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Emergent Substances, Physical Properties, Action Explanations

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Abstract: This paper proposes that if individual X ‘inherits’ property F from individual Y, we should be leery of explanations that appeal to X’s being F. This bears on what I’ll call “emergent substance dualism”, the view that human persons or selves are metaphysically fundamental or “new kinds of things with new kinds of causal powers” even though they depend in some sense on physical particulars. (Baker 2000, 22, 20; Lowe 2006, 2008) Two of the most prominent advocates of this view, Lynne Rudder Baker and E.J. Lowe, suggest that emergent particulars have physical properties in virtue of the relations they bear to physical particulars—they ‘inherit’ their physical properties. In section 1, I argue that *having* a property F this way is not *instantiating* F. In section 2, I raise concerns that if emergent particulars don’t instantiate physical properties, then facts about emergent particulars don’t explain intentional actions. I suggest that emergent dualism would be more attractive if it could avoid this apparent consequence. In section 3, I propose a view according to which some instances of physical properties are instantiated by *both* an emergent particular and its body.

Several philosophers have recently defended what I’ll call “emergent substance dualism”. Lynne Rudder Baker proposes that although human persons are constituted by human bodies, they are “new kinds of things with new kinds of causal powers”, and they are metaphysically fundamental. (Baker 2000, 20, 22) E.J. Lowe has proposed that even though the self¹, the bearer of all of one’s thoughts and emotions, is embodied, it is an emergent particular substance. (Lowe 2006, 2008) For want of a better dichotomy, I’ll say these emergent particulars are “non-physical”, and I’ll reserve “physical” for particulars (properties, events, etc.) that are either fundamentally physical or grounded (without emergence) in the fundamentally physical. Both Baker and Lowe claim that such particulars have physical properties, and both have suggested that they do so in virtue of the relations they bear to physical particulars. Baker says, for instance, that a person has her mass *derivatively* while her body has mass *non-derivatively*. (Baker 2000, 46-58) Lowe suggests that a self *inherits* its mass from its body. (Lowe 2001, 153) In section 1, I argue that *having* a property F this way is not *instantiating* F. In section 2, I raise concerns that if emergent particulars don’t

¹ Lowe uses both “self” and “person” to refer to embodied emergent particulars (see e.g. Lowe 2008, 20), but I’ll use “self” exclusively, reserving “persons” for Baker’s *constituted* emergent particulars.

instantiate physical properties, then facts about emergent particulars don't explain intentional actions. I suggest that emergent dualism would be more attractive if it could avoid this apparent consequence. In section 3, I propose a view according to which some instances of physical properties are instantiated by *both* an emergent particular and its body.

1. Emergent substances

I should be clearer about how I'm using "emergent dualist" here. First, I say that emergent dualists are substance dualists because they claim that there are metaphysically fundamental particulars that are not to be found in a complete physics. For Baker, *persons* are metaphysically fundamental but wouldn't be included in a complete physical theory²; for Lowe, it is the *self* that is non-physical.³ Second, the thinkers considered here are *emergent* dualists because they think that non-physical particulars depend on physical entities and can have physical properties. As I discuss at length below, Baker believes that human persons are *constituted* by human bodies and have physical properties *derivatively* while Lowe thinks that selves are *embodied* in physical substances and can *inherit* their properties.⁴ In general outline, then, both Lowe

² See, e.g., Baker 2000 (20-22), 2011, 2013. She says that persons are distinguished from other conscious beings by virtue of having a robust first-person perspective (2013, 30-1; 64-5); and, she claims that the existence of such distinctive persons is inconsistent with "naturalism", which she characterizes as "the ontological view that science can provide a supervenience base that accounts for all reality." (Baker 2011, 161)

³ See, e.g., Lowe 2008, 92-99. Lowe there characterizes his view as a kind of substance dualism, namely, "Non-Cartesian Substance Dualism".

⁴ Let me acknowledge here that it is somewhat cumbersome to say that Baker is an emergent dualist. She never, so far as I know, *says* that she's an emergent dualist, and she never describes her constitution relation as a form of emergence. (She does say that a constituting thing is *submerged* in what it constitutes, though: Baker 2000, 33.) Moreover, few would consider the relation to which "constitution" refers to be a form of emergence. And finally, the term "emergent" isn't always used in the literature in the way that I'm using it here. Indeed, the term's use is a matter of debate. (See, e.g., Francescotti 2007, Barnes 2012) I opt here simply to stipulate the meaning I have in mind by appeal to the claims found in the main text. I thus take the term "emergent dualist" to be apt for Baker in light of her commitment to the claims just given and on grounds that these claims characterize a view that is aptly called "emergentist". If one thinks such views are not aptly called "emergentist", however, I am willing to concede the name. My interest here is in theories that accept the claims given in the main text.

and Baker are emergent dualists in the sense given. I will focus below on claims common to their accounts while also taking care to keep their views distinct. As an aid in the latter, I'll use "person" to refer Baker's proposed emergent substance and "self" to refer to Lowe's. In order to avoid using "emergent substance" over and over again when I'm talking about *any* alleged emergent substance, I'll say "mind" to indicate a generic emergent substance.

Now let me clarify some of the more significant differences between Baker and Lowe. For Baker, when a body *constitutes* a person, each relatum shares some of its properties with the other by virtue of their relation. If a body has 75kg mass and constitutes a person, then the person is thereby 75kg as well. The person, according to Baker, has the mass *derivatively* while the body has it *non-derivatively*. Meanwhile, the dean of arts and sciences may have the right to walk at the head of the procession non-derivatively while her body has that right only derivatively. (Baker 2000, 46-58) More generally, constitution is the relation that holds between a statue and the particular hunk of material from which it is made. The statue of Achilles is not identical to the particular hunk of clay that constitutes it because they don't have all of the same properties. The clay, call it "Hunk", could be squashed and reformed into a statue of a tortoise, but a statue of Achilles couldn't exist as a statue of a tortoise. And yet, they are spatially coincident so long as Hunk constitutes Achilles. Furthermore, they share some physical properties. If Hunk has 75kg mass, Achilles does too. If Achilles' spear is sharp, Hunk is sharp there too. Baker tells us that persons are additionally distinctive because they are capable of a first-person perspective; bodies that do not constitute persons have no such capability.

For Lowe, when a physical substance *embodies* a self, they are spatially coincident and necessarily share some physical properties. (Lowe 2006, 8-9; cf. Lowe 2008, 95) *Embodiment* is similar to constitution but Lowe emphasizes that the self is mereologically simple. (Lowe 2008, 22; Lowe 2001, 139) Lowe uses this feature to distinguish his embodiment relation from the constitution relation favored by Baker and to argue for the distinctness of the self from the body. (Lowe 2001, 150-1) Achilles has proper parts, and as long as the particular hunk of clay constitutes Achilles' parts, it constitutes Achilles. But Lowe claims that

the self doesn't have proper parts. Although it might be true that if x constitutes at least one of y's proper parts, then x at least partly constitutes y, this would be vacuous for embodiment as Lowe understands it. If x embodies y, then y doesn't have at least one proper part. Since the self is simple, Lowe argues, all of it is necessary for every conscious thought and feeling one has, but this isn't true of one's brain or body, so the self can't be identical to either of these. (Lowe 2006, 9-10; Lowe 2008, 21, 96)

I think that if one is to be a dualist, these are the most attractive views presently available. In what follows, I'll focus on what they have in common while noting their differences where appropriate. For now, I should emphasize this: what's under consideration here is the package of claims I've called "emergent dualism": (1) a person/self is a metaphysically fundamental particular that (2) depends on some physical particular(s) for its existence and (3) has physical properties. I'm not considering a hybrid of Lowe's and Baker's views, and I do not deny that Baker's and Lowe's views have their differences. As noted above, Lowe believes that the self is simple while Baker makes no such commitment. Where it is relevant, I will mark this difference and others.⁵

1.2 Having and instantiating physical properties

Does emergent dualism face Descartes' interaction problem? *Prima facie*, if physical substances causally interact by virtue of their physical properties, then emergent substances that instantiate physical properties may do the same. While this may explain *causal* interaction between substances, though, it doesn't fully explain mental-physical interaction. There remains the question of how mental substances instantiate physical properties.

One might think that since emergent substances are spatially located and extended, there is no deep difficulty here. However spatially extended and located physical substances instantiate physical properties,

⁵ Thanks to an anonymous referee from this journal for pushing me to be clearer on these points.

that's how emergent substances do it as well. But the matter isn't so straightforward. Emergent particulars in our world emerge from physical particulars—paradigmatically, they emerge from human bodies. When a person or self has a physical property F, the body from which it emerges has F too. Indeed, For Baker, the person has the property in virtue of being constituted by a body that is F; and, Lowe's self 'inherits' F from the physical particular that embodies it. If a body b is F and emergent substance m is too, then either the union of m and b has F twice or, somehow, b and m 'share' a single instantiation of F.

But of course, it can't be that the union of b and m has F twice. Suppose that F is *having 75kg mass*. If body b instantiates F and mind m does too, then if the union has F twice, it should have a mass of 150kg. If the living person is 150kg, then when the person ceases to exist, the remaining body will have half the mass. The dualist, then, should say that F isn't instantiated twice; rather, b and m have the very same instance of F. But this is mysterious. If F is instantiated only once in the space that b and m both occupy, then *prima facie* either b has instantiated F, m has instantiated F, or b and m jointly instantiate F. To say that b and m both have the same instance of F seems to claim that the one F-instantiation is instantiated twice—which sounds rather absurd.

But the absurdity may be only apparent. As we saw above, Baker says that when x constitutes y, for some property instance F had by both x and y, one of the two may be F *derivatively* while the other is F *non-derivatively*. In general, a dualist might follow Baker and say that minds have mass properties only derivatively, so that they wouldn't have mass without their bodies, and there's no worry that a body and mind together have a sum mass of their independent masses—minds have no independent mass. (Baker 2000, 58) Moreover, on Baker's view, the fact that Achilles has 75kg mass at t is *identical to* the (conjunctive) fact that the clay has 75kg mass at t and the clay constitutes Achilles at t. (Ibid, 51) It's not that the mass is instantiated once non-derivatively and once derivatively; the non-derivative instantiation is the derivative instantiation. It's by virtue of being constituted by clay with mass 75kg that Achilles derivatively has mass 75kg.

Lowe makes a similar appeal: “*my weight...just is (identical with) the weight of my body: in other words...I inherit my weight from my body. Likewise, I inherit my size and shape from my body.*” (Lowe 2001, 153; Lowe’s emphasis and parenthetical) Since Lowe doesn’t spell out the *inheritance* relation, however, I’ll follow the details of Baker’s view.

This approach saves the claim that emergent particulars have physical properties while avoiding the apparent consequence that a mind-body union has twice the mass of its body. But does it save the dualist from the awkward claim that for some physical properties, one instance is instantiated twice? If we emphasize Baker’s claim that facts about having properties derivatively *are identical to* facts about constitution conjoined with facts about non-derivative instantiation, then the dualist does seem to be freed from the difficulty. For, the mass had by both Achilles and Hunk is instantiated *only by Hunk*. The fact that Hunk has 75kg mass non-derivatively is grounded, one presumes, in Hunk’s instantiation of the mass property. Meanwhile, since Achilles has his mass derivatively, the fact that Achilles has mass 75kg *isn’t* grounded in Achilles’ property instantiations. Rather, Baker tells us that this fact is grounded in Hunk’s instantiation and the Hunk-Achilles constitution relation. On the face of things, then, although Achilles *has* 75kg mass, it doesn’t follow that Achilles *instantiates* the property *having 75kg mass*. Presumably, this generalizes. Although a person *has* physical properties derivatively, a person does not *instantiate* physical properties.

Indeed, I’ll now argue that this *prima facie* appearance is borne out when we consider the details of what it is to instantiate a property.

Suppose one takes the view that substances are metaphysically prior to or more fundamental than properties and the nature of a property instance is fully determined by the substance instantiating it. Let’s call this “Aristotelian instantiation”. When body *b* instantiates property *F* on this view, the relevant instance of *F* is a way that *b* is, and everything about this instance of *F* is fully determined by *b*’s identity. Suppose that this is *b*’s having *F non-derivatively*, and suppose that *b* constitutes *m*. What is it for *m* to have *F* derivatively? Since *m* doesn’t have *F non-derivatively*, it would seem that *m* can’t have *F* in the way that *b*

does. If it did, m would have F non-derivatively. But m doesn't have F non-derivatively. So m can't have F this way. It can't be that F is *a way that m is*, i.e. it can't be that m Aristotelian instantiates F. But that's just *what it is* for m to instantiate F. If m can't have F *this way*, it seems that m can't have F at all.

But that's just to say that m can't have F *if there's only one way to have a property*. Baker disputes that, of course. According to Baker, there's another way to have F, viz., derivatively. Whatever this way is, it isn't that m Aristotelian instantiates F. So m has F in some other way. Maybe it's more like having a property on a bundle theory view. On this view, properties are metaphysically more fundamental than substances, so that what it is to be a substance of a certain sort is to be a bundle of certain properties. A particular substance on this view need have no existence independent from its property instances—it may have its existence and identity fully determined by the property instances with which it is associated. Where b has F non-derivatively and m has F derivatively, then, b and m may both instantiate the same instance of F, but they do so in different ways. For b, F is a way that b is—F's nature depends on b; for m, F is one among the bundle of instances on which m depends. Since b determines F, we may say, as Baker does, that m's having F derivatively depends on b's having F non-derivatively. If b hadn't determined F, there wouldn't be an F for m to have.

But this strategy won't work for Baker. She thinks that when b constitutes m, b has some properties non-derivatively and others derivatively. Hunk is valued at \$10,000 derivatively and has mass 75kg non-derivatively. Achilles, meanwhile, has mass 75kg derivatively and is valued at \$10,000 non-derivatively. On the present view, this would mean that having mass 75kg is a way that Hunk is—Hunk's nature determines the instance of the property *having mass 75kg*. But Hunk doesn't have all of its properties this way. Since Hunk has *being valued at \$10,000* derivatively, the view under consideration says that this property is among the bundle that determines Hunk's nature. Achilles, meanwhile, has this same property non-derivatively, so the property instance's nature depends on his nature. And, since Achilles has mass 75kg derivatively, his nature is partly determined by that property instance. The result, of course, is a circle of determination. Hunk's nature determines the nature of the properties it instantiates non-derivatively;

since Achilles has these properties derivatively, they determine his nature; Achilles' nature then determines the natures of the properties he has non-derivatively; since Hunk has these properties derivatively, they then determine Hunk's nature, and we're back where we started. Hunk determines Achilles, who determines Hunk.

While there may be reasons for accepting circles like this, I take it that a theory is better off if it can avoid them. So I take it that if one substance can *have* properties in two ways, we're better off denying that there are two ways to *instantiate* a property. The problem with such views is that, *prima facie*, what it is to instantiate a property varies only if what it is to be a substance also varies. But if this is so, then one substance can't instantiate properties in more than one way.⁶ If this is so, then *having* properties derivatively and non-derivatively are not both ways of *instantiating* properties.⁷

On both first appearances and second, then, Baker's persons and Lowe's selves don't instantiate physical properties. If persons and selves have physical properties derivatively, they do not instantiate physical properties. In the next section, I suggest that this is problematic. If persons/selves don't instantiate physical properties, then there are reasons to doubt that facts about persons/selves explain intentional actions.

⁶ I take it that there can't be one substance that is two kinds of substance, e.g. both an Aristotelian substance and a bundle of properties.

⁷ Insofar as the problems I raise here and in the next section arise from something like a competition between an emergent particular and that from which it emerges, it is *prima facie* plausible that one may avoid these problems by denying that there are *individual* physical particulars from which emergent particulars emerge. The view would be akin to Peter van Inwagen's position on the question of composition: roughly, that mereological simples compose a material object just in case they compose a living organism. (van Inwagen 1995) Here, one might say that a self or person emerges from mereological simples, but there is no body that the simples compose. Only the self/person is then available to instantiate properties like *having 75kg mass*, and since none of the simples involved has this property, one might think there is no threat that the self/person and its body weigh 150kg. This would spell drastic changes for the views under consideration, however; for, each emergence relation is characterized as a relation between particulars: x constitutes/embodyes y. This is a fix worth pursuing, but it would take us far afield. I'd like to thank an anonymous referee from this journal for suggesting that I think through this possibility.

2. Action explanations

I take it that causal explanations relate facts. In simplest form, the fact that C occurred causally explains the fact that E occurred. Further, I take it that true causal explanations are backed by or grounded in causal relations that obtain between entities ‘in the world’. The consensus is that events are the causal relata, but Lowe makes a case for taking substances to stand in causal relations instead. (See, e.g., Lowe 2013) I mention this because I am concerned that if persons and selves don’t *instantiate* (but only *have*) physical properties, then facts about persons and selves won’t causally explain things that, *prima facie*, facts about persons and selves *do* explain. For instance, I would have thought that according to the true theory of persons, *I*—the person that is me—have caused certain utterances of “I love you”, certain acts of political protest, and certain admissions of guilt. It seems to me that if a theory of persons says that my person is not identical to my body, and only facts about my body explain these acts, then this theory of persons misplaces personhood. Or, at the very least, if there is a theory according to which I am the cause of these acts, then, all else equal, such a theory is to be preferred over a theory that can’t claim the same.

Why might one worry that if persons and selves don’t instantiate physical properties, then facts about persons and selves don’t explain facts about expressions of love and guilt? The problem is that the theories under consideration don’t tell us how a person’s or self’s having properties derivatively might provide grounds for person- or self-based explanations, and there are reasons to worry that derivative havings *can’t* provide such grounds. I give these reasons below, in 2.1. If this is right, then if persons or selves can explain intentional actions, the explanations they ground must not invoke physical properties. Indeed, there are reasons to think the explanations they could ground are *independent* from the physical explanations of intentional actions. But there are well-worn reasons to deny that intentional actions have both physical explanations *and* independent non-physical explanations. Thus, the dualist can’t plausibly claim that persons or selves ground explanations of intentional actions that *don’t* invoke physical properties either. I make the case for this point in 2.2. Taking 2.1 and 2.2 together, emergent particulars can’t ground physical explanations of intentional actions (2.1), and there are no independent non-physical explanations

of intentional actions to ground (2.2). So emergent particulars don't ground any explanations of intentional actions. I blame this result on the claim that emergent particulars have physical properties only derivatively, and I conclude that dualism is better off without it. Dualists should claim that persons, selves, or minds do instantiate physical properties. In section 3, I give an account of how this may be.

2.1 Having a property derivatively and grounding an explanation

Why worry, then, that derivative havings can't ground explanations? We saw in section 1 that if x has F derivatively, then x doesn't *instantiate* F . It's not clear to me what it is for x to *have F without instantiating it*, but we can get some insight by remembering that having F derivatively is just being related in a certain way to something that has F non-derivatively. Presumably, then, x has a property F without instantiating it when x is related 'in the right way' to an individual that does instantiate F . It would be helpful to know which relations are the right relations for derivative havings of course, but our interest here isn't just what it is to have a property derivatively. Rather, it's in the relation between having a property derivatively and explanations that appeal to properties had derivatively. So, a more direct question is preferable: is there any relation R such that if x and y stand in R , then if x instantiates F and y does not, explanations that appeal to y 's being F are acceptable?

If one thinks that identity is a relation (Baker sometimes says it is: Baker 2000, 28), then one might think that it underwrites an affirmative answer. If x and y are identical and x instantiates F , then of course explanations that appeal to y 's being F will be acceptable. But this doesn't answer our question. We're looking for cases in which x instantiates F and y does not. If $x = y$ and x instantiates F , then y instantiates F . After all, $x = y$.

For many relations, our intuitions are very strong that if x and y stand in R , and x instantiates F and y does not, explanations that appeal to y 's being F are *unacceptable*. Consider having a property *superderivatively*: x has F superderivatively iff x does not have F non-superderivatively and there is some y ($y \neq x$) such that y has F non-superderivatively and x and y coexist. My father and I both have the property

being the tallest building in New York City superderivatively; steel has the property *being a noble gas* superderivatively; and, the crab nebula is superderivatively filled with Boston cream. We might say an explanation that invokes properties had superderivatively isn't natural or doesn't cut nature at the joints, but such explanations seem so far from natural and joint-carving that they're not even in the running to be explanations. If we want to explain the less fundamental by appeal to the more so, it's unclear what would be so far from fundamental that we'd call upon properties had superderivatively in explanation. We might call these "mere Cambridge havings". If x has F superderivatively, then x *merely Cambridge has* F.

This doesn't prove that persons merely Cambridge have physical properties, of course, but I hope it helps to push the burden of proof onto the advocate of derivative havings. The dualist can't just assume that there is some relation such that if x and y stand in it, then if x instantiates F and y does not, explanations that appeal to y's being F are acceptable. The dualist owes us an explanation for why some relations can legitimate an explanation and others cannot—what distinguishes the two? Until we have an answer, we should be skeptical of explanations that purport to be grounded in derivative havings.

Perhaps there is an answer: *being very similar* to identity. Baker tells us that constitution and identity are similar:

Constitution is a relation in many ways similar to identity, but it is not the same relation as identity, understood in a strict, or Leibnizian sense. We need constitution to be similar to identity in order to account for the fact that if x constitutes y, then x and y are spatially coincident and share many properties... (Baker 2000, 28)

While strict identity 'between' x and y permits that if x instantiates F, then explanations that appeal to y's being F are acceptable, perhaps something slightly weaker permits that if x instantiates F *and y does not*, explanations that appeal to y's being F are still acceptable. Compare the composition relation, which many also take to be very similar to identity. *Prima facie*, the razor is sharp in virtue of its blade's being sharp, and yet there's no apparent problem with explaining the cut on David's face by appeal to the sharpness of his razor. Similarly, although it's the ring's *surface* that is shiny, it doesn't seem inapt to say that *the ring's* luster caused me to gasp. Each explanation appeals to a composite object's having a property that one of its parts instantiates, and each seems to be acceptable. If they are, then this is presumably so in virtue of the

fact that the relation between a composite and its parts is very similar to identity, even if it is not strict identity. If this is right, then the fact that constitution is also very similar to identity might legitimate explanations that appeal to a person's having properties derivatively.

But there are reasons to doubt this. Strict identity 'between' x and y makes sense of y 's having F by accepting that y *instantiates* F . Where $x = y$ and x instantiates F , explanations that appeal to y 's being F are acceptable *because* y *instantiates* F . Since y *is* x and x instantiates F , y instantiates F 'too'. Similarly, one might think that if a part instantiates F , the whole it composes *instantiates* F as well. (See, e.g., Liebesman 2011, 419) But when we move to the constitution relation, this crucial claim is exactly what is denied: x instantiates F *and* y *does not*. If y doesn't instantiate F , we have lost the feature of identity (and perhaps composition) that legitimated explanations that appeal to y 's being F . Perhaps there is another way to legitimate these explanations, but the point here is that the similarities between identity and constitution aren't the right similarities to make derivative havings such that they can ground explanations. If there is some other reason that we should accept explanations that appeal to properties had derivatively, it's quite unclear what it might be.

As far as I can see, then, only a genuine property instantiation can ground an explanation that appeals to that property. Since Baker and Lowe seem committed to the claim that persons/selves do not instantiate physical properties, we should deny that persons/selves can ground explanations of intentional actions that appeal to physical properties. If persons/selves can explain intentional actions at all, then, they'll have to do it by appeal to non-physical properties that persons/selves have non-derivatively.

2.2 Physical properties explain intentional actions

Given the results of 2.1, if there is any acceptable explanation of an intentional action that appeals to persons or selves, it doesn't appeal to physical properties. Can the dualist ground *non-physical* explanations of intentional actions in persons or selves? I don't think she can. The problem is that there shouldn't be any such explanations for persons or selves to ground: if there were, intentional actions would

have two independent explanations. In other words, if the dualist accepts that intentional actions have non-physical explanations, she faces the problem of causal exclusion.

Much of the relevant reasoning is very familiar. Empirical considerations strongly suggest that every physical event—and thus every intentional action—has a complete causal explanation that appeals only to physical properties.⁸ Given that every intentional action has a complete physical explanation, if intentional actions also have *non-physical* causal explanations, it would seem that intentional actions are overdetermined. But we should deny that intentional actions are overdetermined. Maybe *some* intentional actions are overdetermined—as when I choose to raise my arm and someone pulls it up—but it seems quite wrong to claim that *all* of them are, that they are *systematically* overdetermined, or that they are overdetermined whenever they're caused by the person or self who performs them. If so, it seems we should deny that intentional actions have both physical explanations *and* non-physical explanations. Given the strength of the empirical considerations in favor of the physical explanations of intentional actions, it seems we should deny that they have non-physical causal explanations. (See, e.g., Kim 1989, Kim 1998, Sider 2003, Bennett 2008, Wilson 2011) But if we do, it can't be that persons ground non-physical explanations of intentional actions—there are no such explanations to ground.

As is well known, this doesn't fully establish that there are no non-physical explanations of intentional actions. What just about everyone thinks it *does* establish, however, is that unless an intentional action is overdetermined, it doesn't have a causal explanation that is *independent* of its complete physical explanation. (Sider 2003, Bennett 2008, Wilson 2011). Many non-reductive physicalists have argued that if an effect is brought about by, say, a composite and its parts, the effect is not overdetermined (or, perhaps,

⁸ For empirical considerations, see, e.g., Papineau 2001. This claim is often dubbed “causal completeness”. (See, for example, Bennett 2008, Wilson 2011) It should be carefully distinguished from what is often called “causal closure”, which claims that no physical event has a non-physical cause. (See, for example, Kim 1993; Lowe 2006, 11; Lowe 2008, 100) Whereas the latter explicitly rules out non-physical causes of physical events, the former does not. The difference is pertinent here because Lowe rejects *causal closure* in some places (e.g. Lowe 2008, 26; but see Lowe 2006, 11 and 2008, 100) but not *causal completeness*. Indeed, he discusses the difference and accepts *completeness* at 2008, 26-7. Thus, I deny that in appealing to *causal completeness* here, I beg a question against Lowe.

it is not *problematically* overdetermined⁹) because the two causes are not independent. A baseball and its parts do not overdetermine the window's breaking, they say, because the baseball depends on its parts. If an effect's causes are independent, however, then the effect *is* overdetermined. Ted Sider suggests that the problem with such overdetermination is that it would be a massive coincidence:

Imagine a paranoid who thinks that every time someone is shot, there are in fact two causally independent shooters. He is crazy, but why? One reason (not the only one) is that it would be a great coincidence that all these sharpshooters just happen to be at the same places at the same times. This great regularity would need an explanation, and none could be given. (Sider 2003, 722)

Similarly, if a theory claims that intentional actions are brought about by both physical causes and non-physical causes, then the theory claims that all these causes just happen to be in the same places at the same times, and it owes us an explanation for this massive coincidence. If no plausible explanation can be given, then the theory is implausible.

Thus, if there are non-physical causes that back person-based explanations of intentional actions, then there is some explanation for why these causes just happen to be in the same places as physical causes and at the same times. Could the dualist provide some such explanation? It looks doubtful. If there is some explanation for the apparent coincidence, then either the properties invoked in the two explanations are identical or there is some dependence between them.

Suppose the properties invoked in the physical explanation are identical to those invoked in the non-physical explanation. Since the non-physical explanation is grounded in persons or selves, persons or selves have these properties non-derivatively. Since these properties are identical to the properties invoked in the physical explanation, and since the properties invoked in the physical explanation are physical properties, it follows that persons or selves have physical properties non-derivatively. But this is false, so it's not that the properties invoked in the two explanations are identical.

⁹ The difference between saying that the effect is "not overdetermined" and saying that it is "not *problematically* overdetermined" is merely terminological. For ease of expression, I'll use the former phrase.

Could it be that there is some dependence between the properties that feature in the two explanations? Suppose there's a non-causal *grounding* dependence. Then the grounded properties depend for their existence on the grounding properties. Perhaps, as many non-reductive physicalists claim, the non-physical properties are grounded in the physical properties. For instance, Sydney Shoemaker claims that a mental property instance is a proper part of the physical property instance that realizes it, so that overall, mental properties are 'nothing over and above' physical properties. (Shoemaker 2013, 35) If the properties in physical and non-physical explanations are related in this way, then one might argue that they don't overdetermine their causal effects. However, if the dualist's non-physical properties are grounded in physical properties, it's dubious that they're *also* grounded in persons. It can't be that a mental property instance is fully determined by both a person or self and the physical property instance that realizes it; if it's fully determined by one, it can't also be fully determined by the other. Moreover, if a property instance is fully grounded in physical properties, it's not non-physical. If mental property instances are physical, persons don't have them non-derivatively. So the dualist can't ground her non-physical properties in physical properties on pain of having to deny that persons instantiate them. On the other hand, if the dualist claims that the properties invoked in the physical explanation are grounded in non-physical properties, analogous problems arise. It can't be that physical properties fully depend on both fundamental physical properties (entities, processes, etc.) *and* persons or selves. And, if an allegedly physical property instance is fully grounded only in a non-physical particular like a person or self, we should deny that it is physical—it's not grounded in fundamental physical properties, entities, or processes. It can't be, then, that the non-physical explanation is non-causally grounded in the physical explanation or vice-versa.

Perhaps, then, the dependence isn't such that the properties in the one explanation *fully* determine counterparts in the other explanation. Perhaps the dependence is weaker, and the physical properties *cause* the properties in the non-physical explanation. The latter properties are grounded in persons or selves and

their instances are distinct from instances of physical properties, but they still depend on physical properties. Lowe suggests something like this.¹⁰ (Lowe 2008, 29-32)

Causal dependence, however, won't solve the problem. The concern about overdetermination isn't about whether the *determiners* are independent but about whether the *determinations* are. Imagine a single shot that grazes the victim's jugular vein and continues past him, ricocheting around the room. The blood loss from the grazing would be fatal on its own, but at just the moment that the victim would die from the first shot, the ricocheting bullet strikes a blow that would have been fatal on its own. Clearly, the death is overdetermined even though there is just one determiner. Why? Because it was determined twice by the one bullet. The *determiners* are not independent, but what's important is that the *determinations* are. If the properties in the two causal explanations are causally related, then they will still be distinct. If they are distinct, their causal determinations of intentional actions will be distinct.

But what's the problem with overdetermination if the 'massive coincidence' is explained by causal relations? If causation is productive, it's that the effect is brought into existence twice without ceasing to exist 'in between'. Suppose that M is an event constituted by a person and a non-physical property at time t_1 while P is an event constituted by that person's body and a physical property at t . And suppose that P causes M and both P and M cause intentional action E. Since P causes M, it's not a coincidence that they occur together, but it's also the case that they cause E separately. P's causing E and M's causing E are distinct—neither one causes E *via* the other.¹¹ Even though M and P are not independent, then, their causings are, so E is caused twice by M and P. Furthermore, since we assumed that causation is productive,

¹⁰ Lowe proposes that physical events cause mental events and vice-versa, but it's not clear to me that he does so in order to avoid overdetermination. He seems to think that a counterfactual dependence conception of causation allays overdetermination worries. He says, "...in the sense of 'cause' now in play, an event may have many different causes, without thereby being causally overdetermined. I am taking it that to say that one event *is a cause of* another event is—barring the possibility of causal overdetermination—at least to imply that *if that first event had not occurred, then that second event would not have occurred either.*" (Lowe 2008, 29-30; Lowe's emphases)

¹¹ Note that if one were to claim that M causes E by causing P, then since P has a complete physical explanation, the overdetermination recurs for P. On the other hand, if one were to claim that P causes E by causing M, then one must deny that E has a complete physical explanation.

if M and P both cause E, we assume that both bring E into existence. It is *prima facie* absurd, however, to suppose that an intentional action is brought into existence twice without ceasing to exist 'in between'.

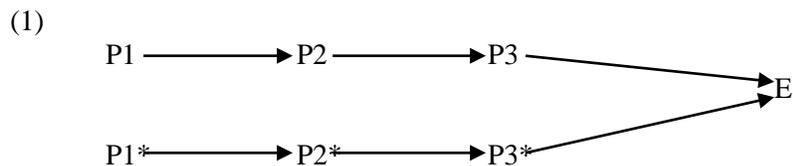
But what if causation isn't productive? If causation isn't productive, then presumably it is Humean. If M causes E, it is merely a regularity or a counterfactual dependence. There is nothing more to a Humean causal relation than either the counterfactual dependence between cause and effect or the regularity that events like the cause precede events like the effect. If this is right, then an intentional action with two causes wouldn't seem to be brought into existence twice. Meanwhile, it is no coincidence that intentional actions have two causal explanations because the explanations themselves are causally related. The dualist's problems are solved.

Not quite. The problem is that if all there is to causation is a regularity or counterfactual dependence, then this is all there is to the explanation for why intentional actions admit of both physical and non-physical causal explanations. But this isn't an acceptable explanation; rather, it's circular. The explanandum is that the mental and physical causes of intentional actions regularly co-occur. If Humean causation is invoked to explain this regularity, the explanans is also that these mental and physical causes co-occur. This explanation is unsatisfactory, of course. While adopting Humean causation would avoid the problem of bringing intentional actions into existence twice, it sacrifices the explanation for the co-occurrence of physical and non-physical causes of intentional actions. As a result, this theory posits that regular co-occurrence as a massive coincidence. Which, again, is implausible.

Hence, if the dualist proposes that there is a causal dependence between the properties featuring in her two explanations of intentional actions, she faces a dilemma. If causation is productive, then she claims that each intentional action is brought into existence twice. If causation is not productive, she gives up her explanation for the apparent coincidence that intentional actions have two causes. If it can't be that the properties in the two explanations are related by either a causal relation or, as we saw above, by a non-causal relation, then we should conclude that there can be no satisfactory dependence relation between them. Furthermore, it can't be that the properties invoked in the explanations are identical. I conclude that

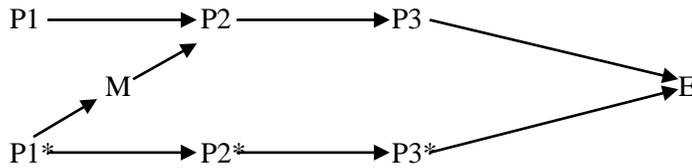
if persons or selves have physical properties only derivatively, they can't ground explanations of intentional actions.

But if they can't explain intentional actions themselves, maybe they can explain *something about* intentional actions. Lowe has proposed that mental causes explain why intentional actions don't *occur by coincidence*, even though they're jointly caused by independent physical causal chains. What makes an event coincidental in the sense relevant here is that its immediate causes have independent causal histories. (Lowe 2008, 28) If wind blows a tree over onto a sidewalk just as someone is walking by, the collision of tree and person is a coincidence. But if the person's walking set off a trap that made the tree fall over, it is not a coincidence. In both cases, the joint causes of the collision are the walking and the falling. In the coincidental case, the immediate causes of these joint causes are causally independent; in the non-coincidental case, they are not. As Lowe sees it, it might be that although there is a complete physical explanation of every intentional action, the physical explanation alone doesn't tell us why an intentional action is not a coincidence in this sense.¹² Imagine two chains of physical events that jointly determine an effect E. In one, P1 causes P2, P2 causes P3, and P3 contributes to causing E. In the other, P1* causes P2*, P2* causes P3*, and P3* contributes to causing E. P3 and P3* jointly cause E. (Cf. Ibid, 30) If these two chains are causally independent, then E's occurrence is a coincidence.



¹² I should reiterate that the principle about the causes of physical effects that is relevant here is causal *completeness* and not causal *closure*. As noted above, it is not clear whether Lowe accepts *closure*, but he explicitly endorses *completeness* in giving the proposal recounted in the main text. Whereas *closure* claims that no physical event has a non-physical cause, *completeness* claims only that every physical event has a complete physical cause, making no claim about whether physical events also have non-physical causes.

(2)



But suppose that P1* causes a non-physical event, M, and M in turn causes P2. In this case, since P3 and P3*, E's immediate causes, have a common cause, P1*, E's occurrence isn't coincidental. In light of these considerations, Lowe proposes that non-physical causes may explain how intentional actions are non-coincidental without disturbing the physical explanations of those actions.

Positing certain non-physical (mental) causes of a physical event, in addition to the physical causes which have already been discovered, may serve an explanatory purpose which cannot be served by appeal to the physical causes alone. The non-physical part of the explanation need not deny anything which has been discovered about the identity of the physical causes and their purely physical causal relations and is in this sense perfectly compatible with the purely physical part of the explanation... (Ibid, 33)

But this proposal doesn't solve the problems at hand. Adding the non-physical cause fails to respect the constraints at issue; rather, in the second case, all the familiar difficulties arise when we ask what caused P2. If P1 completely explains P2's occurrence, then M overdetermines P2. If P1 doesn't completely explain P2's occurrence, then either P1 and P1* jointly cause P2 or P2 doesn't have a complete physical explanation. It can't be that P2 doesn't have a complete physical explanation, so it must be that P1 and P1* completely explain P2. But if they do, we won't find any 'gap' in the causal chain from P1* to P2 for M to fill. Or, more to the point, if P1* is a cause of P2, then this accounts for any dependence there is between the two chains, so it explains the extent to which E's occurrence is non-coincidental. It wouldn't be true, then, that M serves an explanatory purpose which cannot be served by the physical events alone. Lowe's proposal, then, is no solution to the present problem.

I conclude that if persons or selves have physical properties only derivatively, then they don't ground explanations of intentional actions. This, I suggest, should be avoided. But I don't propose that we

reject Baker's or Lowe's emergent dualism. Instead, in the next section, I work out an account of how an emergent particular might instantiate a physical property that is *also* instantiated by its body.

3. Dualist property instantiation

The emergent dualist would like to claim that both an emergent particular *y* and the particular from which it emerges, *x*, have physical properties. But she must do so without claiming that *x* and *y* have distinct instances of these properties; if *x*'s instance of *having 75kg mass* is not identical to *y*'s, then the union of *x* and *y* will be 150kg. The account of dualist property instantiation, then, should explain how two substances may 'share' a single property instance. I have just argued, however, that in giving this explanation, the dualist shouldn't say that one substance has the property but doesn't instantiate it. I here take it as a further constraint on an adequate account of dualist property instantiation that when two substances share a property instance, both instantiate the one instance *in the same way*—i.e. we should try to avoid accepting that there are two ways to instantiate a property. Finally, if the dualist claims that two substances instantiate one and the same property instance, she seems to accept that sometimes, a single property instantiation is instantiated twice at the same time. The dualist's account of property instantiation should deny this or show that it is not absurd. I thus take it that the emergent dualist is better off if she can produce an account of property instantiation that meets these three constraints:

- (i) two particular substances may 'share' a single property instantiation;
- (ii) in such cases, both substances instantiate the property in the same way; and,
- (iii) it is either not true or not absurd that one property instance is instantiated twice.

First, then, consider the ontology often associated with D.M. Armstrong, according to which states of affairs comprise substances and property instantiations. (Armstrong 1997) Neither properties nor substances are more fundamental than the other while states of affairs, which unite the two, are prior to

both. In this case, a substance has a property just in case there's a state of affairs joining the former to the latter. Substances and properties are 'welded together' in states of affairs.

Now let P be an instance of *having 75kg mass*, let m be an individual mind, and let b be an individual body. Can there be a state of affairs that unites this one P to both m and b? There is no obvious obstacle to it, at least. The one instance of *having 75kg mass* is welded to both the statue of Goliath and the lump of clay constituting him. The one instance of *being shiny* is welded to both the bronze and the statue of Achilles. If one would like to push the objection, then, he should offer further reasons why there can be no such state of affairs.

If there is no objection, then all three conditions may be met on this view of property instantiation: (i) substances m and b may share a single property instantiation, P; (ii) both instantiate P in the same way; and, (iii) there is no absurdity to the claim that the one property instance is instantiated twice. The one P is simply 'welded' to two substances.

Second, suppose that properties are prior to substances. On this view, individual substances are what they are by virtue of their properties. An individual may be no more than a bundle of property instances. On this view, the challenges again look hardly worrisome. One and the same instance of *having 75kg mass* may be in the statue's bundle and in the lump of clay's. One and the same shininess may be in the bundle characterizing Achilles and that characterizing the bronze. All three conditions again may be met: (i) substances may share a single property instantiation; (ii) in such cases, both instantiate the property in the same way; and, (iii) there is no absurdity in claiming that the one property instance is instantiated twice. The two bundles of properties simply overlap where they share property instances.

Finally, take Aristotelian instantiation again. That is, suppose that substances are relatively more fundamental than properties, and properties are ways that substances are. This is the view on which it's most natural to say that if b instantiates P and m does too, then b's instance of P can't be identical to m's. After all, m's being P on this view is just *a way of being m*—if b isn't identical to m, then it's dubious that b's being P is *also* a way of being m. Rather, b's being P must be a way of being b. If b is P and m is too,

then, P looks to be instantiated twice. If this is what property instantiations are, it looks like two substances cannot share a single instantiation. Moreover, on this view substances *determine* properties, so that if the P determined by b is numerically identical to the P determined by m, that P seems to be overdetermined. In terms of our conditions on dualist instantiation, this seems to be a problem for satisfying condition iii.

The dualist might like to appeal to the unity of constitution and other relations here. She may say that if *being sharp* is a way that the razor's blade is, the razor's instance of *being sharp* is just that same way. Since the blade is a proper part of the razor, they aren't identical. Yet, the razor's being sharp just is a way that the blade is, and the blade's being sharp *is* the razor's being sharp. Similarly, the dualist might continue, when a mind is embodied, most of the body's ways of being are also the mind's ways of being.¹³ A minded body's way of having 75kg mass just is the embodied mind's way. Similarly, *mutatis mutandis*, for a person constituted by a human organism.

But I don't think we should find this convincing unless the embodied mind has its physical properties without instantiating them—i.e. only derivatively. Since substances determine property instances on this view, the worry about overdetermination can't simply be dismissed. If b has an (Aristotelian) instantiation of F, then b determines the nature of this instance of F, and b brings this F into existence. If m is not identical to b and m instantiates the same F, then m brings the very same instance of F into existence. But F doesn't cease to exist 'in between' b's instantiation and m's instantiation, and *prima facie*, this one instance of F can't be brought into existence twice without ceasing to exist 'in between'. Thus, it looks as though one or the other of the instantiations isn't a genuine Aristotelian instantiation—only one brings F into existence and accounts for its nature. Whatever one thinks about overdetermination worries in the philosophical literature, I think we can agree that this does make 'sharing' a single property instance seem rather absurd: the one instance of F can't be brought into existence twice at the same time.

¹³ I say "most" because a dualist may want to deny that the mind has mereological properties like *having parts*, and she will certainly want to deny that minds have properties like *being entirely physical* and *having only physical properties*.

One might reply to this charge that if *b* and *m* are not independent, then *b* and *m* don't overdetermine *P*. As we saw above, non-reductivist accounts of mental causation often appeal to the apparent difference between dependent overdetermination and independent overdetermination. (See, e.g., Pereboom 2002, Bennett 2003 and 2008, Witmer 2003) In the standard cases of overdetermination, the determiners are independent. Each shot in the firing squad could have occurred without the others, so there are independent determinations of the dictator's death. In cases of overdetermination that some find to be unproblematic, however, the determiners are not independent. Although both the baseball and its parts break the window, the ball depends on its parts, so there are not independent determinations of the window's breaking. A dualist might make a similar appeal. When a mind is embodied, mind and body are not independent, so when they both instantiate the same property instance, there are not independent determinations of the instance. Although both *m* and *b* determine a single instance of *F*, there are not independent determinations of *F*, so *F*'s determination is not like the dictator's death.

But this shouldn't assuage the overdetermination worry here. As we saw above, the concern about overdetermination isn't about whether the *determiners* are independent but about whether the *determinations* are. In the case at hand, even though *b* and *m* may not be independent, if both instantiate *F* as a way of being, then their determinations of *F* are independent. It's supposed to be that the instance of *F*'s identity fully depends on the identity of what instantiates it. Since *m* and *b* are not identical, an instance of *m*'s identity determining *F* cannot be identical to an instance of *b*'s identity determining *F*. So, if *F* were instantiated by both *b* and *m*, there would be two instances of *F*'s being fully determined. But that can't be. It would entail the absurdity that the numerically one *F* is brought into existence twice at the same time. Thus, I take it that if properties are ways substances might be, then a mind and a body cannot both instantiate the same property instance in the same way at the same time.

I think the dualist who prefers this view of properties and substances, then, should try to work out an account of derivative explanations. For example, one might adopt an account of events that permits properties had derivatively and non-derivatively to constitute a single event. If events are individuated by

their actual causal relations, then perhaps the razor's being sharp and the blade's being sharp constitute the very same event. If so, then *prima facie*, they ground the same explanations as well.

Maybe there's an account of derivative explanations to be worked out, but I think the burden is on the dualist both to give that account and to tell us what it is for an individual to have a property without instantiating it. Thus, as a tentative conclusion, I submit that if property instantiation is Aristotelian, minds (persons, selves) and bodies do not share properties. So long as mind and body are not identical, it cannot be that each fully determines one and the same property instance. On the other hand, if substances are bundles of properties or if substances and properties come together in states of affairs, then the dualist need not accept that minds have physical properties only derivatively. Indeed, she may accept that mind and body both instantiate the same instances of some physical properties. If she does so, then her theory is able to ground physical explanations of intentional actions in either minds (persons, selves) or bodies.

3.1 Sharing property instances

I've argued that the emergent dualist should take substances to be either bundles of properties or 'welded' to properties in states of affairs. In this brief subsection, I would like to explore further how these two ontological approaches might spell out an emergent dualist position and what challenges each might face. Both ontological approaches have virtues and vices generally, of course, but I won't be able to do justice to the more general discussions here. I'll focus on their qualities as accounts of emergent dualism.

Take the bundle view first: properties are metaphysically prior to particulars, and particulars are merely 'bundles' of properties. On a view of this sort, it helps to have a way of referring to the relation that holds between properties had by the same particular. Following others, let's use "compresent". (See Hawthorne and Sider 2002 for a helpful discussion of compresence, including how it might be applied to relations.) Thus, let's say that on the bundle theory, where there is a juicy, red tomato, redness and juiciness are *compresent*.

For the emergent dualist who adopts the bundle theory, then, where there is an embodied *self* or a *person* constituted by a body, there are compresent properties composing both particulars. If one claims that both particulars, body *b* and mind *m*, comprise all and only the same properties and that particulars are fully determined by their properties, then it would seem that $b = m$. So, *prima facie*, the dualist bundle theorist should identify properties that distinguish emergent particulars from the particulars from which they emerge.

Baker's proposal that persons have a robust first-person perspective seems a natural candidate. She argues that there are first-person properties that we must include in a complete ontology but that don't supervene on properties found in the natural sciences. (Baker 2013, 102-124) Where body *b* constitutes person *p*, then, we might take it that *p*'s first-person properties distinguish *p* from her constituting body. A person, then, is a bundle of properties that includes a bundle of physical properties composing a body *and* non-physical first-person properties. Conceived of this way, persons are 'more than' the bodies from which they emerge. This might put some meat on the bones of Baker's claim that "the identity of the constituting thing is submerged in the identity of what it constitutes." (Baker 2000, 33) She may say that the properties of a submerged body are a proper subset of the emergent person's properties. If Baker were to take this tack, however, she would have to say that constituting bodies do not have first-person properties—apparently contrary to her claim that they have such properties *derivatively*.

But while first-person properties may distinguish persons from bodies, given the results of section 2, they (still) won't be able to ground explanations of intentional actions. We saw above that only physical properties can do that. Notice that switching to a states of affairs ontology won't help here—so long as first-person properties are non-physical, they won't participate in action explanations, no matter what property instantiation is. Nonetheless, accepting a bundle theory does deliver some benefits for Baker's view. Since a person can have physical properties in the same way that a body does on this view, we can say that explanations of intentional actions are grounded in persons. Such explanations just aren't grounded in (non-physical) first-person properties.

Given that non-physical first-person properties can't ground explanations of intentional actions, though, we should ask: what *do* first-person properties do? Baker appeals to first-person properties to explain our possession of first-person *concepts*. (Baker 2013, ch. 5) *Prima facie*, we do have first-person concepts, but the evidence for this seems to be in our intentional actions: we talk and act like we have first-person concepts. But if some of Chitra's intentional actions are explained in part by claiming that Chitra has a first-person concept, and if Chitra's having a first-person concept is grounded in her having a non-physical first-person property, then, again, it would seem that there are non-physical explanations of intentional actions, contrary to what we saw in section 2.

If first-person properties are to make the difference between physical and non-physical particulars, then first-person properties should be more than *ad hoc* posits. But if the results of section 2 stand, then non-physical first-person properties don't ground explanations of intentional actions; one must find some other explanatory work for them to do.

Can Lowe adopt a bundle theory? No. If the self is simple, it isn't also a bundle of properties. Lowe, then, must appeal to states of affairs. As with the bundle theory, taking up the claim that states of affairs are prior to properties and substances lands one in various philosophical controversies; and, as with the bundle theory, we won't dwell on the general debates here. We're interested in the view as it serves emergent dualism. Here we'll just take it that where there is a particular substance *s* with property *F*, the substance has its property because there obtains a state of affairs in which *s* is *F*. If you prefer to say that *facts* 'tie' particulars and properties this way, that's fine for our purposes. (For some discussion, see Armstrong 1997, 115-119; Horwich 1990, 113.) We will run roughshod over subtleties of how to individuate states of affairs as well. Thus, where there is an embodied self, let's say that there is a compound state of affairs that 'includes' (i) states of affairs in which a body is joined to physical properties, (ii) states of affairs in which many of those same physical properties are joined to a self, and (iii) the state of affairs in which the self and body stand in the embodiment relation. (See Plantinga 1974, 44-6 on *inclusion* with respect to states of affairs.)

The self on this view may be distinguished from its body on the same grounds that we saw Lowe offer above: the self is the simple subject of conscious thoughts and feelings. The self is thus necessary for the occurrence of each of one's conscious thoughts and feelings, whereas there is no obvious physical particular of which the same can be said. (Lowe 2006, 9-10; Lowe 2008, 21, 96) If one takes it that having conscious thoughts and feelings requires having some properties, then the self will be distinguished by the set of properties it's joined to even if these properties—those involved in conscious thoughts and feelings—are physical. *Prima facie*, this also gives the self an explanatory role: it accounts for the unity of our conscious thoughts and feelings. An individual's conscious experiences are unified in that the same particular substance had, has, or will have each.

With this approach, however, the relation between self and body, what Lowe calls “embodiment”, needs further development. Suppose body *b* embodies self *s* and both have property *F*, *having 75kg mass*. Then there is a state of affairs in which *b* is *F* and another in which *s* is the very same instance of *F*. Each state of affairs is contingent; *b* could have had another mass, and *s* could have too. Given just this information, it is tempting to think it a coincidence that both states of affairs obtain in actuality. But on Lowe's view it is no coincidence. Rather, if *b* embodies *s*, then “they exactly coincide spatially at a time and *necessarily* share, at that time, many of their physical properties such as their shape, size, and mass.” (Lowe 2006, 9; emphasis added)

Of course, we shouldn't take this as the claim that necessarily, *b* is 75kg iff *s* is 75kg. That would be mysterious indeed—it would simply be a brute fact that *even though b and s are distinct, still b* is 75kg if and only if *s* is 75kg. Rather, Lowe's claim is that *if b embodies s*, then necessarily, *b* is 75kg iff *s* is. The fact that the state of affairs in which *b* is 75kg and the state of affairs in which *s* is 75kg necessarily co-obtain isn't brute at all; it is explained by the fact that *b* embodies *s*.

But then, if embodiment is to explain why some self and body necessarily share properties, we should like to know *what about* embodiment does the explaining, what the explanation *is*. Lowe, however, seems to take “embodiment” simply as a name for the relation that obtains between a simple self and a

material body at a time iff “they exactly coincide spatially at a given time and necessarily share...many of their physical properties.” But if “embodiment” just names the relation that has these features, it *doesn't* explain why two apparently distinct states of affairs should nonetheless co-obtain by necessity. The fact really is brute. I take it that one who adopts emergent dualism and a states of affairs ontology should either attempt further elaboration on this point or show how taking the embodiment relation as primitive has broader explanatory value.

There's much to be done in clarifying the options for emergent dualists who accept either a bundle account of particulars or a states of affairs approach. I hope that the sketch I've provided here gives some sense for options with *prima facie* viability, the challenges these approaches face, and where further work is needed.

4. Conclusion

I've argued against the claim that emergent particulars have physical properties only derivatively. If one accepts derivative properties, one must accept the obscure claim that emergent particulars *have* physical properties, but do not *instantiate* them. I have suggested that if this were so, then facts about emergent particulars wouldn't explain intentional actions. Instead of derivative properties, I propose that emergent particulars 'share' property instantiations with the particulars from which they emerge. One cost of this approach is that it seems incompatible with the Aristotelian account of property instantiation. But if property instantiations are grounded in states of affairs or if substances are bundles of properties, then two substances may indeed share a single property instantiation, and both may instantiate the property in the same way. I propose, then, that the emergent dualist should accept either that substances are bundles of properties or that both substances and properties are grounded in states of affairs.

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