid the complex ideology of conditions on grounding relations and yet still solve our initial problem, while also preserving a form of pluralism according to which the properties of wholes are grounded in facts about the properties and relations of certain more basic items as well as compositional facts to the effect that those more basic entities combine to compose the whole that is in question.

The trouble with this ideologically simpler alternate reply (and hence with the above objection to my account) is that one cannot treat the mereological fact that the XXs compose O as part of the ground of the fact that O has intrinsic property F. This is because it is an extrinsic matter that the XXs compose O.[27] Yet intrinsic properties cannot have extrinsic grounds. Hence, we have to filter out this extrinsic requirement by treating it as a mere condition in order to allow the fact that the

intrinsicality is rather problematic (see Bader 2013b for arguments to this effect), and so questions arise about just how costly it is in general to deny that Lewisian duplicates never differ in intrinsics.

[26] I briefly mention this worry in n. 21 above.

[27] For instance, for the XXs to compose O (when they do) rather than some other item the causal history of the XXs matters, as does their spatio-temporal trajectory up to that point (cf. Wiggins: 1980). In short: it is extrinsic whether the XXs compose O. Hence, we must treat the fact that the XXs compose O as a condition on the grounding relation holding between the XXs being Φ and O being F (and so derivatively on O being F simpliciter) rather than as a partial ground.

XXs are Φ to (fully) ground the fact that O has the intrinsic property of being F. That is, we have to understand that claim 1. is most perspicuously written as:

1*. The fact that O has F is grounded by the fact that the XXs are Φ, on the condition that the XXs compose O.

On this view, when a composite object has an intrinsic property, it has it solely in virtue of its basic proper parts (i.e. the simple particles that compose it) meeting some complex condition, whereby their doing so is an intrinsic matter.[28] Yet this grounding relation holds only given that the relevant parts of the object *compose that object* in the relevant situation. The fact that these parts compose the object is not a ground of the fact that the object has the relevant intrinsic property, but is rather a condition that must be met in order for the object to possess this property in virtue of its basic proper parts meeting some complex intrinsic condition and hence on its possession of that property *simpliciter* (given certain assumptions).

The proposed response to the problem, therefore, brings out an interesting result, namely, that if we wish to hold on to the pluralist position to the effect that wholes are posterior to their parts—and thus are as they are in virtue of their parts being as they are—then we must hold that (i) grounding claims can be conditional (whereby in the case of composite objects the conditions are both mereological and contingent) and that (ii) intrinsic properties can have extrinsic conditions on their instantiation. As I see it, that we must make these claims does not count as a cost of the present proposal, but rather a clarification of what accepting the Pluralist Grounding Principle commits us too, and hence as a clarification of the commitments that go with accepting, in general, a pluralistic metaphysics.

4 Conclusion

In this paper, I have considered a problem that arises given the following three plausible principles, namely the Pluralist Grounding Principle, the Necessitation Principle, and the Alternate Composition Principle. The trouble is that these plausible principles form an inconsistent triad, so one of them has to go.

I have argued here that we can resolve this puzzle by rejecting the Necessitation Principle. I have also claimed that there are good reasons for doing this, given at least that we want to retain the other principles. For this then means that we have independent reason to think that certain grounding claims obtain conditionally, whereby the condition will be mereological and contingent—e.g. the fact that O is F will hold in virtue of some particles the XXs being Φ (i.e. instantiating certain intrinsics and/or certain interrelations) *on the condition* that the XXs compose O (in at the relevant situation). On the proposed view, therefore, it is only on the condition of composing O that the fact that the XXs meet complex condition Φ makes it the case that O has intrinsic property F.

[28] I set aside here cases of constitutive overdetermination or overgrounding (cf. Rosen 2010), wherein an object has intrinsic property F fully in virtue of having intrinsic property G and fully in virtue of having intrinsic property H (G = H). For in such cases it is clear that x's being G is not the sole ground of the fact that x is F (even if it is the—or rather *a*—full ground of this fact).

Again, an interesting corollary of this view is that intrinsic properties can have extrinsic requirements on their possession. In the literature on the intrinsic/extrinsic distinction, it is widely held that if a property has extrinsic requirements on its possession, then it must be extrinsic. What we should really hold, however, at least given the apparatus of conditional grounding, is that this is not so, since intrinsic properties can be instantiated in virtue of intrinsic grounds but on the condition that certain extrinsic (e.g. mereological) requirements are met.[29]

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[29] My thanks to two anonymous referees for Oxford University Press for helpful comments on an earlier draft.

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