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# Property Reductive Emergent Dualism

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Abstract: This paper sketches and motivates a metaphysics of mind that is both substance dualist and, to a large extent, property reductive. Call it “property reductive emergent dualism”. Section 1 gives the broad outlines of the view. Sections 2 and 3 argue that it can claim several advantages over non-reductive physicalist theories of mind. Section 2 considers metaphysical challenges to mental causation in detail. Section 3 considers overall theoretical virtues: ontological and ideological economy, unification with physical sciences, the promise of explanatory gain. On these grounds, I propose that the view coupling substance dualism with property reductivism deserves further philosophical attention.

Substance dualism strikes many as a theory with pre-theoretical appeal but little theoretical virtue. It is ontologically and ideologically indulgent, offers few distinctive explanatory gains, and compromises the fundamental unity of our worldview. And, of course, it seems without a plausible account of mind-body interaction. This paper argues against these impressions in defense of a view that is both substance dualist and, to a large extent, property reductive. I call it “property reductive emergent dualism” or PRED. Section 1 gives the broad outlines of the view. Section 2 argues that it permits an account of mental causation that is not only plausible but has several advantages over rival theories. Section 3 considers the theory’s overall theoretical virtues: ontological and ideological economy, unification with physical sciences, the promise of explanatory gain. On these grounds, I propose that the view coupling emergent dualism with property reductivism deserves further philosophical attention.

## 1. Emergent dualism

I propose to use the term “emergent dualism” to refer here to metaphysical theories with the following commitments: (1) there are particular substances that are neither identical nor reducible to the entities to be found in a complete physics (e.g., particles, fields). (2) These particulars are in some sense metaphysically fundamental, but (3) they nonetheless depend for their existence on the entities to be found in a complete physics, and (4) they can instantiate physical properties.<sup>1</sup> Furthermore, (5) these emergent particulars are in some way distinctive of persons, living things, or minded beings—for instance, they are essential to personhood (Baker 2000, 2007, 2013), they account for the unity of selfhood (Lowe 2006, 2008), or they host phenomenal properties (Zimmerman 2010).<sup>2</sup>

I take it that these views are substance dualist by virtue of accepting 1 and 2. Unlike reductive physicalist views, they accept 1; unlike non-reductive physicalist views, they accept 2. Unlike *property* dualist views, they accept 1 and 2 rather than similar claims about properties. Claims 3 and 4, however, distinguish these views from ‘Cartesian’ dualisms familiar from

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<sup>1</sup> These include, of course, ‘reduced’ mental properties. Thus, emergent particulars on this view are still bearers of non-emergent mental properties.

<sup>2</sup> As I understand the view in O’Connor and Jacobs 2003, it accepts all of the claims above but for the second. While persons are emergent individuals with distinct, fundamental *properties* and a ‘thisness’ or haecceity distinct from the physical particles they comprise, these emergent individuals are not metaphysically fundamental. (O’Connor and Jacobs 2004, 549-50) Rather, each person simply *is* a composite: “The new object is itself the composite system. The simples jointly compose the object, which has a distinctive thisness and some distinctive features.” (Ibid, 550) Given that no mere composite is metaphysically fundamental—each is fully explained by its fundamental parts and perhaps their interactions—we can see why O’Connor and Jacobs disavow substance dualism and criticize Baker’s conviction that persons are “just as real as fundamental physical objects” (O’Connor and Jacobs 2003, 554; my emphasis). Similarly, Hasker distinguishes his view from the O’Connor and Jacobs view on grounds that he, Hasker, posits “a new individual, not composed of the microparticles of physics” while O’Connor and Jacobs attribute emergent personal properties to an organism that is, in their own words, “fundamentally biological”. (Hasker 2012, 483-4; O’Connor and Jacobs 2003, 540)

Descartes and Leibniz. Whereas Descartes' substances could exist independent from all physical entities and could not bear physical properties, the substances at issue here cannot exist independent from all physical entities and can bear physical properties. I take 2 and 3 to give a minimal characterization of how these substances are *emergent*. I include claim 5 in order to focus attention on such theories in the philosophy of mind.

I intend this to be a general characterization that includes, especially, the views developed by Lynne Rudder Baker and E.J. Lowe; in addition, I intend it to characterize views amenable to Dean Zimmerman's arguments for substance dualism. I should be clear that in naming Baker's Constitution View among my target dualisms, I do not mean to contravene her attempts to distance herself from historical substance dualisms. There are reasonable definitions of "substance dualism" according to which Baker's view is not one; it isn't my intention to deny this. On the definition used here, however, the Constitution View is a dualist view; for, she claims that a complete metaphysical account of persons requires appealing to two metaphysically fundamental substances.<sup>3</sup>

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<sup>3</sup> Baker has explicitly rejected the label "substance dualism" on grounds that (1) she posits more than two kinds of substance and (2) neither the relation she posits between mental and physical substances (constitution) nor that between mental and physical properties is unique to mental-physical relations. (Baker 2007, 177) "Pluralism" is more appropriate for her view, and Baker is right to claim that 2 saves her view from some of the peculiarities of substance dualism. With respect to 1, I will continue to use "dualism" here in order to reflect the minimal commitment relevant to this discussion: that there are two fundamental substances needed to give a full metaphysical account of persons. With respect to 2, I take these to be attractive features of Baker's *variety* of substance dualism that distinguish it from more traditional dualisms—not features that undermine its claim to dualism. After all, her view satisfies the minimal commitment mentioned above. Similarly, where Baker distinguishes her view from William Hasker's Emergent Substance Dualism (Ibid, 176), the differences concern the nature of the emergent substance and the generality of the soul-body/person-body relation; the views agree that it takes two fundamental substances to fully account for the metaphysical nature of human persons.

Every emergent dualism should provide an account of the emergent-fundamental physical relation that is as clear as possible. I believe that Lynne Rudder Baker has done most to meet this burden (see, e.g., Baker 2000, 2007, 2013); accordingly, I will now give an overview of her remarks on what she calls the “constitution view”. The point here isn’t to give a complete account of emergence, to say that all emergent dualisms should accept Baker’s constitution view, or to signal that emergent dualism as discussed here presumes the constitution view. Rather, the point is just to confront the worry that there is no intelligible account of emergence to be given.

Baker claims that while *persons* are metaphysically fundamental, a human person is constituted by a human body. (Baker 2000, 20, 22) The constitution relation that holds between a person and her body, she claims, is perfectly general: it holds between a statue and the particular hunk of clay from which it is made. If the hunk of clay, Hunk, constitutes the statue, Goliath, at noon on Tuesday, then Hunk and Goliath are spatially coincident at this time but not identical. For if Goliath were squashed, the statue would cease to exist, but the lump of clay would not. But this would not be possible if Goliath *were* Hunk, for they would have the same persistence conditions. Generally, if X constitutes Y at a time t, then  $X \neq Y$ , even though the two are spatially coincident at t, and even though they share many properties. Similarly, says Baker, a human person is constituted by her body but not identical to it. Persons depend on their bodies for their existence, then, but the nature of a person is not fully determined by her body. Rather, Baker proposes that a person has a first-person perspective essentially, and this gives a person new powers that underwrite her claim to being metaphysically fundamental.

Thanks to their constitution relation, persons and bodies share many properties. This doesn't mean, of course, that if you step on a scale and it reads 150kg, your body accounts for some of the mass and you, the constituted person, account for the rest. Rather, Baker claims that your body has the mass *non-derivatively* while you, the person, have mass *derivatively*. On the other hand, 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)

Thus, an emergent particular and the physical entity or entities on which it depends may share properties without duplicating their instances. Again, I take this only to suggest that there's at least one way to spell out the relation between emergent substances and the physical entities on which they depend. I will not presume Baker's constitution view in what follows.

Nonetheless, I will take it that an emergent particular may share properties with the physical particulars on which it depends. One way to conceive of this is to draw on a states of affairs ontology of the sort often associated with David Armstrong (see, e.g., Armstrong 1997). On this view, a substance and a property are 'joined' in a state of affairs, but neither depends on the other for its nature. Rather, states of affairs themselves are fundamental, and they ground both substances and properties. Where two substances share a property, then, each is joined to the same instance of the property and there are two states of affairs. In one, a bodily substance is joined to a property instance F; in the other, a mental substance is joined to the very same property instance. We might say this is a compound state of affairs (see, e.g., Plantinga 1974). There is no need to duplicate the property in order to for it to be shared. Indeed, such an ontology doesn't call for any special pleading on behalf of property-sharing; rather, it is, on the basic principles of this view, no different from a single substance's being joined to two

properties. Just as a substance may be 'joined' to both a realized property and realizer, a property may be joined to a constituted substance and its constituter. Alternatively, one might accept, with Baker, that a property may be had derivatively or non-derivatively. I prefer the former approach, but I assume here only that some such account is viable. (See Engelhardt forthcoming 2 for discussion)

## 1.2 Property reductivism

I take property reductivism in the philosophy of mind to be the claim that (6) some mental properties are identical to physical properties. One may accept emergent dualism without accepting property reductivism, of course. Indeed, it may seem unclear how or why one would accept that *any* mental properties reduce to physical properties if minds themselves are not physical. On Descartes' dualism, mental properties are modes of immaterial, extensionless mental substances while physical properties are modes of material, extended substances. Consequently, no Cartesian mental property can be identical to a Cartesian physical property.

But this is not so for the emergent dualist. Emergent particulars are extended and located; they may have mass, light reflectance properties, and shape. If emergent particulars can have physical properties, nothing stands in the way of an emergent dualist's being a property reductivist. Thus, an emergent dualist may accept that human pain is C-fiber activation, that human pleasure is dopamine release, and so on. This sort of dualism, then, may endorse the successes of neuroscience. I call it property reductive emergent dualism, or PRED.

Any advocate of PRED should, of course, have something to say about *which* mental properties are identical to physical properties. If *all* mental properties were identical to physical

properties, it would be dubious that emergent substances make any contribution to the theory's overall explanatory resources. Those who accept PRED might disagree about which properties are reducible, of course, but I assume that it would be self-effacing for an emergent dualist to deny that emergent substances have any distinctive properties. Instead, she should claim that the properties distinctive of emergent substances are those mental properties that look least likely to be reduced: consciousness, phenomenal properties, and perhaps, as Baker proposes, the capacity for a first-person perspective. (See, e.g., Baker 2013) Indeed, as I remark below, PRED advocates a methodological pluralism according to which mental properties are to be investigated by neural and cognitive scientific methods *as well as* methodologies that, *prima facie*, sit more comfortably with a dualist metaphysics: introspection, phenomenology, first-person report. I take it as an attractive feature of the theory that PRED can accept the advances afforded by apparently divergent methods of inquiry.

But while it is attractive that PRED may accommodate the successes of various kinds of inquiry, if it merely proposes to accept whatever discoveries may come, it would seem to offer nothing of its own. It would be more attractive if it could provide principles by which past results might be organized and future projects might be planned. In the interest of demonstrating how PRED might do so, I suggest the following speculative principle: if a mental property is causally efficacious, it is physical; if it is epiphenomenal, it is grounded in an emergent substance. If phenomenal properties, consciousness, and the first-person perspective are epiphenomenal, then we should expect them to be intractable to the methodologies that have served physical sciences so well. Still, alternative methodologies may prove fruitful in these domains. PRED can accept the results of such methodologies. Indeed, as I am

characterizing it here, PRED proposes that developing such methodologies is necessary for coming to a complete understanding of the human mind.

One need not draw the distinction between reducible and irreducible mental properties this way, of course, but it will be helpful in what follows to have some such distinction. On the basis of this sketch of property reductive emergent dualism, I'll argue that it provides an account of mental causation that is more attractive than non-reductive alternatives. In section 3, I'll argue that PRED can boast various theoretical virtues. But first, let me briefly introduce the paper's antagonist, non-reductive physicalism, or NRP.

NRP conjoins non-reductivism and physicalism. Physicalism claims that all the fundamental entities (events, processes, facts) are physical, and that these fundamentalia determine and provide metaphysical explanation for everything else there is. Non-reductivism in the philosophy of mind claims that some mental phenomena do not 'reduce' to physical entities. What is it to 'reduce'? As I'll treat it here, to claim that some M doesn't reduce to some P is just to claim that  $M \neq P$ . Which mental phenomena don't reduce? I'll assume here that it is properties: mental properties aren't identical to physical properties. As I'll characterize it here, then, non-reductive physicalism claims that although mental properties are determined by physical fundamentalia in such a way that the former are 'nothing over and above' the latter, they are not identical to any physical properties.

## 2. Problems of mental causation

In what follows, I assume that causal relations hold between events. It's not the bat that causes the homerun, it's *the bat's hitting the ball at a certain time*. Events I take to be constituted by a particular substance or substances (e.g. bat and ball), an instance of a property or relation (*x's hitting y*), and a time or duration. Mental causation occurs when a mental event brings about some effect, whether that effect is mental or physical. I take it that a mental cause must be constituted by either a mental particular or an instance of a mental property. According to PRED as I've construed it, then, mental causation could involve either an emergent particular or a mental property; since I claim that emergent properties are epiphenomenal, there is no mental causation involving an emergent particular and an emergent property. Furthermore, since all the causally efficacious mental properties are identical to physical properties, PRED mental causation always involves only physical properties. These features make for a straightforward account of mental causation.

Indeed, I claim that PRED solves the Cartesian problem of causal interaction, the pairing problem, and the problem of causal exclusion. Consider causal interaction. PRED claims that when Chitra's intention caused her arm to go up, the mental property relevant to the causal interaction was identical to a physical property: mind-body interaction involves the very same property instantiations as body-body interaction. If Descartes' problem was that no one could understand how a substance without spatial extension or location could stand in causal relations *at all* or with physical substances, PRED clearly has no such problem. With respect to causal interactions, what minds do *is* what bodies do.

PRED has a similar solution for the pairing problem. (See Sosa 1984; Kim 2005, ch. 3) The pairing problem challenges the Cartesian to explain why minds are paired with the bodies they

are. In virtue of what is Chitra's mind paired with Chitra's body rather than with Mira's; and why is Mira's mind paired with her body rather than with Chitra's? The natural answer is that Chitra's mind and body are in the same place. But Descartes denies that minds are located, so he has to find another explanation for the pairings. But since emergent minds *are* located, the natural answer is available to PRED.

While emergent dualisms generally may solve Descartes' problem and the pairing problem, it isn't clear that emergent substance dualism without property reduction can solve the more contemporary problem of causal exclusion. Baker has said little on the matter, and Lowe has struggled to settle on an adequate solution.<sup>4</sup> If an emergent dualist adopts PRED, however, there's a simple solution.

The problem of causal exclusion charges that if every intentional action has both a mental cause and a physical cause, then every intentional action is overdetermined. (Kim 1998; Bennett 2003; Engelhardt forthcoming 1) But it seems false that every intentional action is overdetermined. If so, then it seems it can't be that every intentional action has two causes, contrary to the claims of dualists and non-reductive physicalists alike.

Quite a lot has been written on the exclusion problem, and I don't wish to add to it here. Rather, let me just point out that PRED's solution is on a par with the non-reductivist solution. Note that since the non-reductivist's properties are irreducible, her events plausibly are too. For if mental property  $M \neq P$ , then when some physical particular  $b$  instantiates  $M$  at noon, the event thereby constituted can't be identical to the event constituted by  $b$ 's instantiating  $P$  at the

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<sup>4</sup> See the various approaches adopted in Lowe 2006 and Lowe 2008, chapters 3, 5, and 6. Baker 2013, 228-233 has a brief discussion.

same time. The two events can't be identical because their constituting properties aren't identical. Hence, NRP faces the exclusion problem.

The most common solution among non-reductivists claims that physical property instances determine mental property instances by necessity. (See, e.g., Pereboom and Kornblith 1991; Sider 2003; Bennett 2003; Engelhardt 2012) Thus, when the right physical property is instantiated, a mental property must be instantiated as well; and, when a physical property instance is relevant to bringing about an intentional action, there's a mental property instance that comes along with it. For instance, many claim that each mental property instance is a proper part of a physical property instance; if so, then just as you get the legs of a chair 'for free' every time you buy a chair, a mental property instance comes along 'for free' whenever the right physical properties are instantiated. (Wilson 2011; Shoemaker 2013) Mental causation, then, simply involves causation by *a part* of a physical property instance and by the physical property instance itself. The non-reductivist claims that if this is overdetermination, it's not a problem.

PRED can claim a similar solution: while it's true that every intentional action has two causes, there is only one property instance relevant to these causal relations. If emergent particular *p* instantiates mental property *M* at noon to bring about some intentional action, then since *M* is identical to a physical property, the very same instance of *M* is had by the body paired with *p*, body *b*, at the same time. Both *p*'s being *M* at noon, the event  $\langle p, M, n \rangle$ , and *b*'s being *M* at noon ( $\langle b, M, n \rangle$ ) cause the effect, then, but no one should think they overdetermine it. To put it metaphorically, the mental cause and the physical cause share the same causal path

to the action, viz., the path 'through' property instance M. And of course a single causal path doesn't overdetermine an effect on its own.

While their solutions to the problem of causal exclusion might be on a par, I claim that PRED's account of mental causation has several advantages over NRP accounts.

### 2.1 *Mental explanations*

First, PRED can claim that there is only one property instance involved in mental causation; the non-reductivist cannot. As a result, the non-reductivist faces a challenge about the causal explanation of intentional actions that the dualist does not.

A theory of mental causation should account for the everyday appearance that some mental phenomena causally explain intentional actions. Although many philosophers believe that events are the causal relata, many of these same philosophers believe that when one event causally explains another, the explanation should appeal to properties of the cause. (LePore and Loewer 1987; Dretske 1989; Braun, 1995) It's the bat's *swinging* that explains the homerun; it's the pitch and amplitude of the singing that explains the champagne flute's shattering; and, it's the mass of the doubloons that explains the scales' tipping. Since intentional actions are fully explained by the physical properties of their causes, it seems there's no explanatory role for any other properties to play. NRP claims that mental properties are not identical to these physical properties, of course. If the non-reductivist's mental properties play no explanatory role, his theory doesn't account for the appearance that some mental phenomena causally explain intentional actions.

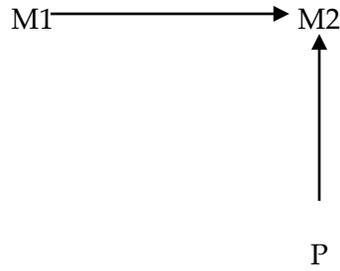
On this outlook, even after the non-reductivist has explained why intentional actions have two causes, he must still explain why two properties are relevant to explaining every intentional action. This challenge is often confused with the exclusion problem, but the two are importantly distinct. Even after one accepts that it's unproblematic that every intentional action has two causes, one may still ask whether both causes explain the action. And, given that every intentional action is fully explained by its physical cause, the non-reductivist should tell us what explanatory role his mental properties might play. There seems to be no explanatory work left for any mental property to do. Since the advocate of PRED claims there is only one property relevant in each case of mental causation, she faces no such difficulty. Her mental substance enters into causal explanations of intentional actions in the same way that her physical substance does. If one causally explains intentional actions, then so does the other.

Thus, the dualist may ask the non-reductivist what his mental properties contribute to causal explanations. If the non-reductivist attributes distinctive explanatory powers to his mental properties, the dualist asks whether the non-reductivist's physical properties also have those powers; the non-reductivist then faces a dilemma. If his physical properties also have the explanatory powers in question, then we must again ask what the mental properties are contributing to the explanation. If the physical properties don't have the relevant explanatory powers, the non-reductivist's physicalism becomes dubious—in order to maintain his physicalism, the non-reductivist needs his mental property instances to be 'nothing over and above' physical property instances. If mental properties have explanatory powers that physical properties lack, they would seem to be something over and above physical properties.

As an example, consider again the view that mental property instances are proper parts of physical property instances. This commitment makes it clear that M is nothing over and above P. If property instance M is a proper part of property instance P, then *prima facie*, M's explanatory role is part of P's explanatory role. And if M's explanatory role is part of P's, then M doesn't offer any explanations that aren't 'already' available from P. If M's explanatory role is not part of P's, on the other hand, then it's hard to believe that M is a proper part of P. But if M isn't a proper part of P, then this view loses its explanation of how M is nothing over and above P. Again, the dualist faces no such dilemma, so she has the advantage here.

## 2.2 *'New' exclusion problems*

Second, PRED doesn't face some of the recent variations on the exclusion problem that have appeared in the literature. Jeff Engelhardt (forthcoming 1) has argued that in addition to the exclusion problem as it appears above, some non-reductive physicalists face 'new' exclusion problems. Where the new problems arise, they do so thanks to the very claim that some non-reductivists use to defuse the exclusion problem, namely, the claim that each mental phenomenon depends on some physical phenomenon. Engelhardt asks us to consider what he calls "mental chain cases", cases in which one mental event causes another. Let M1 be the cause and M2 be the effect. Since M2 is a mental phenomenon, the non-reductivist will say it depends on some physical phenomenon, call it P.



Assuming that if M2 depends on P, then P determines M2, it looks like M2 *has two determiners*, M1 and P. But if M2 has two determiners, we should ask if M2 is overdetermined. Indeed, since this would be the case every time one mental phenomenon causes another, it looks like the effect in *every* mental chain case is overdetermined. This looks like a massive coincidence for which there ought to be some explanation. If the non-reductivist has no explanation, her theory is in trouble. Engelhardt calls this “the new problem of systematic coincidence”. (Engelhardt, forthcoming 1: xx)

It may seem that the non-reductivist has a straightforward explanation for the massive coincidence: mental phenomena like M1 cause physical grounds like P. Why did M1 and P occur together, then? Because M1 caused P. But Engelhardt gives reasons to think this doesn't solve the problem. Consider, first, a Humean account of causation, according to which the relationship between M1 and P is just that P counterfactually or nomically depends on M1. The causal relationship for a Humean doesn't *explain* why P follows M1, it just takes the regularity between phenomena like them to be brute. Now suppose that a Humean cites this mere regularity between entities like M1 and P to *explain* why M1 and P co-occur. Does the explanation succeed? Engelhardt argues that it doesn't; instead, he says it's circular. All there is to the Humean causal relation between M1 and P is *that they (and others similar to them) co-occur*, and the new problem of systematic coincidence asks the non-reductivist to explain *why they (and*

*others similar to them*) co-occur. Suppose we substitute a paraphrase of the Humean's understanding of causation for "M causes P" in the explanation for why M1 and P co-occur. Then, when Engelhardt charges "It is a coincidence that phenomena like M1 and P systematically co-occur", the Humean explains, "No, it's not a coincidence—for phenomena like M1 and P co-occur". Clearly, the Humean doesn't have a straightforward solution here.

Perhaps, then, there is a straightforward solution available to the *non-Humean* non-reductivist. If one takes a productive view of causation, then M1's occurrence *produces* P, so that the former does indeed explain the latter, and it no longer appears coincidental that M1 and P co-occur. Phenomena like P exist because phenomena like M1 bring them into existence, so it's no surprise that the two regularly come together.

But if one solves this problem by accepting a productive account of causation, Engelhardt poses *another* problem for the non-reductivist. In this case, the problem is that M2 has two 'creation stories'. By his commitment to physicalism, the non-reductivist has to claim that P brings M2 into existence—if there is no physical explanation for M2's existence, then it's not true that everything that exists is either physical or has its existence because of the physical. On the other hand, if M1 causes M2 and causation is productive, then M1 *also* brings M2 into existence. Engelhardt comments:

If one thinks that causes bring about the existence of their effects and that grounds do the same, then M2's existence is brought about twice. That is, M1 brings about the existence of an entity, M2; [P] brings about the existence of an entity as well, and this entity is *also* M2. On such a view, then, M2 is brought into existence by two separate occurrences; and, both M1 and [P] take credit for M2's existence. On its face, an ontology that permits such situations commits to an idiosyncratic conception of existence which would require clarification and defense. (Ibid: xx; variable changed for consistency with above)

Even if we have an explanation for why M1 and P occur together, they are still separate in that they occur at different times and in different locations. At the very least, it's unclear how an entity might be brought into existence *twice* without falling out of existence in the interim.

The problem Engelhardt raises may have a solution, but the important point for the dialectic between the dualist and the non-reductivist is that the dualist faces no such problem. The problem arises from the non-reductivist's commitment to the claim that physical phenomena *determine* mental phenomena. The non-reductivist uses this claim to explain why mental and physical causes regularly occur together, and then Engelhardt problematizes that determination. But the dualist doesn't use physical-mental determination to explain away the appearance of overdetermination. Instead, she says that mental and physical causes occur together so regularly because they instantiate physical properties together. Neither one makes the other do it. Of course, there may be further problems with this claim, but the dualist doesn't have Engelhardt's new problems of exclusion. This is an advantage for PRED.

### 3. Theoretical virtues

It's not just that PRED can solve problems of mental causation and explanation that non-reductive physicalism cannot; PRED can also claim more general virtues. I claim here that (1) unlike non-reductive physicalism, PRED need not posit explanatorily idle properties, and (2) taken overall, PRED may be ontologically and ideologically more economical than both reductive and non-reductive physicalism.

### 3.1 *Explanatorily idle entities*

As we saw in 2.1, the non-reductivist's mental properties make no explanatory contribution. If this is right, then including them in the theory sacrifices some of its theoretical economy. Consider two theories. The first posits the set of properties P to explain a set of observations O. The second agrees with the first that everything in O can be fully explained by appeal to members of P, but this theory nonetheless posits an additional set of properties M to account for the members of O. If we had just this information to choose between the two theories, we would choose the first because it is ontologically simpler while offering just as much in explanatory power. The second theory explains no more than the first while committing to more. Of course, I claim PRED is like the first theory and NRP is like the second. Both theories agree that physical properties fully explain intentional actions, but the dualist posits no additional properties for that purpose while the non-reductivist doubles the number of properties involved. If we're focusing on the properties involved in mental causation, then, PRED is more economical.

The non-reductive physicalist will of course reply that he may make a similar argument about substance. The non-reductive physicalist, after all, is a physicalist, so he posits just one substance while the dualist posits two. According to this reply, the dualist and the physicalist agree that every intentional action can be fully explained by appeal to physical substances instantiating physical properties, but the physicalist appeals to no additional substances while the dualist doubles the number of substances involved. Thus, the physicalist view is more economical. From here, the non-reductivist may say, the dialectic should consider the relative costs of positing substances and properties. Both theories seem to posit causes that are

extraneous in the explanation of intentional actions, and we need to compare their respective surplus posits to decide which, if either, can claim an advantage in theoretical economy.

But these arguments aren't analogous. The dualist's theory really is more economical than the non-reductivist's. Why? Because the dualist's 'surplus' ontology *can* play a non-redundant explanatory role and the non-reductivist's *cannot*. As we saw in 2.1, the mental properties in NRP are hamstrung. If there's anything more to a mental property instance M than there is to its physical realizer instance P, then it seems that M is 'something over and above' P. So the non-reductivist is under pressure to deny that his mental properties play non-redundant explanatory roles. The dualist is under no such pressure.

The dualist may say, for example, that her mental substances instantiate epiphenomenal qualitative properties that we associate with color experiences, odors, and so on. These explain qualia. She may say that each mental substance instantiates a property or properties that explain our subjectivity, our consciousness, perhaps our first-person perspective. It's not strictly germane to this paper to work out the details in any of these ideas; the point is that the dualist may use mental substance to explain quite a bit, so the dualist, unlike the non-reductivist, isn't committed to a theory with explanatorily idle entities.

### 3.2 Theoretical economy

Overall, I claim that PRED is more economical than both reductive and non-reductive physicalism. On the one hand, PRED and reductive physicalism are both more parsimonious and elegant than non-reductive physicalism in accounting for causal relations involving the mind. Whereas the former two theories posit only one set of properties, viz. physical properties,

to account for intentional actions, the non-reductivist posits two sets, one mental and one physical. Furthermore, the non-reductivist has to posit some further ideology to explain the relation between these sets, costing his theory in elegance.

Moreover, given the successes of physical sciences—in terms of explanatory breadth and depth, unity and economy of explanations, etc.—the explanatory gains promised by a reductive physical theory far outweigh those promised by a non-reductive physical theory. That is, if Theory 1 claims that the properties in set S are identical to ‘lower-level’ physical properties and Theory 2 says they are not, Theory 1 will almost certainly promise greater explanatory gains than Theory 2. It may turn out that the properties in S are not identical to physical properties, but when we evaluate the proposed theories, we may still consider which theory, if true, promises more. If all else is equal between the theories, the promises of the physical theory make it preferable. PRED and reductive physicalism identify mental properties with physical properties, promising all the virtues of physical theories; NRP is denied these virtues. If all else is equal, then, the former two theories are preferable. They promise greater breadth and depth in our understanding of many mental processes, unification with the physical sciences, and greater economy in our overall understanding of the mind’s place in nature.

On the other hand, there seem to be features of human minds that don’t involve causal interactions—qualitative experiences, consciousness, subjectivity, perhaps others. Given the remarks above, if it turns out that physical sciences can account for these, the advocate of PRED should acknowledge that the theoretical gains of reductive physicalism outweigh the appeals of property reductive emergent dualism. But as things stand, this is not guaranteed, and if qualia and consciousness are epiphenomenal, it’s unclear how the methods of physical science could

discover their natures; similarly, if scientific inquiry is necessarily objective and some part of mentality is necessarily subjective, then we should be pessimistic about the prospects for purely physicalist accounts of the mind. In light of this pessimism, we should view the PRED proposal as providing alternative methods of inquiry that draw on introspection, phenomenology, first-person reports of internal states, and so on. It's not simply an appeal to mystery and apparent shortcomings of physicalism; it's an attempt to find a workable kind of inquiry into phenomena that at present seem otherwise intractable.

I'm not saying here that I'd *bet* that we won't get physical accounts of consciousness and qualia. I'm saying that until we have such accounts, only dualisms that can appeal to introspection and first-person awareness give us explanatory access to consciousness and qualia, and they thereby give us methods of inquiry that seem to be reliable. Furthermore, it may be that this isn't just how things stand now but how things are by necessity. That is, it's a live epistemic possibility that introspection and first-person awareness are metaphysically necessary to explain consciousness. Similarly, it's a live epistemic possibility that *being first-personally aware* and/or *having introspective access* are properties that (metaphysically) must be grounded in a substantial self. As such, dualisms are worth our consideration, and the effort to develop better methodologies that involve introspection and first-person awareness may pay dividends. As I see it, PRED is the most plausible of the theories that can accommodate such methodologies. If these methods bear fruit, PRED makes explanatory gains where reductive physicalism does not, and it does so while retaining much of the simplicity and unity of property reductivism.

#### 4. Conclusion

I've argued that property reductive emergent dualism (PRED) has some advantages over non-reductive physicalism and perhaps reductivism as well. PRED's account of mental causation has three advantages over non-reductivist accounts: it accounts for how mental phenomena are causally *explanatory*, not just causally effective; it can give mental phenomena *distinctive* explanatory roles; and, it faces none of the 'new' exclusion problems. With respect to theoretical virtues, I claim that it is almost as elegant, unified, and parsimonious as reductivism. And, if there are explanatory gains to be made from introspection, phenomenology, or first-person reports, it may be that PRED, as compared to alternative theories of mind, offers the greatest explanatory powers at the least ontological cost. I believe these points serve to motivate PRED as a viable approach to the metaphysics of mind. I conclude that it deserves further consideration.

#### NOTES

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