# Ontology and Overdetermination



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**ONTOLOGY AND OVERDETERMINATION**

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## 1. Introduction

Common-sense ontology – our commitment, in our everyday talk and thought, to such entities as tigers and tables and baseballs and gloves, and perhaps even to *pairs* of gloves – serves us pretty well. Trenton Merricks argues, however, that – except in the case of conscious composite objects, which he thinks *do* exist – common-sense ontology is mistaken. There *are* no tigers or tables or baseballs or gloves; there are merely smaller things (simples or 'smallest causes'; let's call them 'particles') arranged tigerwise, glovewise, and so on.

Merricks' argument runs as follows. First, we have no good 'ordinary' reasons to believe in what he calls 'essentially mere causal overdeterminers'. If Pair – a pair of gloves consisting of Lefty and Righty – exists, then Pair overdetermines all of its effects, because there is nothing that Pair causes that isn't *also* jointly caused by Lefty and Righty. Similarly, if Lefty exists then Lefty overdetermines all of *its* effects, because there is nothing that Lefty causes that isn't also jointly caused by S (a leather shell), L (a lining) and T (some thread). And so on. Second, we have *philosophical* reasons to *disbelieve* in things that are essentially mere causal overdeterminers – especially if we have no good ordinary reasons to believe in them. Putting the two stages of the argument together, we get the conclusion that we have good reasons to think that no composite objects such as Pair, Lefty, Righty, S, L, T, and still smaller composite objects exist.

In §§2 and 3, I consider the two halves of Merricks' argument separately. I start, in §2, with Merricks' claim that we have no ordinary reasons to believe in Lefty and its ilk, and I argue that the main principle that Merricks appeals to in his argument is unjustified. In §3, I dispute Merricks' claim that we have good *philosophical* reasons *not* to believe in Lefty. In §4, I show briefly that even if, by the lights of my own argument, we have good ordinary reasons to believe in a two-headed couch-carrying monstrosity composed of me and Trenton, the terms of the debate are such that this is does not count against the argument. Finally, in §5, I very briefly sketch a possible answer to the 'Special Composition Question' – when do some objects (such as S, L and T) compose a further object (such as a glove)? – that broadly respects common-sense ontology.

*2. The Case Against Lefty*

Let's start by considering Merricks' claim that Lefty (say) is '*of necessity* wholly causally redundant' [PAGEREF]. I'm going to grant the truth of that claim: it's true that, of necessity, whatever Lefty causes (if it exists) is *also* jointly caused by other things – viz, whatever composes Lefty. But we need to be careful about what we mean by 'causally redundant'. Strictly speaking, something is causally redundant if and only if either (a) it is a redundant cause or (b) it is causally inefficacious. A redundant cause is a genuine cause – a '*bona fide*' cause, as I shall put it – but is not necessary for its effect because the effect is overdetermined by that cause and some other sufficient cause.[1] Lefty is a redundant cause: Merricks does *not* claim that Lefty, if it exists, doesn't cause anything (though that would be one way for Lefty to be causally redundant). That is, he accepts that, if Lefty exists, Lefty is just as much of a cause of my left hand's staying warm as S, L and T are, jointly, causes of its staying warm. Lefty, then (if it exists), is a *bona fide* cause of my left hand's staying warm.

Merricks' argument that we have no ordinary grounds for believing in ordinary objects, such as gloves, depends on the claim that we have no ordinary grounds for believing in objects that are (of necessity or otherwise) wholly causally redundant. But, since he accepts that gloves, if they exist, are redundant causes rather than not causes at all, I think we can safely say that he is committed to the following principle:

[1] Pre-empting causes are often also thought of as 'redundant' causes (Lewis 2000), but I shall ignore pre-emption since it is only overdetermination that is relevant to the case of ordinary objects.

(A) If O (if it exists) is a wholly redundant cause, then we have no ordinary reasons to believe in O.

Merricks' argument for (A) runs roughly as follows. First of all, 'all the *ordinary* reasons to believe in the existence of any particular physical object … turn on the causal effects of that object' [PAGEREF]. However, 'any reason for believing that any particular wholly causally redundant physical object exists that turns on some causal effect of that object is a bad reason' [PAGEREF]. Why so? Well, any argument we might offer for the existence of a particular wholly causally redundant object (such as the three arguments Merricks considers and rejects) 'is bad because the relevant effect is fully causally explained even if Lefty [for example] does not exist' [PAGEREF].

Putting things slightly differently, we have two candidate principles in the offing here:

(B) All the ordinary reasons to believe in the existence of object O turn on the effects which that object causes.

(C) All the ordinary reasons to believe in the existence of object O turn on the effects which that object *non-redundantly* causes.

In effect, Merricks endorses (C): if O (if it exists) is a mere *redundant* cause (perhaps just of all the events we know about, or perhaps – as in the case of Lefty – all events *simpliciter*), then we have no ordinary reasons to believe in O. Hence (A). And the alleged reason for endorsing (C) rather than (B) is that, in the case of a putative redundant cause O of some effect E, we already have a complete causal explanation for E, and hence no ordinary reason to believe in O.

The first part of my argument attempts to establish that we have no grounds for endorsing (C) rather than (B), and hence no grounds for endorsing (A) (unless, of course, we can think of some *other* grounds for endorsing (A); I'll return to this question later). The argument considers what I'll call 'standard' cases of causation – cases, that is, that do not involve what I'll call 'compositional overdetermination', and hence cases where we are simply ignoring (as we normally do) the question whether the effect is overdetermined by an ordinary object (if it exists) and its constituent particles. My basic claim will be that in standard cases, grounds for thinking that an object is a *bona fide* cause *at all* just *are* grounds for thinking that it is a *non-redundant* cause. This is not so in the case of compositional overdetermination: any grounds (if any) we might have for thinking that Lefty is a compositionally-overdetermining cause, and hence a *bona fide* cause, would obviously *not* be grounds for thinking that Lefty is a non-redundant cause, since, we have agreed, Left, if it exists, is a wholly redundant cause. Hence consideration of standard cases gives us no grounds for preferring (C) over (B).

In standard cases, overdetermination is a pretty rare phenomenon. We have it in death-by-firing-squad and two-assassin cases; a case where I independently promise two different people that I'll be in the café at 4pm and am equally motivated to keep my promise to each of them; a case where someone takes an aspirin because they just hit their head on a cupboard door and then stubbed their toe really badly, and so on. But *most* run-of-the-mill causation doesn't involve overdetermination (aside from compositional overdetermination, of course, if composite objects exist): 'standard', that is, non-compositional, overdetermination is not *normal*. Standard cases of overdetermination involve two shots of causal juice, as it were: two *independent* causes of the same effect. Compositional overdetermination, by contrast, involves just the one shot. The fact that S, L and T jointly cause your hand to stay warm together with the fact (if it is a fact) that they compose Lefty *entails* that Lefty causes your hand to stay warm; we don't need to do some extra bit of empirical investigation to ascertain whether or not Lefty, in addition to S, L and T, causes the hand-warming. There's no extra causal juice whose source we need to unearth.

This being so, in standard cases (but not in the case of compositional overdetermination) we have to adduce empirical evidence for thinking that a given effect is overdetermined rather than non-redundantly caused. For any given event E, I am entitled to infer that *something* caused it; and indeed I may have specific evidence about what kind of thing that might be. (Victim has suspiciously long incisors and has a wooden stake through his heart. This licenses me to infer that there is a sufficient cause of Victim's death that involves a vampire slayer plunging a stake through his heart.) But, having identified *a* cause of the effect in question, I am not entitled to infer the existence of a *second*, overdetermining cause. That just wouldn't be *normal*. I am only entitled to infer the existence of a second, overdetermining cause if I can find evidence that there really was a second, independent causal process that also led to the effect – and I will only be able to do *that* if I can find some intermediate event that was likely to have caused the effect but was not itself on the path from our first cause to the effect. I might, for example, find that Victim also has a silver bullet lodged in his heart. Knowing what I know about vampires, I can legitimately conclude that a silver-bullet-firing gun – call it Gun – was involved in Victim's death, E.[2]

Suppose we find no silver bullet, or indeed any other object or event that we might reasonably believe to be non-redundantly caused by a silver-bullet-firing gun. Then manifestly we have no good reasons to believe in Gun *in addition* to the existence of some vampire slayer or other who put the stake through Victim's heart. Why? Well, this might seem to be an excellent point at which to appeal to (C), the principle that all the ordinary reasons to believe in the existence of object O turn on the effects which that object non-redundantly causes. Indeed, such an appeal appears to line up exactly with what I said above about our evidence for the existence of overdetermining causes such as Gun: our *only* evidence for the existence of Gun will come from events that Gun (if it exists) non-redundantly causes, such as the presence of a silver bullet in Victim's heart – and we have no such evidence.

But here's the rub: in fact, (B), the principle that all the ordinary reasons to believe in the existence of object O turn on the effects which that object causes (*simpliciter*) will do just as well in this context. In standard cases (such as cases of vampire killing), we only have evidence that our purported object (in this case, Gun) is a *redundant* cause of anything (such as E) insofar as we have evidence that it is a *non-redundant* cause of something (such as the presence of the silver bullet). In the absence of the silver bullet (or similar), we have no reason whatsoever to believe that E was overdetermined, and hence no reason whatsoever to believe that it was redundantly caused – and so no reason to

[2] Silver bullets only work on werewolves, apparently. But the silver bullet makes the example work, so let's pretend.

believe that it was redundantly caused by Gun in particular. So normal cases give us no grounds for upholding (C) rather than (B). As things stand, then, (A) lacks justification.

To sum up the basic point I've been driving at so far: Merricks says that 'any reason for believing that any particular wholly causally redundant physical object exists that turns on some causal effect of that object is a bad reason', and it is 'bad because the relevant effect is fully causally explained even if Lefty [for example] does not exist'. My argument, in effect, has been that consideration of standard cases does not justify the first of those two claims. In standard cases we are not considering *wholly* redundant physical objects, but physical objects (such as Gun) that are wholly redundant with respect to events we know about (such as E, in the case where there is no silver bullet or equivalent). In such cases, *there is* no known 'causal effect' of Gun that might serve as a reason, good or bad, for believing in Gun. It's true that the relevant events (*viz*, the ones we know about) are fully causally explained even if Gun does not exist; and that does indeed mean that we have no good reason to believe in Gun – but only because we thereby have no good reason to think that Gun, if it exists, is a *bona fide* cause of any of those events. By contrast, we *do* have good reasons to think that Lefty, if it exists, is a *bona fide* cause of plenty events we know about.

Let's set (B) and (C) aside, then, and consider a slightly different path we might try to take from standard cases to the truth of (A). Here is a possible explanation you might adduce for the fact that, in the absence of the silver bullet, we have no ordinary reasons to believe in Gun:

> If Gun – if it exists – is causally redundant with respect to E and all other events we know about, then we have no ordinary reasons to believe in Gun.

Generalising, we might propose the following principle:

(A*) If O – if it exists – is causally redundant with respect to all events we know about, then we have no ordinary reasons to believe in O.

Of course, we have good reasons to think that Gun, if it exists, is indeed causally redundant with respect to all of the events we know about, since we know of no events whose occurrence requires explaining by appeal to a silver bullet-firing gun. So, if (A*) is true, it might serve to explain why we have no ordinary reasons to believe in Gun. And (A*) certainly *looks* true.

Note that any purported entity that satisfies the antecedent of (A) will automatically satisfy the antecedent of (A*). Since Lefty, if it exists, is a mere causal overdeterminer of *everything* it causes (indeed, necessarily so), Lefty, if it exists, is *in fact* causally redundant with respect to every event *we know about*. So (A*) entails (A). So if ordinary cases give us good reasons to think that (A*) is true – and, as things stand, that looks like a plausible hypothesis – we have good reasons, based on ordinary cases, to think that (A) is true too. And, as I say, (A*) *looks* true. So, it seems, we have excellent reasons to endorse (A). This, then, would seem to provide us with the required motivation for endorsing (A).

Merricks himself does not address ordinary cases, and gives no indication one way or the other on whether or not he would endorse (A*). My point, however, is that (A) stands in need of motivation. (A*), it seems to me, would – if true – do this: (A*), as we've seen, entails (A), and (A*) itself would seem to be justified by consideration of perfectly commonplace, ordinary reasoning that connects causation and existence.

But *should* we endorse (A*)? I claim that we should not. As I said earlier, in standard cases (i.e. those not involving compositional overdetermination), when we already have one sufficient cause of an event locked in – the stake through the heart, for example – we have to adduce empirical evidence in order to have good reasons to think that the event in question was overdetermined: we need to find the silver bullet or equivalent. In the absence of our silver bullet, then, we are entitled to assume that the event in question was *not overdetermined at all* – after all, we know that standard overdetermination is rare, and we have no grounds for thinking that this is one of those rare cases. This being so, the reason why we have no grounds for believing in Gun is that we have no reason at all to think that any silver-bullet-firing gun was a cause of anything (relevant) that we know about. In other words, we should endorse the following principle instead of (A*):

(D) If we have no ordinary reasons to believe that any O-type thing is a *bona fide* cause of anything we know about, then we have no ordinary reasons to believe that O exists.

(D) works just fine for standard cases. It also explains why, in Merricks' case of the mysterious object O (which I shall henceforth call 'MO' for 'mysterious object' in order to avoid confusion), we have no ordinary reasons to believe in MO:

> Imagine that some claim that a certain object MO causes the water in your tea kettle to get hot. They admit that your stove causes this as well. They clarify that MO overdetermines the heating of the water, and add that no part of your stove is a part of MO and no part of MO is a part of your stove. They also claim that MO causes the rain to stay outside your house, but admit that MO is thereby causally overdetermining the effect of your roof, which itself is not a part of MO nor is any part of MO a part of it. They add that none of this has anything to do with your stove or your roof in particular. Rather, they further add, this is all because every effect MO causes is also (of necessity) caused by other things, and, moreover, none of those things is a part of MO and no part of MO is a part of any of them. They add that no one has any good ordinary reasons to believe in MO. [PAGEREF]

Merricks' purpose in introducing this example is to motivate the claim that we have good *philosophical* reasons *not* to believe in MO; however, my purpose here is rather different. Merricks' protagonists 'add that no one has any good ordinary reasons to believe in MO'. And indeed they don't, if (A) is true, since MO is a mere overdeterminer (and, indeed, essentially so). But there is another perfectly good explanation for the fact that there is no good ordinary reason to believe in MO. Our protagonists tell us, in effect, that (a) there is some object, x, such that x overdetermines the boiling of the kettle and so on, and (b) that object is MO. But we have no grounds for thinking that the boiling of the kettle *is* overdetermined, and hence no reason to think that there is any additional *bona fide* cause of the boiling aside from the causes we already thought there were (turning the stove on, putting water in the kettle, and so on). It's perfectly true that *if* MO exists then it overdetermines the boiling of the kettle (and so on); after all, MO is stipulatively defined as doing just that. But we have no grounds for thinking that *anything* overdetermines the boiling of the kettle, and hence no grounds for thinking that MO exists. So, while one *might* try to account for our lack of reasons to believe in MO by appealing to (A) – or indeed (A*) – (D) will do just as well.

So (D) licenses the conclusion that we have no grounds for believing in Gun (and indeed MO). Hence we don't *need* to appeal to (A*) in order to get to that conclusion; hence we have no grounds for endorsing (A*). Nonetheless, we are left with the worry that (A*) just *looks true* – even granted that it's not a principle we need to appeal to in order to explain why we have no grounds for believing in Gun (or MO). So maybe we still *do* have grounds for endorsing (A*) and – since (A*) entails (A) – grounds for endorsing (A). I'll argue that there are in fact no grounds for endorsing (A*) on, as it were, its own merits, and so there really are no grounds for endorsing (A*) and hence (A).

Imagine. There's been a recent spate of prince-turning-into-frog incidents. Most such incidents are caused by the casting of a single spell. But Merlin and Morgana have, for reasons best known to themselves, made a sworn pact: one of them will only ever cast a prince-to-frog spell if the other one does exactly the same thing. Their *modus operandi* is to fix a date and time for the casting of the spell and, having done so, each of them stops whatever they were doing at the allotted time, quickly whittles a wand (for reasons that will become clear), and casts their spell. Neither of them has ever broken the pact – and the two of them, given their strong dislike of princes, have implemented it on very many occasions indeed; there is barely a prince left to turn into a frog, in fact, so busy have they been. Imagine that we know all of this. Then we have perfectly good ordinary reasons to think that, when Merlin and Morgana both cast their spells, the transmogrification of their unfortunate target is overdetermined and hence that each spell was a *bona fide* cause of it, since we have excellent reasons to think that prince-to-frog spells are extremely reliable, and no grounds for thinking that, when two spells are cast (or perhaps just when two spells are cast simultaneously), one of the spells 'trumps' the other.[3]

Now, suppose the wizard police are investigating the latest prince-to-frog incident, E. They acquire excellent evidence that Merlin was a *bona fide* cause of this: his spell-casting (call this event SC1) was witnessed – on 1 April – by a very reliable police informant. Question: do we thereby have grounds for thinking that E was overdetermined? I say: yes, we do. We have excellent grounds for thinking that Morgana also cast a prince-to-frog spell on 1 April (call this event SC2).

Of course, we don't yet have any *object* whose existence is up for dispute – and hence no grounds for deciding between (A*) and (D).[4] So here's more of the story. Prince-to-frog spells are rather tedious because they require the use of a single-use-only wand – one that the wizard him- or herself must personally carve just prior to casting the spell. And the wand must have on it the wizard's name and the date the spell is cast, or else the spell won't work. Now, I just said that we have excellent ordinary reasons for thinking that Morgana cast a prince-to-frog spell on 1 April. Given our additional bit of information, I think we also thereby have excellent ordinary reasons for thinking that a certain kind of wand exists: one with 'Morgana, 1 April' carved on it. Let's call that wand, if it exists, Wand. Next question: given everything we now know, do we have ordinary reasons for thinking that Wand exists? I say: yes.

In that case, we have a counter-example – admittedly a somewhat far-fetched one – to (A*). Wand, if it exists, is causally redundant with respect to all events we know about. Hence, by (A*), we have *no* ordinary reasons to believe in Wand. But we *do* have such reasons. By contrast, we do not have a counter-example to (D): we do have ordinary reasons to believe that some Wand-type thing (a wand, that is, with 'Morgana, 1 April' carved on it) is a *bona fide* cause of something we know about, *viz*, E. So the antecedent of (D) is not satisfied.

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[3] See Schaffer 2000, in which Merlin and Morgana appear but in a case of trumping pre-emption. The grounds Schaffer presents for thinking that in *his* example one spell trumps the other do not, by stipulation, apply to my case.
[4] Unless, that is, you're prepared to grant that SC2 counts as an 'object' for the purposes of evaluating (A*) and (D) – in which case you don't need the additional part of the story I'm about to give.

Let's sum up where we've got to. We started with the thought that (A) lacks justification, because in normal cases we have no grounds for endorsing (C) rather than (B). I then proposed, on behalf of my opponent, a slightly different route we might explore that gets us justification for (A), via (A*). But that route fails because we have no grounds for preferring (A*) to (D), and (D) does not entail (A); indeed, the Merlin-Morgana case suggests that (A*) is false. Hence we have no grounds for endorsing (A): we have no grounds for thinking that, since Lefty (if it exists) is a wholly redundant cause, we have no ordinary reasons for believing that Lefty exists.

Indeed, I *do* think we have ordinary reasons for thinking that Lefty exists. When my left hand warms up, I have ordinary reasons for thinking that this was caused by a cosy glove currently surrounding my left hand, and hence ordinary reasons to believe in Lefty. That Lefty is a *redundant* cause of my hand-warming is neither here nor there, since Lefty is still a *bona fide* cause of it. Merricks, of course, disagrees. He disagrees that we have ordinary reasons to think that *any* composite objects are *bona fide* causes things, because he holds that (A) establishes that we have no ordinary reasons to believe in any composite objects, and *hence* no ordinary reasons to believe that any composite object is ever a *bona fide* cause of anything. But if (A) lacks justification – and I've argued that it does – then that argument fails.

### *3. The Curious Case of MO*

So far, I've only considered Merricks' argument for the claim that we have no ordinary reasons to believe that Pair (or Lefty or Righty or S or L or T or ….) exists. But he argues for a stronger conclusion than this, namely that Pair does *not* exist (and nor do Lefty or …):

> My philosophical reason for denying that Pair exists has two stages. The first is an "Ockham's razor" type principle: We should deny the existence of those alleged physical objects that would be, of necessity, wholly causally redundant, especially if we have no good ordinary reasons to believe in such objects. The second is that—as argued above—we have no good ordinary reasons to believe in physical objects that are (of necessity or otherwise) wholly causally redundant. [PAGEREF]

The argument of the previous section concluded that we should not endorse this last claim, namely (A). But that leaves the first stage of Merricks' argument relatively unscathed (only relatively, however, because I've argued that we shouldn't endorse the bit that comes after 'especially' – but let's ignore that).

Is the first stage of Merricks' argument – the wielding of the 'Ockham's razor' type principle that we should *deny* the existence of wholly causally redundant objects – compelling? In fact, Merricks does not attempt to defend this principle directly; instead, he relies on the analogy with his mysterious object O (which, as before, I'll refer to as 'MO') – the purported object that overdetermines the boiling of the kettle and keeping the rug dry, and yet of which neither the kettle nor the roof is a part. MO, like Lefty, is essentially a mere overdeterminer: if it exists, it is, of necessity, a wholly redundant cause.

Merricks is right, I think, to claim that we have good *philosophical* reasons to deny that MO exists. The question is, what are those reasons? Merricks' answer is that those reasons include the fact that MO is, of necessity, wholly causally redundant. I disagree. MO *is*, of course – if it exists – of necessity wholly causally redundant. But we have perfectly good reasons to deny that MO exists without appealing to this particular feature of MO.

MO is stipulatively defined *purely* in terms of its effects: there is no *more* to MO's essence than its having those effects. By contrast, Pair, Lefty and Righty are not *merely* essentially mere overdeterminers of their various effects. Lefty is (let's assume) essentially an instance of a medium-sized dry good. (Maybe Lefty has other essential features; maybe it's essentially a glove, for example. But let's set that question aside.) Medium-sized dry goods in turn have at least one essential feature: they *have spatial location*.

What about MO? Well, the stove is not a part of MO, and neither is the roof. So it would seem that MO is located where the stove and roof are. Similarly for all the other objects whose effects are also redundantly caused by MO. MO would appear to lack any spatial location whatsoever, since, were it to have a location it would, presumably, at least displace some air molecules and hence fail to be causally redundant, and it is part of MO's essence that it is wholly causally redundant. So MO has no spatial location – *it isn't anywhere* – and yet it is a *bona* *fide* cause of some familiar events, such as the kettle boiling. Is MO supposed to be an abstract object or a concrete object? I claim: we have good philosophical reasons for denying that abstract objects are *bona fide* causes of kettles boiling. We also have good philosophical reasons for denying that there are any concrete objects that aren't anywhere. So we have good philosophical reasons to deny that MO exists.

Merricks, of course, accepts that there are *other* philosophical reasons to believe that MO does not exist, aside from the fact that it is essentially a mere causal overdeterminer [PAGEREF]. My counter-claim is that the fact that MO is essentially a mere causal overdeterminer does not, in itself, constitute so much as *a* philosophical reason to believe that MO doesn't exist.[5] That we have good philosophical reasons not to believe in MO, then, does not give us any good reasons not to believe in Lefty, which (if it exists) is different to MO in various salient ways, not least of which is the fact that it has spatial location.

*4. The Two-Headed Beast and other mereological monstrosities*

At the end of §2, I claimed – admittedly without argument – that we have ordinary reasons to believe that things like gloves and baseballs exist, because we have grounds for thinking that they are *bona fide* causes. One might wonder, then, whether the same goes for any old mereological sum, however gerrymandered and arbitrary-seeming – which will, it would seem, be a *bona fide* cause in just the way that Lefty is, since it will inherit its (admittedly redundant, but no less *bona fide* for that) causal status from whatever composes it.

Suppose Trenton and I together carry a couch, or stand on the scales, or leap about. Is there an object composed of the two of us, with two heads, two livers, four hands, and a weight of over three hundred pounds? Let's call this monstrous fusion of the two of us the Two-Headed Beast, or Beast for short. Beast, if it exists, causes a lot of things: it causes changes in the couch's location; it causes the scales to register over three hundred pounds; it causes you to experience its wild leaping; and much else besides. Beast's causing of all these

[5] Admittedly I appealed to MO's causally redundant status in the above argument, but only in order to infer that MO has the features that *do* constitute philosophical reasons not to believe in it, *viz* the combination of *being a bona fide cause* and *not being anywhere*.

phenomena is entirely redundant but nonetheless *bona fide*: *qua* causal explanation of the number displayed on the scales, for example, the explanation that appeals to Beast is no worse than one that appeals to just me and Trenton individually (which in turn is no worse than the one that appeals to just all of Trenton's undetached body parts and all of my undetached body parts, and so on). So perhaps I am committed to saying that we have good ordinary reasons – in the absence of any good reason to think otherwise that don't also apply to Lefty and its ilk – to believe that Beast exists. And not just Beast; we have equally good reasons to believe in an object composed of the Sun and my left foot; *Guernica* and the speck of dust on my computer screen; and so on.

Obviously, that sounds weird: it fails to accord with our common-sense ontology, according to which Lefty and Righty exist but Beast doesn't. (Or maybe not: one might think – as Lewis does (1986, 213) that common sense merely ignores such mereological monstrosities as Beast rather than being decisively committed to their non-existence.) In the current context, however, we are according consonance with common sense ontology, or lack of it, no epistemic weight at all. If we were, then we would thereby have excellent reasons to believe in Lefty and Righty that have nothing to do with their causal status. Recall that on Merricks' view, our *only* ordinary reasons for believing in Lefty and Righty are causal reasons. If we're assuming, then, that consonance with common-sense ontology provides no grounds for believing in Lefty, we are entitled to assume also that lack of consonance with common-sense ontology provides no grounds for *dis*believing in Beast. So the fact that it sounds weird to say that we have grounds for believing in Beast and its ilk is, in the current context, no objection to that claim.

*Common-sense ontology and real patterns*

Let's grant that a reasonable degree of consonance with common-sense ontology is not an adequacy constraint on a philosophical theory. (I'm inclined to think that it is, but let's leave that aside.) It would nonetheless be nice if most of our ordinary beliefs about the world didn't turn out to be false. Is there *any* hope that a philosophical theory of what there is might deliver this pleasing result?

Well, let's get back to basics. The question Merricks and I are interested in is: do composite objects – objects that are wholly constituted by smaller objects or *parts* – exist, and, if so, which ones? There are various options on the table. One is full-blown *nihilism*: the claim that *no* composite objects exist, and hence that the only objects that exist are partless simples. (Or one might endorse a kind of *mitigated* nihilism: perhaps, as Merricks argues (2001, Ch.4), *persons* and other conscious beings exist, and such beings are composite objects; but, because they aren't causally redundant, we have grounds for believing in them. A second option – Merricks' view, as outlined in §VI of his contribution to this volume and suggested in his 2001 (115) – is more nuanced: it might be that *some* other composite objects exist, because it might turn out that there is some smallest composite object that we need to believe in if we are to causally explain, say, hand-warming. All of these positions rule out the existence not only of mereological monstrosities, but also all (or nearly all) of the elements of common-sense ontology: tables, gloves, and so on. All we have, when it comes to such entities, is particles (or whatever the smallest unit we need to believe in is) arranged tablewise, glovewise, and so on – and two-headed-beast-wise, come to that.

On the other end of the spectrum, we have *universalism* – the view that, wherever we have two objects (me and Trenton, say), we have a third object: the mereological sum of those objects (in this case, Beast). So not only Beast but the object composed of the Sun and my left foot, and so on and so on, all exist.

As we've already seen, neither of these views is at all consonant with common-sense ontology, according to which tables, tigers and gloves exist but Beast and its ilk don't. Even if we assume that consonance with common-sense ontology should carry no weight in the debate about what exists, it may nonetheless seem rather curious that that debate has come to take this all-or-nothing form. We might, surely, have at least thought that common-sense ontology is a good place to *start*. So why has endorsing that ontology proved to be so spectacularly unpopular?

The answer is that it's generally thought that there is no good answer to the *Special Composition Question* (van Inwagen 1990): what are the circumstances under which two objects compose a third object? The standard way things proceed at this point is as follows. Consider a handful of possible ways of answering the question. For example, we might consider the possibility that *x* and *y* compose *z* if and only if *x* and *y* are in contact, or fastened together, or fused, or whatever (van Inwagen 1990; Markosian 1998). Show that none of those answers work. Conclusion: there is no good answer to the Special Composition Question. Hence (unless we endorse what Markosian calls 'brutal composition') composition must 'occur' either always (universalism) or never (nihilism) – or, if we can make some principled exceptions, as both van Inwagen and Merricks do, we can do so only in very circumscribed circumstances.[6]

What this debate presupposes, of course, is that there is a single *composition relation* – one that equally binds Lefty and Righty together as Pair, the members of a football team together as (say) the Liverpool team, various molecules of water together as the Mediterranean, and so on. Some philosophers have denied that we should accept this assumption (Sanford 1993; Thomasson 2007, Ch.7), claiming instead that we should ask instead 'such manageable substitution instances as "When is there some ship such that the planks compose the ship?" or "When is there some fort such that the rocks compose the fort?" and so on (Thomasson 2007, 130). But this kind of approach, as Thomasson seems to accept (2007, §10.3) and Jonathan Schaffer urges (2009, §3.2), is apt to end up in the same place as universalism. After all, I can perfectly easily define, say, the sum of a ship and a fort as a *shipfort* and ask the question, "When is there some shipfort such that the planks and rocks compose a shipfort?". So if we're after an answer to the Special Composition Question that discriminates between Lefty and Beast, this kind of piecemeal approach won't appear to do the trick – at least, not on its own.

Here's another question we might ask. *Why* does common-sense ontology countenance some composite objects (Lefty, say) but not others (Beast)? We can plausibly assume that there is some kind of broadly evolutionary explanation for at least some aspects of common-sense ontology, to do with the basic need to stay alive and reproduce. (If there's a tiger-shaped collection of particles, or whatever, in the vicinity of you and your family, it's pretty useful to be able to

[6] I hereby register my disapproval of speaking of composition as 'occurring' – as though it's something that *happens* or is brought about by some mysterious metaphysical process.

shout 'Tiger!', as opposed to 'Collection of simples arranged … oh dear, too late!'.) Common-sense ontology is incontrovertably *useful*.

But now we can sensibly ask: *why* is common-sense ontology useful in the way that it undoubtedly is? Why are tigers and tables useful elements in our ontology, but Beast and other mereological monstrosities aren't? A pretty obvious first pass at an answer at this point would be that the collections of particles (or whatever) that make it into our common-sense ontology exhibit certain kinds of features – perhaps such as integrity and stability over time – that *make* them the kinds of thing it's useful to be able to track over time. Terry the Tiger, for example, is a good candidate for existence.[7] His behaviour is reasonably predictable because there are plenty of pretty serviceable generalisations about tigers that we either know or would know if we spent enough time investigating tigers. For much of the time, many of Terry's parts do not operate entirely independently of each other, as when he breaks into a run having spotted a lone gazelle, slurps some water thanks to interaction between various body parts (head, tongue, etc.) and his brain, and so on. We can ask – and, in the right circumstances, come up with an answer that has a good chance of being true – questions such as, 'What would have happened if Terry had been twenty feet further away from the gazelle?'.

Perhaps we can also ask what would have happened if there had been no particles arranged Terrywise in the location at which there are actually particles arranged Terrywise, and instead there had been some particles arranged Terrywise twenty feet further away from the particles arranged gazellewise – and give it the same answer (suitably translated into language that doesn't imply the existence of Terry or the gazelle). But if to be an object just *is* to exhibit the kind of stability, cohesion, organisation or whatever that I'm vaguely gesturing towards here, then the fact that we can ask and answer *that* question does not in the least undermine the claim that *Terry* exists. That some particles arranged Terrywise (if such there be) exhibit such stability, cohesion or whatever is, precisely, the grounds for committing ourselves to the existence of Terry.

[7] Merricks himself agrees that Terry the Tiger exists, because he holds that conscious composite objects (such as Terry) exhibit top-down causation and hence are not causally redundant. See Merricks 2001, 114-16. But the view sketched here – unlike Merricks' – applies just as much to tables and gloves as it does to tigers.

Beast, by contrast, exhibits no such integrity or stability. There are no interesting generalisations about two-headed bi-people. For the most part – that is, apart from those rare occasions when we are carrying a couch or standing on the scales together – Trenton and I operate pretty much entirely independently of one another: the extent of co-ordination between those of Beast's parts that compose me and those that compose Trenton would (were Beast to exist) be extremely limited.

This proposal is, of course, incredibly sketchy. For what it's worth, it's in the same ballpark as a rather less sketchy account offered by Don Ross (2001) and Ladyman, Ross and Collier (2007), developed from a position of Dennett's (1991) concerning the ontology of folk psychology – the ontology of beliefs, desires, and so on. As Ross very succinctly sums up the view: 'to be is to be a real pattern' (2001, 161).

The suggestion, then, is not that we should accept common-sense ontology because something's being an element of common-sense ontology is, in itself, grounds for thinking that it exists. Rather, the suggestion is that common-sense ontology, by and large, tracks real, objective patterns, and *that* is what vindicates it – or at least to a great extent vindicates it. Terry, Lefty and Beast are equally *bona fide* causes, if they exist. But Beast does not constitute an objective pattern of the required kind, and hence we have grounds for denying that Beast exists. Of course, it's an empirical question to what extent, exactly, common-sense ontology would thereby be vindicated. I'm not at all sure about Pair, for example – which is why the earlier part of this chapter focussed on Lefty. My own pairs of gloves, if they exist at all, exhibit barely any more stability or integrity than does Beast – a fact to which my ever-growing collection of unmatching single gloves attests.

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