

# Parts generate the whole, but they are not identical to it<sup>1</sup>

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## Abstract

The connection between whole and part is intimate: not only *can* we share the same space, but I'm *incapable* of leaving my parts behind; settle the non-mereological facts and you thereby settle what is a part of what; wholes don't seem to be an additional ontological commitment over their parts. Composition as identity promises to explain this intimacy. But it threatens to make the connection *too* intimate, for surely the parts could have made a different whole and the whole have had different parts. In this paper I attempt to offer an account of parthood that is intimate enough but not too intimate: the parts generate the whole, but they are not themselves the whole.

## 1: Puzzles with parthood

Common sense about parthood pulls us in two directions. It is a relation that seems to be peculiarly intimate in some respects, but not in others. Let's start with some puzzles about parthood:

- 1) Why are your parts always where you are? When you leave the house, of necessity your parts leave with you? Why? Why does bearing this relation, *parthood*, to those things mean that they have to follow you around? You can leave the house and leave your children, your possessions and your spouse behind: what makes *parthood* different from *parenthood*, *ownership*, or *marriage*?<sup>2</sup> This is a special case of a more general puzzle: why does the whole inherit properties from its parts? Why am I partly red if I have a part that is wholly red? Whether my dog is red doesn't speak to my colour profile in the slightest: what is it about my relationship to my parts as opposed to my relationship to my dog, e.g., that explains this inheritance?
- 2) How can you share exactly the same space as your parts at the same time? My parts, collectively, are exactly where I am just now – how can we both fit? Of course, some

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<sup>2</sup> You could chop your arm off, of course. But the only way to leave a part behind is for it to cease to be a part of you. What calls out for explanation is why, at all times, the things that are a part of me at that time are where I am. See Williams (2008) for further discussion of this puzzle.

people won't see that as a puzzle, as they see spatially coincident entities all over the place: the statue sharing the same space as the lump, the person sharing the same space as the human animal, etc. But those who are attracted to a monistic account – identifying the statue and the lump and the person and the animal (or denying the existence of one in each case) – in order to preserve the thought that no two entities can be in the same place at the same time (or *at least* that such co-location is not ubiquitous!) should also find it *prima facie* puzzling how an entity and *some* entities can be in exactly the same place at the same time. Saying that there's no puzzle because those entities are *parts* of the one entity is no solution: we want to know what it is about parthood that allows for this. The many things I bear the *is a cousin of* relation to couldn't be in the same place as me at the same time (even if their collective volume equaled the volume I occupy), so what is different about parthood that lets the many things I bear the *parthood* relation to occupy the same place as me at the same time?<sup>3</sup>

- 3) Intuitively, once you settle the non-mereological facts, you thereby settle the mereological facts: there can't be two possible worlds indiscernible in all respects describable in non-mereological terms but which are mereologically discernible.<sup>4</sup> Why not?
- 4) Intuitively, wholes are no additional ontological commitment over their parts. If you're weighing up how well a theory is doing with respect to ontological parsimony, if you count some thing that it posits and then count its parts, you have double-counted. But why? If you count a thing, you should count its cousins in addition to it – you don't get my cousins for free once you've got me, so why should you get me for free once you've got my parts?<sup>5</sup>

These puzzles call out for an understanding of parthood that explains the special intimacy between whole and part. Puzzles 1 and 3 present us with a failure of recombination: when one relatum drags along the other(s), it calls out for explanation; when some facts supervene on others, it calls out for explanation. The second puzzle, instead of asking why something *isn't* possible asks how it *is*: how is it that the relata of this relation can co-locate? The fourth is methodological: what accounts for the intuition that wholes are an ontological free lunch – no addition of being once you've got their parts?

What should our conception of parthood be so that we can explain the tight connection between whole and part and thus explain the above failures of recombination etc? Now, of course one

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<sup>3</sup> This puzzle is put forth as an argument for composition as identity by Wallace (2011).

<sup>4</sup> Even Markosian, who thinks that it's simply a brute matter when some things compose some other thing, thinks that we should believe that it is "impossible for two worlds to be duplicates with respect to non-mereological universals but differ with respect to composition." (Markosian 1998, p216-217.)

<sup>5</sup> See, e.g., Lewis (1991, p81): "Given a prior commitment to cats, say, a commitment to cat-fusions is not a *further* commitment. . . if you draw up an inventory of Reality according to your scheme of things, it would be double counting to list the cats and then also list their fusion."

could just deny the data: Raul Saucedo, precisely on combinatorial grounds, is driven to accept the possibility of the whole being in one place and the parts being elsewhere<sup>6</sup>; I myself, for similar reasons, previously advocated the non-supervenience of the mereological facts on the non-mereological<sup>7</sup>; and as I've said, one might simply refuse to see the possibility of co-location as something that needs explaining (especially if one thinks such co-location is ubiquitous), and clearly one could just deny that complex objects are no additional ontological commitment over their parts. I won't argue against such responses here; in any case, I think there is value in asking what we need to think about parthood to explain the intuitive intimacy between whole and part.

One response to such puzzles is the thesis that composition is identity. Why can't you go to the shops and leave your parts behind? Because they are you! This necessary connection is no stranger than the fact that you can't go and leave yourself behind – indeed, it's the same fact. How can your parts be in the same place at the same time as you? Because they are you! This is as explainable as the fact that you can be in the same place as yourself at the same time – indeed, it's the same fact. Why does the non-mereological description of the world settle the mereological facts? Because the non-mereological description includes a description of what there is, and once you've settled what there is you've settled what is identical to what (namely: everything that there is is identical to itself, and nothing to anything else), and the facts about what is identical to what just *are* the facts about what composes what. The fact that the mereological supervenes on the non-mereological is no more mysterious than the fact that the identity facts supervene on the non-identity facts – indeed, it's the same fact. Why shouldn't you count the wholes as a mark against ontological parsimony once you've already counted the parts? Because the whole *is* the parts: it would *literally* be double counting to do so. The fact that positing the sum of the Xs is no additional cost over positing the Xs is no more mysterious than the fact that positing the Xs is no additional cost over positing the Xs – indeed, it's the same fact.

And so the thesis that composition is identity attempts to resolve the above puzzles by explaining what it is about parthood that makes it different from parenthood etc. such as to make tractable these otherwise puzzling claims. This is a big mark in the thesis' favour. As Ted Sider says<sup>8</sup>,

Everyone accepts the inheritance principles [that the whole is where the parts are, that the whole's intrinsic nature supervenes on the parts' intrinsic natures]. If they are true, then the part whole connection is a uniquely intimate one. The intimacy of this connection must be explained. The best explanation is a conception of parthood that renders the connection between parts and wholes as intimate and identity-like as possible.

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<sup>6</sup> Saucedo (2011).

<sup>7</sup> Cameron (2007).

<sup>8</sup> Sider (2007, p75).

Let's be clear, though, that it's the thesis that composition *really is* identity that has a chance of explaining the puzzles in question. The weaker thesis that Sider calls moderate composition as identity doesn't explain the puzzling claims about the intimacy of parthood because that thesis simply is a collection of such claims: it doesn't tell you what it is *about* the parthood relation that makes for such an intimacy. Similarly, Lewis's claim that composition is analogous to identity<sup>9</sup> doesn't explain anything, because the question simply becomes: *why* is it analogous to identity in the respects that it is? Merely claiming the analogy doesn't tell you what it is about the parthood relation that makes it analogous to identity, and that is exactly the puzzle. So to explain the intimacy, one needs to believe that composition and identity are literally one and the same relation.

That strong thesis does yield a picture of parthood as an especially intimate relation. But on the other hand, the thesis that composition is identity threatens to make the link between whole and part *too* intimate. Our ordinary thinking about parthood sanctions the thought that whole and part are not so tightly bound as to demand that they stand in that relationship of necessity. The whole could exist without having its actual parts as parts, and the parts could exist without composing the thing they actually compose. I could have lacked my legs, and I would still have been me; my house could have been built from different bricks and still been it; my parts could have been scattered across the universe and would have still been those very same parts, but they would not thereby have composed me. The thesis that composition is identity is in at least a pro tanto tension with this. If I simply *am* my parts and this is what it *is* for them to compose me, how could I fail to be composed of them or they fail to compose me?

Now we could bite the bullet and accept the threatened extreme mereological essentialism, or we could enter the murky waters of the inconstancy of modality *de re*, but what would be best is if we could steer a middle ground: if we could offer an account of parthood that made it intimate enough to explain the above puzzles but not so intimate as to rule out the modal flexibility that seemingly occurs in what parts make up what wholes. Can there be such a relation?

## 2: Relations and free lunches

It's common to single out relations whose obtaining is settled by the mere existence of the relata, and relations whose obtaining is settled by the intrinsic natures of the relata. Let's call these *internal* and *intrinsic* relations, respectively.<sup>10</sup>

A relation R is *internal* iff<sub>df</sub> necessarily, for all x and y, if Rxy then necessarily, if x and y exist then Rxy obtains in virtue of the existence of x and y. R is *external* otherwise.

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<sup>9</sup> Lewis (1991).

<sup>10</sup> The terminology in the literature is a mess, with some people using 'internal' to talk about relations where the mere existence ensures the obtaining of the relation, others using it to refer to relations where it is the intrinsic nature of the relata that ensure that the relation obtains. I prefer to use the terminology as I do in the text (which is the more traditional usage), but it's purely stipulative.

A relation  $R$  is *intrinsic* iff<sub>df</sub> necessarily, for all  $x$  and  $y$ , if  $Rxy$  then necessarily, if there is a duplicate  $s$  of  $x$  and a duplicate  $t$  of  $y$ , then  $Rst$  obtains in virtue of  $s$  and  $t$  having the intrinsic natures they have.  $R$  is *extrinsic* otherwise.

Note that I'm talking about the relational fact obtaining *in virtue of* the existence, or intrinsic natures, of the relata. This is a departure from the norm, where modality is used in the definition: the internal/intrinsic relations are those whose obtaining *supervenies* on the existence/intrinsic natures of the relata. I think modality is the wrong tool to use here. The interest of internal/intrinsic relations is that the obtaining of the relation is an ontological free lunch<sup>11</sup>: it's something you get for free once you have the existence (or intrinsic natures) of the relata. But modality is too coarse-grained to capture the structure required for something to be no addition of being over something else; for that, we need something hyperintensional – we need grounding. The fact that you've necessarily got Socrates' singleton when you've got Socrates surely doesn't tell you that the singleton is no addition of being over Socrates, for the necessitation holds in the other direction as well<sup>12</sup>, and *one of them* has to have ontological oomph! They can't each be no addition of being over the other, or we wouldn't have anything at all; but it would be ad hoc to simply pick one and say that *it* is the free lunch. But if Socrates *gives ground* to his singleton, that's another matter entirely. This relationship is asymmetric, and it's not ad hoc at all to say that if Socrates gives ground to his singleton then his singleton is no genuine addition of being over Socrates. The fact that numbers exist necessarily if they exist at all doesn't give you any reason to deny that Platonism is a cost against parsimony: numbers are still an addition of being, despite their existence supervening on anything you like – they'd just be an addition of being that couldn't have been avoided. But if the existence of the numbers is *grounded* in the non-numerical world, that is another matter: in that case, they plausibly are no ontological cost over what gives ground to them.

I think we should expand on the above definitions: there are more interesting divisions amongst the relations for those interested in free lunches. While internal relations hold in virtue of the nature of the relata, we should acknowledge relations where one relatum is of special importance: where its mere existence gives ground to the very existence of the other relatum as well as to the fact that the relation holds between them. Following Bennett<sup>13</sup>, let's call such a relation a *superinternal* relation.

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<sup>11</sup> See, inter alia, Armstrong (1997, p12): "What supervenes is no addition of being. Thus, internal relations are not ontologically additional to their terms."

<sup>12</sup> Cf. Fine (1994).

<sup>13</sup> Bennett (2011b). Actually, I'm not using the term in quite the same way as Bennett, but the differences are minor and not relevant for present purposes.

A relation is *superinternal* iff<sub>df</sub> necessarily, for all x and y, if Rxy then necessarily, if x exists then y exists in virtue of the existence of x and Rxy obtains in virtue of the existence of x.<sup>14</sup>

Superinternal relations are very interesting: superinternal relations allow God to create some objects and then get for free a whole bunch of other objects related by superinternal relations to the first objects. To the extent that there is a reason to think that internal relations are no addition of being over the relata, so is there reason to think that the free objects you get with superinternal relations are no addition of being over the relatum that does the grounding. So to return to Socrates and his singleton, *is a member of* is plausibly a superinternal relation, with the members giving ground to the very existence of the set as well as to the fact that they belong to it. If so, both the set and the relation are an ontological free lunch: no further ontological commitment over the members. By contrast, the relation *being greater than* that holds between numbers is internal but not superinternal. Once we've got two numbers, it follows from their very nature which is greater than the other, so you don't need to add the relation to your ontology to ground those facts. But since there is neither a first nor a last number, it is not tenable that when one number is greater than another, one of those numbers exists in virtue of the other, for then there would be an infinite regress of ontological groundings that never bottomed out. (And that's bad!)

And once we've recognized superinternal relations, a bunch of similar relations also look of interest. We might be interested, e.g., in *superintrinsic* relations, whereby the intrinsic nature of a thing grounds that some thing exists and is so related to it.

A relation R is *superintrinsic* iff<sub>df</sub> necessarily, for all x and y, if Rxy then necessarily, if there is a duplicate s of x, then y exists in virtue of s having the intrinsic nature it has, and Rsy obtains in virtue of s having the intrinsic nature it has.

I think the best version of Aristotelianism about universals is the thesis that *instantiation* is a superintrinsic relation. What has ontological priority are particulars, and particulars being a certain way gives ground to the universal properties that are those ways, with the particular instantiating the universal in virtue of it being the way it is. You can't have the universal F-ness without some thing that is F to give ground to it, but any thing that is F will be such a ground, thus explaining the necessary connection of universals on particulars without necessarily tying the universals to any *specific* particulars.

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<sup>14</sup> This definition tells you that it is the relatum that is named first that is the privileged one. Of course, the order of the names in the syntactic string 'Rab' is completely arbitrary. I'm assuming that whenever there is a relation R, there is a relation S, such that Sba iff Rab. And it's a completely arbitrary decision which one we focus on and call 'the' superinternal relation. So suppose we adopted the convention of writing 'a belongs to set S' as 'MEMBER(S,a)'. Then the definition will tell us that *being a member of* is not superinternal. But no matter: just ignore that relation then, and focus on *being a member of\**, where MEMBER\*(a,S) iff MEMBER(S,a), which is superinternal.

Or we might be interested in relations where both the identity and the intrinsic nature of a thing is needed to give ground to the other relatum and the obtaining of the relation. Or we might be interested in three place relations where the existence of the third relatum and the obtaining of the relation is grounded in the fact that some two place relation holds between the first two relata. Or . . . etc. There are many options. But what these options have in common is that some entities give ground to others, either by virtue of their mere existence, or by virtue of the way they are, or the way they are related, etc.

### 3: Solving the puzzles: composition as identity versus composition as superinternal relation

Identity is an internal relation. Given *a*, nothing further is needed to ground the fact that *a* is identical to *a*. It is of the nature of each thing that it is *that* thing, and so each thing grounds that it is identical to itself: no relation of identity need be added to our ontology to account for the facts of identity. This is the truth that is closest to Wittgenstein's false claim that identity is not a relation. So those who claim that composition is identity are claiming that it is an internal relation. Identity is not a superinternal relation, because nothing gives ground to its own existence: one relatum of a superinternal relation grounds the existence of the other relatum, but the relata of the identity relation are the same, and nothing grounds its own existence. So if composition is identity, composition is an internal but not a superinternal relation. Nor is identity amongst the family of relations similar to superinternal relations, for in those relations one relatum is always at least a partial ground for the existence of another relatum, and nothing is even a partial ground of its own existence.

I think we should reject the claim that composition is identity. The tight connection between whole and parts should not be secured by making the connection identity: instead, we should explore taking composition to be a superinternal, or similar, relation. The parts are not identical to the whole; but they do give ground to the whole (at least in part).<sup>15</sup>

Take the simplest view available. Composition is a superinternal relation: for every possible case in which the *Xs* compose *Y*, the *Xs* ground the fact that *Y* exists and that *Y* is composed of the *Xs*. What does this view get us?

I think that this view handles the opening puzzles just as well, or better, than composition as identity. Let's start with the inheritance puzzle: why am I always where my parts are, and why am I always partly red if I have a red part or massive if I have a massive part, etc.

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<sup>15</sup> The view I'm defending is similar in some respects to that of Bennett (2011a, ms.), who argues that composition is one amongst a family of building relations, and that building relations are in general superinternal relations.

Because, in general, a derivative object inherits its properties from what gives ground to it, in that the properties of the derivative thing supervene on the properties of the things that ground its existence. And this is true because the derivative object has its properties *in virtue of* the features of its grounds.

Is this just shifting the problem? Don't we simply now need an explanation for *why* derivative objects have their properties in virtue of the features of their grounds? Well, to quoque for composition as identity: as Sider says, we shouldn't overestimate the ability of composition as identity to explain the inheritance puzzles, for these puzzles concern not only why I am the way my parts are but also why the way I am is related intimately to the way that *each* of my parts are.<sup>16</sup> It might follow trivially from composition as identity that the location of me is the same as the collective location of my parts: but what explains the relationship between where the parts are collectively and where each part is? Why does my arm come with me when I leave the house? Because it is amongst the things that are me. But what explains why the *collection* of parts that is me is in the union of the regions that each thing that is amongst that collection occupies? Why is it that the location some things collectively have is intimately related to the location each of those things has?

The non-distributive properties that some things collectively have supervenes on the properties that each of those things singularly has. But supervenience claims are never explanations, they always call out for explanation, so what explains this? Plausibly, it is that when there are some things, they collectively have the properties they do *in virtue of* the things each having the properties they have. This *in virtue of* claim, I think, is of the same status as that concerning derivative objects having their properties in virtue of how their grounds are: both claims are massively plausible, and resist further explanation. So far, then, composition as identity is on a par with composition as superinternal relation.<sup>17,18</sup>

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<sup>16</sup> Sider (2007, p79).

<sup>17</sup> Someone might try to insist that we don't need to appeal to any *in virtue of* claim when explaining why the non-distributive properties some things collectively have supervenes on the properties each of those things have on their own. Rather, the thought goes, when we say that the Xs are collectively F, this *says the same thing*, or *picks out the very same fact*, as some claim of the form x1 is G and x2 is H and x3 is J . . . and x1 bears R to x2 and x2 bears S to x3 and . . . etc (where x1, x2, x3 etc are amongst the Xs). That is: claims about how some things are just pick out the same fact as complex claims about how each of those things are and how they are related to one another. If that's true, it's not that the former facts hold *in virtue of* the latter facts: they are the same facts! Whereas, the thought goes, the same can't be said for claims about how derivative objects are: these do *not* pick out the same facts as claims about how their grounds are (at least, not if we have the inflationary understanding of derivative objects discussed in fn.23).

Reply. I don't think it's plausible that claims about how some things collectively are say the same thing as any claim about how those things are individually; but the defender of composition as identity *certainly* shouldn't think that this is the case, for then all her apparently controversial metaphysical claims about some one thing being identical to some many things, etc, would simply turn out to say the same thing as uncontroversial claims about some things being some things. She would be unable to distinguish her radical thesis from mereological nihilism with a fancy semantics. (See Cameron (2012).) For her thesis to be interesting she needs to hold that as well as the Xs being the Xs (which everyone thinks), there is the *extra* fact that there is an *individual* which is the Xs.

Similarly with the possibility of co-location. Composition as identity explains how I can be where my parts are, since I am they. But how can one of my parts occupy an area that I pervade<sup>19</sup>: I take up a greater space, a fortiori I completely take up *that* space, so how can my part which is distinct from me also fit in there? Composition being identity doesn't help until – as above – we make an assumption about the properties that pluralities of things collectively have and how this relates to the properties each of the things that are amongst that plurality singularly have. What explains why y, who is amongst the Xs, can be exactly located in a region that the Xs pervade? Because the Xs collectively have the location property they have partly in virtue of the facts that y has the location property it has and that y is amongst the Xs. But if this is a good explanation in the case of pluralities and their members, I think it is just as good in the case of derivative objects and their grounds. Why can y, who is amongst the entities that ground the existence of X, be wholly located in a region that X pervades? Because X has the location property it does partly in virtue of y having the location property it has.

What about ontological commitment? It's certainly not an uncommon claim that derivative entities are no further mark against ontological parsimony: Jonathan Schaffer, in particular, makes heavy use of the claim that derivative objects are no additional ontological cost over the entities that give ground to them.<sup>20</sup> Is it more puzzling why a derivative object is no extra commitment over its grounds than that a collection of things is no further commitment once you've counted each of those things? I think not, and that the temptation to think otherwise is due to an adherence to Quine's criterion of ontological commitment, which should be rejected by anyone who accepts the distinction between fundamental and derivative entities.

A collection of entities is certainly not some extra thing – the collection – in addition to the things in that collection. When I say that there are some students occupying the lecture theatre, I am not quantifying over some new thing – the collection of students; rather, I am using a new kind of quantification – plural quantification – to quantify over the things I already recognized (*this* particular student, and *that* particular student, etc). By contrast, when I say that there is some thing – the *sum* of the students, e.g. – that is a derivative entity whose being is grounded in the existence of the students, this *is* using the bog-standard existential quantifier to quantify over

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<sup>18</sup> To be upfront, in neither case do we have an explanation for why the location of the complex object is the union of the locations of its parts. Saying that the complex object has its location in virtue of its parts' locations – whether that is because it is grounded in them or is identical to them – only immediately entails that the location of the whole supervenes on the locations of the parts, but it is compatible with, e.g., the whole always being exactly 10 yards north of where the parts are. But again, the explanations are on a par: each theorist simply has to make a further assumption about *how* collections of objects/derivative objects inherit their properties from the objects that are amongst that collection/give ground to them, and in each case further explanation for the assumption does not seem to be forthcoming.

<sup>19</sup> X pervades a region R iff X exactly occupies a region that has R as a part, and so no part of R is free from X. See Parsons (2007).

<sup>20</sup> Schaffer (2007, p189; 2009, p361; 2008; forthcoming, section 2.3).

a new thing. And hence, after our Quinean upbringing of seeing the ontological commitments as what goes into the domain of the bog-standard existential quantifier<sup>21</sup>, it is natural to see the derivative entity as an additional commitment over its grounds in a way we don't see the collection as an additional commitment over its members. But really, anyone who thinks – as Quine did not – that the things that there are divide into the fundamental and the derivative in a metaphysically substantive sense, with the former giving ground to the latter, should deny that the mark of ontological commitment is being in the domain of the existential quantifier. Quine's criterion of ontological commitment is tailor made for those who think that all that there is is on a par with respect to being. If in contrast to Quine I think, as Meinong did, that there are things that lack being, then I should think that acknowledging that there are these things incurs no ontological commitment. Derivative entities don't *lack* being<sup>22</sup>, but their being is *inherited* from their grounds, and so for similar reasons I should think that acknowledging that there are these things incurs no *further* ontological commitment over the commitments their ultimate grounds incur.<sup>23</sup> As Jonathan Schaffer says<sup>24</sup>, the relationship between a derivative thing and its grounds is akin to that between a derived ideological notion its primitive analysans. No-one would think that you incur an extra ideological cost in defining a new notion from your primitive ideology; likewise, we should not hold that you incur an additional ontological cost in accepting derivative entities whose being is entirely the result of what you've admitted to your fundamental ontology.

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<sup>21</sup> Quine (1953).

<sup>22</sup> There are two ways to treat the fundamental/derivative distinction. One view treats derivative entities in a very deflationary manner. On this view, to say that the parts give ground to the whole is to say that *really* there are just simple entities but that we can *represent* this reality of simples by using talk of complex objects. On this view, complex objects really have no being: what's going on is merely that we can use complex object *talk* to represent – in a more pragmatically useful but less metaphysically perspicuous manner – our world of simples. This view is just mereological nihilism, but with an account that aims to reconcile that metaphysic with the literal truth of sentences involving talk of complex objects. This is what Sider is talking about when he talks about complex objects being a logical construction from simples (2007, p77). This is *not* the view being put forward in this paper. In this paper I am following Schaffer (2009) in taking grounding to be a relation that holds between non-representational *objects*: what's grounded is the existence of some thing, not the truth of some representational entity. This is a more inflationary view about derivative objects: they genuinely have being (an account of reality could not be correct if it failed to mention them), but their being is inherited from their grounds. On the difference between the inflationary and deflationary conceptions of the fundamental/derivative distinction, see von Solodkoff and Woodward (ms.). On the deflationary conception, derivative entities have no being, *a fortiori* they are no addition to being over the fundamentals; on the inflationary conception, derivative entities have being but it is entirely inherited from the fundamentals, and so they are no *addition* to being.

<sup>23</sup> Does this mean that if there is an infinitely descending chain of entities, each grounded by the next, that I can avoid being ontologically committed at all? Surely not! But if not, that might cause you to doubt the claim that derivative entities are a free lunch: when everything is derivative it's not the case that everything is a free lunch, so why should the derivative things be a free lunch in the lucky case when there's a bottom level?

I think the person who holds that derivative entities inherit their being from their grounds should simply dig in their heels and insist that these infinite descent cases are impossible, because in such a case there's nothing to grant being on any of the things that there are. As Jonathan Schaffer says of such cases: "being is infinitely deferred, never achieved". (Schaffer (2010, p62).)

<sup>24</sup> Schaffer (forthcoming, section 2.3).

It's also worth mentioning that taking composition to be a superinternal relation also secures any ideological advantage composition as identity does. Ted Sider argues for mereological nihilism – that everything lacks mereological structure – on the grounds that if this is true then we do not need to invoke mereological vocabulary to completely and truly describe the world: hence, mereological nihilism is ideologically simpler than its rivals, and this is a reason to believe it.<sup>25</sup> Of course, the argument doesn't hold water against composition as identity: if the mereological notions are being reduced to the familiar ideology of identity, then it is no ideological cost to admit mereological structure to the world. But nor does it hold water against composition as a superinternal relation for then the relation is a free-lunch: the mereological facts obtain in virtue of non-mereological facts, and hence mereological notions are no addition to primitive ideology.<sup>26</sup>

So far, then, I think composition as identity and composition as a superinternal relation are on a par in responding to the puzzles: they each do an adequate job of explaining the puzzling phenomena, provided at least that we accept certain claims concerning the grounding of properties in each case. For puzzle 3, however, I think taking composition to be a superinternal relation does better.

I don't think composition as identity actually does explain the supervenience of the compositional facts on the non-compositional. Let's look again at the argument that it does. What I said above was: 'The non-mereological description [of the world] includes a description of what there is, and once you've settled what there is you've settled what is identical to what . . . and the facts about what is identical to what just *are* the facts about what composes what.'

That was too quick. Suppose the Xs actually compose some single thing, A. If composition is identity, does this entail that the mere existence of the Xs suffices for them to compose some single thing A? I think not. Of course, it follows from our assumption (by the necessity of identity) that in every world in which the Xs exist, A exists and is identical to the Xs. And it follows from this and (the necessity of) composition as identity that in every world in which the Xs exist they compose A. But what *doesn't* follow is that A is an individual in every world in which it exists. It is consistent with composition being identity that A/the Xs is an individual, but contingently so: in some worlds it is a mere plurality of things. In which case, it is contingent whether the Xs compose some individual. And so the compositional facts about what collections of things compose individuals do not supervene on the non-compositional facts: one must add to the supervenience basis claims about what collections of things are identical to some one thing – but those are compositional facts, if composition is identity: they are precisely the facts about what collections compose individuals. Now of course, the defender of composition

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<sup>25</sup> Sider (ms.).

<sup>26</sup> Nor is it an ideological cost to believe in grounding itself if Bennett (2011b) is right, as I think she is, that grounding is itself a superinternal relation, for in that case when p grounds q p also grounds that p grounds q: the grounding facts are themselves a free lunch, and the grounding relation no addition to primitive ideology.

as identity can add to their theory additional claims that will secure the supervenience thesis: both the essentialist claim that individuals are essentially individuals and non-individuals essentially non-individuals or the de dicto necessity claim that necessarily every plurality of things is identical to some individual thing will do the trick. But while the resulting theory *entails* the supervenience claim, it doesn't *explain* it. Those additional claims are far from obvious, after all. It may be that their adoption results in a simpler, more elegant theory: but while that would give you *reason to believe* the supervenience claim, it doesn't *explain* it. Classical extensional mereology might be the simplest and most elegant of the traditional views on parthood, but while this gives you a reason to believe in universal composition it doesn't explain why every collection of things composes some thing: it's merely built into the theory that it does.<sup>27</sup>

So the promise of composition as identity explaining the supervenience of the compositional on the non-compositional was a false hope. And here, composition as superinternal relation does better, for the supervenience claim then simply follows from the supervenience of the derivative facts on the fundamental ones. And that the derivative supervenes on the fundamental is plausible no matter what your particular views on composition are, so *at least* we've managed to subsume the compositional supervenience claim under a supervenience claim that we should believe anyway. Furthermore, there is at least the potential for giving further explanation to this supervenience claim. I am attracted to a view whereby the extent of what is possible is *settled* by the grounding facts: the idea being that it is part of the story of how the reference of the modal terms gets fixed that there be free modal recombination concerning fundamental reality and that when p grounds q it be necessary that if p then q. Developing such a view is beyond the scope of this paper, but clearly it promises to explain the supervenience of the derivative on the fundamental.

#### 4: Composition, Superinternality and Modal Looseness

In the previous section I argued that the *intimacy* of parthood is as well explained, or better explained, by taking composition to be a superinternal relation than by taking it to be identity. But what about ensuring that it is not *too* intimate – does composition as superinternal relation help secure the intuitive modal flexibility between whole and part?

A little, but not much. Since one thing can have different grounds in different worlds, the view allows that the whole could have been composed of different parts, but since the grounds necessitate what they ground, this can only be the case in worlds where it's not the case that all of its actual parts exist. But intuitively, I could have lacked my arm as a part not only because it failed to exist, but because it existed but was severed from me.

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<sup>27</sup> For a far more detailed version of the arguments in this paragraph see Cameron (2012).

The fix is simple. What grounds my existence is not merely my parts, but my parts being arranged a certain way. Necessarily, those parts being arranged that way is sufficient for my existence, but all the parts could exist and I fail to exist if those parts are not so arranged, for then my actual grounds would not obtain. And those parts can exist and not be so arranged but I exist and be composed of *other* parts that *are* appropriately arranged.

That this is possible is due to the flexibility of the current approach. Something can be grounded by the mere existence of the Xs, or it can be grounded by the Xs being F, or by the Xs being R-related, etc. And different options will naturally lead to different modal profiles for the grounded entity. This is a major advantage of the present approach over composition as identity. If I am simply identical to my parts then I am them no matter how they are, or how they are arranged. Since the parts retain their identity no matter what properties they have or how they are related, there is simply no option for a composition as identity theorist to hold that any complex object has persistence conditions tied to its parts being appropriately arranged or having appropriate properties.

It's not that we have to make some kind of choice here: is the whole grounded just in the existence of the parts, or is it in them being R-related, etc? We can accept *all* these options. There are simply many complex objects with my parts as parts – there is the one whose existence is grounded simply in those parts, who would be a scattered object were those parts scattered; there is the one whose existence is grounded in those parts being spatially related as they are, which would not exist (or at least, would not be composed of them) were the parts scattered; there is the one whose existence is grounded in those parts being spatially related as they are and having the intrinsic nature they have, which would survive neither a scattering of the parts nor an intrinsic change in any of the parts . . . etc. Which of these complex objects is *me* just depends on how we're using our language.<sup>28</sup> We shouldn't be worried about there being all these complex objects because, of course, they are no extra ontological commitment over the entities involved in each of their grounds. Nor should we be worried about the fact that there are all these actually coincident objects, since the fact that they share the same location is explained by the inheritance of their location from the locations of those entities which are involved in each of their grounds. Again, this is a welcome flexibility of the current approach over composition as identity which simply cannot recognize distinct entities sharing the same parts (since things just *are* their parts).

The view we've arrived at is similar to the Aristotelian view defended by Kit Fine. Fine agrees that the mereological sum of my parts is not me because those parts must be appropriately

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<sup>28</sup> And, of course, it may be a vague and/or context sensitive matter which of the many objects that share my parts is the referent of 'Ross'. Thus this view sits nicely with Laurie Paul's account of the context dependency of essentialist judgements: things don't (contra counterpart theory) have variable essences, but what things we refer to is contextually shifty, and the different candidate referents have different essences, thus accounting for the contextual shiftiness in essentialist *judgements*. See Paul (2004, 2006).

arranged: so the relevant relation gets in on the action with the parts for me to come about. But on the Finean view, the relation becomes an extra part: albeit a part I have in a different way to my material parts. Here is Fine<sup>29</sup>:

Given objects *a*, *b*, *c*, . . . and given a relation *R* that may hold or fail to hold of those objects at any given time, we suppose that there is a new object—what one may call “the objects *a*, *b*, *c*, . . . in the relation *R*.” So, for example, given some flowers and given the relation of being bunched, there will be a new object – the flowers in the relation of being bunched (what might ordinarily be called a “bunch of flowers”). Intuitively, this new object is an amalgam or composite of the component objects *a*, *b*, *c*, . . . and the relation *R*. But it is a composite of a very special sort. For the components and the relation do not come together as coequals, as in a regular mereological sum. Rather, the relation *R* preserves its predicative role and somehow serves to modify or qualify the components. However, the result of the modification is not a fact or state. It is a whole, whose components are linked by the relation, rather than the fact or state of the components being so linked.

It’s important to realize how radical Fine’s view is. *R* is working as a very odd kind of part here. Normally a part contributes to the nature of the whole in a very straightforward manner – how the part is affects how the whole is: so if I have a red part, I am partly red; if I have a massive part, I am massive; if I have a positively charged part then I am positively charged, unless I have negatively charged parts to balance it out. That’s not what *R* is doing. *R* is abstract: but the bunch of flowers is in no way abstract. *R* is colourless: but the flowers are not even partly colourless. *R* isn’t affecting the nature of the thing that has it as a part by way of how it itself is, but rather by way of how things that instantiate it are: *R* is a part, but is affecting the whole more as if the whole instantiated it than as if it had it as a part in the familiar way. I confess, my understanding of parthood strains to see how this could be.

I think it’s a mistake to take *R* to be an additional part of the bunch of flowers. The bunch of flowers and the mere aggregate of the flowers have the same parts (the flowers): what differentiates them and accounts for the difference in temporal and modal persistence conditions is the different manner in how those parts participate in grounding the existence of the whole. The mere aggregate is grounded simply in the existence of the flowers, the bunch of flowers is grounded in those same flowers being arranged a certain way. But the relation doesn’t, I say, get to be an additional part of the bunch of flowers: it is simply that it is only when the parts are so related that they participate in grounding the existence of the bunch of flowers that has them as parts. We don’t need to recognize a new, mysterious way in which something can be a part: we just need to recognize the multitude of ways in which parts can be involved in grounding the existence of a whole.

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<sup>29</sup> Fine (1999, p65). Cf. Koslicki (2008).

I think the temptation to take the relation to be a part of the object is due to a mistaken trend in metaphysics: that of trying to make ontological identifications. Here's a common way of proceeding: we have the stock of things whose existence we're happy to start with (the Xs), and we have a stock of operations on the Xs that we're happy to use to generate new things (mereological summation, combining into a set, e.g.), and we have some things we'd like to believe in but whose existence is somehow metaphysically worrisome (the Ys), and so we attempt to identify each of the Ys with an X or with some thing that can be generated from some of the Xs by means of the operations we've allowed. And if we *can't* make such an identification, we either need to reject the existence of the recalcitrant Y, or we need to add to the stock of the Xs or to the stock of generating operations. So consider an alleged entity like The Supreme Court.<sup>30</sup> There are lots of apparent truths about the Supreme Court, so it seems like we should believe in it. But we don't just want to take it as a metaphysically basic entity: it seems related to the justices that 'make it up' in an important way that needs explaining. Is it the sum of the justices? Seemingly not, for that doesn't get the modal or temporal persistence conditions right, given that the Supreme Court has had, will have and could have had different justices. Furthermore, the Supreme Court justices could also be members of another judicial body that had different powers (and, hence, is distinct from the Supreme Court). Intuitively, this will be a group of the same kind as the Supreme Court: in which case neither thing can be an entity that is individuated by its members (such as a set, or a mereological sum as classically understood). And so, if we want to believe in such things, we are driven to add a new generating operation: the justices do not *compose* the Supreme Court, nor is it a set of which they are members – rather, they *constitute* it. And when the Xs constitute Y, it is stipulated, they can also constitute some distinct Z; they may fail, or have failed, to constitute Y, and some distinct Vs could, or could have, constituted Y. We are given no intuitive understanding of constitution, however, beyond that it happily satisfies the principles that barred mereological composition or set formation from playing the required role. I think all this is a mistake. What we should be doing is not asking how to identify the Supreme Court with an X, or an entity generated from the Xs by our approved methods; rather, we should be asking how the Xs might *ground* the existence of the Supreme Court. It cannot be the mere existence of the justices that grounds its existence, since they can exist and have nothing to do with the court; rather, it is that these people have these powers bestowed upon them in accordance with the rules of the US constitution that grounds that there is a Supreme Court. And nothing more needs to be said. It's not that the Supreme Court *is* their having such powers. If there is an entity picked out by 'the justices having the powers of the Supreme Court' then it is a state of affairs – but the Supreme Court isn't a state of affairs. There's nothing informative we can say about what the Supreme Court *is* – it's just the Supreme Court. But there are informative things we can say about what *grounds* its existence. And likewise with complex objects.

## References

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<sup>30</sup> See Uzquiano (2004) for discussion of the puzzle that follows and a defence of the constitution solution.

- Armstrong, D.M., (1997), *A World of States of Affairs*, Cambridge: Cambridge University Press.
- Bennett, Karen, (2011a), ‘Construction Area (No Hard Hat Required)’, *Philosophical Studies* 154(1), p79-104.
- Bennett, Karen, (2011b), ‘By Our Bootstraps’, *Philosophical Perspectives* 25, p27-41.
- Bennett, Karen, (ms.), *Making Things Up*.
- Cameron, Ross, (2007), ‘The Contingency of Composition’, *Philosophical Studies* 136(1), p99-121.
- Cameron, Ross, (2012), ‘Composition as Identity Does Not Settle the Special Composition Question’, *Philosophy and Phenomenological Research* 84(3), p531-554.
- Fine, Kit, (1994), ‘Essence and Modality’, *Philosophical Perspectives* 8, p1-16.
- Fine, Kit, (1999), ‘Things and Their Parts’, *Midwest Studies in Philosophy XXIII*, p61-74.
- Koslicki, Kathrin, (2008), *The Structure of Objects*, Oxford: Oxford University Press.
- Lewis, David, (1991), *Parts of Classes*, Oxford: Blackwell.
- Markosian, Ned, (1998), ‘Brutal Composition’, *Philosophical Studies* 92, p211-249.
- Parsons, Josh, (2007), ‘Theories of location’ in Zimmerman (ed.) *Oxford Studies in Metaphysics Vol. 3*, Oxford: Oxford University Press, p201-232.
- Paul, L.A., (2004), ‘The Context of Essence’, *The Australasian Journal of Philosophy* 82(1), p170-184.
- Paul, L.A., (2006), ‘In Defense of Essentialism’, *Philosophical Perspectives* 20, p333-372.
- Quine, W.v., (1953), ‘On What There Is’ in W.v. Quine (ed.), *From a Logical Point of View*, Cambridge, MA: Harvard University Press, p1-19.
- Saucedo, Raul, (2011), ‘Parthood and Location’, in Bennett and Zimmerman (ed.) *Oxford Studies in Metaphysics Vol.6*, Oxford: Oxford University Press, p225-284.
- Schaffer, Jonathan, (2007), ‘From Nihilism to Monism’, *The Australasian Journal of Philosophy* 85, p175-191.
- Schaffer, Jonathan, (2008), ‘Truthmaker Commitments’, *Philosophical Studies* 141(1), p7-19.
- Schaffer, Jonathan, (2009), ‘On What Grounds What’, in Chalmers, Manley and Wasserman (eds.) *Metametaphysics*, Oxford: Oxford University Press, p347-383.
- Schaffer, Jonathan, (2010), ‘Monism: The Priority of the Whole’, *Philosophical Review* 119(1), p31-76.
- Schaffer, Jonathan, (forthcoming), ‘Why the World has Parts: Reply to Horgan & Potrc’ in Goff (ed.) *Spinoza on Monism*, London: Palgrave.
- Sider, Theodore, (2007), ‘Parthood’, *The Philosophical Review* 116, p51-91.
- Sider, Theodore, (ms.), ‘Against Parthood’.
- Uzquiano, Gabriel, (2004), ‘The Supreme Court and the Supreme Court Justices: A Metaphysical Puzzle’, *Noûs* 38(1), p135-153.
- von Solodkoff, Tatjana and Woodward, Richard, (ms.), ‘Noneism, Ontology, and Fundamentality’.
- Wallace, Meg, (2011), ‘Composition as Identity: Part 1’, *Philosophy Compass* 6(11), p804-816.

Williams, J.R.G., (2008), 'Working Parts: Reply to Mellor', in LePoidevin (ed.) *Being: Contemporary Developments in Metaphysics*, Cambridge: Cambridge University Press, p81-106.