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Property Dualism Implies Substance Dualism[1]

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Abstract

Research Article

According to a widely held view in the philosophy of mind, property dualism is a respectable theory whereas substance dualism need not be taken seriously. This paper argues that property dualism, as it is usually understood, is incoherent. The commitments that are meant to lead to property dualism actually lead to substance dualism. The argument presented here adds weight to David Chalmers' suggestion that the serious nonphysicalist options are in fact various kinds of panpsychism and substance dualism. Along the way, I offer an account of the substance/property distinction, argue against the existence of substrata as distinct from substances and properties, and describe a new position that I call 'transcendent panpsychism'. I identify some reasons why philosophers of mind might have overlooked the incoherence of property dualism and finish with some thoughts on the significance of my conclusion for developmental psychology.

Keywords

Substance, Properties, Mind, Dualism, Physicalism.

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Introduction to dualism

Dualism is the thesis that in addition to physical things there are nonphysical mental things that are 'fundamentally new features of the world' (Chalmers, 1996, p. 125). This means that they are not realized by, grounded in, or otherwise 'nothing over and above' physical things. This distinguishes dualism from various kinds of 'nonreductive physicalism' like Davidson's (1970) anomalous monism or Putnam's (1975) functionalism. Nonreductive physicalism can involve dualism at the level of concepts or language, but it is ontologically monistic. Theorists disagree on exactly what relations would make mental things nothing over and above physical things. I will use 'constitution' as a placeholder for this relation so that dualism says that some mental things are in no way constituted by physical things.

Physical things are roughly those described by physics. This definition faces a well-known difficulty. The history of science suggests that future physics will describe things that current physics does not (Hempel, 1969). There are two strategies for getting around this problem (Ney, 2008). The first strategy defines the physical in terms of some future 'complete' physics. The second strategy abstracts general criteria for being physical from current physics. Theorists do not agree on which strategy is best, but they typically agree about what kind of things should count as physical and what should not. For present purposes, physical things can be thought of simply as the kind of things described by physics, and anything they constitute. The arguments that follow are intended to work for any plausible precisification of this definition in light of Hempel's dilemma.

A complication arises from the possibility that familiar physical properties like mass or charge are realized by unfamiliar properties, which are not revealed by empirical investigation. If so, these hidden properties could turn out to be mental or mental-constituting ('protomental'). In acknowledgment of this possibility, I will distinguish between 'familiar' physical things, which are the kinds of things described by physics and anything they constitute, and 'unfamiliar' physical things which are the hidden realizers of familiar physical things should these exist. The thesis that familiar physical things have unfamiliar (proto)mental realizers is panpsychism. Later I will distinguish between two versions of it, which I call 'phenomenal panpsychism' and 'transcendent panpsychism'. This paper argues against the viability of property dualism only, not panpsychism.

In the philosophy of mind, physicalism and dualism are typically regarded as theses about the domain of concrete things. There is no consensus on what

makes something concrete. The leading definitions say that concrete things are spatiotemporal, or that they enter into causal relations, or both. They are contrasted with abstract things. Leading candidates for abstract things include numbers, sets, and platonic universals, which seem to be neither spatiotemporal nor causal if they exist at all. Physicalists deny that there are concrete things whose existence is something over and above physical things. But some physicalists like Quine (1951) or van Inwagen (2014) are willing to posit nonphysical abstract entities.

According to property dualism, nonphysical mental things are limited to properties. According to substance dualism, they also include substances. Property dualism has been famously defended by Jackson (1982), Chalmers (1996), and Kim (2005). Substance dualism is usually associated with historic philosophers including Plato, Augustine, and especially Descartes, though it has also received support from some contemporary philosophers including Schneider (2012) and Zimmerman (2010). There exists a received view on which property dualism is a respectable position, whereas substance dualism need not be taken seriously (Kim, 2001; 2005) I will argue that property dualism, as it is usually understood, is incoherent. The commitments that are meant to lead to it actually lead to substance dualism.

The modal argument for property dualism

Dualism was widely rejected in the mid-twentieth century. But it has since gained considerable support from a popular line of argument. The first premiss says that the physical facts about the world do not a priori entail the existence of consciousness. The second premiss says that if the physical facts do not a priori entail the existence of consciousness then they do not necessitate the existence of consciousness. The conclusion is that consciousness is something over and above physical things. This argument closely follows Chalmers' conceivability argument (1996; 2010). It also captures what is often thought the most promising version of Jackson's (1982) knowledge argument as well as various other arguments for property dualism.

The first premiss of the argument is epistemic: the physical facts about the world do not a priori entail the existence of consciousness. Because of contingent limits on human thought, this is usually elaborated as the claim that no amount of a priori reflection, even under idealized circumstances, could take one from the full physical facts about the world to the existence of phenomenal consciousness. This thesis can be supported by well-known thought experiments. According to the story of Mary, a scientist with all

physical information about color perception could not infer from that alone what it is like to see colors (Jackson, 1982). According to the zombies thought experiment, we can imagine a minimal physical duplicate of our world where consciousness is absent (Chalmers, 1996; 2010).

The first premiss of the argument for property dualism is widely accepted, even amongst physicalists (Chalmers & Bourget, 2022). It is rejected by a minority known as 'type A' physicalists. The second premiss is more controversial. This premiss says that there is a connection between a priori reflection and metaphysical modality, such that if it is necessary that where the actual physical facts obtain there will be consciousness, then it must be a priori too. Physicalists who reject this premiss are known as 'type B' physicalists. Type B physicalism is the dominant position in contemporary philosophy of mind. Property dualists devote considerable attention to defending the second premiss against objections. In doing so, they make important auxiliary claims some of which need to be spelled out.

The most important objection to the second premiss draws on the work of Kripke (1980) and Putnam (1973). In what is considered a landmark event in the history of analytical philosophy, Kripke and Putnam argued that some truths are necessary but a posteriori. For example, they propose that no amount of a priori reflection will tell you that water is H_2O. And yet this is plausibly a necessary truth. The second premiss requires that if it is necessary that the actual physical facts will be accompanied by consciousness, then it must be a priori too. Type-B physicalists can object that this might be an a posteriori necessity of the kind identified by Kripke and Putnam. If so, then the second premiss would be false. There are two important responses to this objection.

The best-known response is the two-dimensional approach, advanced in its most detailed form by Chalmers (2006; 2010). This response takes advantage of an apparent duality in the meaning of some terms. Suppose, for example, that it turns out that the clear liquid in lakes and rivers is not H_2O. We might express this by saying, truly, that 'water isn't H_2O after all'. This is difficult to make sense of if 'water is H_2O' expresses a necessary truth. Two-dimensionalism offers an explanation: 'water' has two intensions. Its 'primary' intension is a function to its referent in a scenario that actually obtains; its 'secondary' intension is a function to the actual referent of the primary intension in counterfactual scenarios. For example, the primary intension of 'water' picks out whatever clear liquid actually fills lakes and rivers. If that liquid is actually H_2O, then the secondary intension will pick out whatever has this chemical makeup in counterfactual scenarios, whether or not

it fills lakes and rivers.

The primary intension can be thought of as determining an appearance property by which the referent of a term is picked out. The secondary intension then picks out *that same* referent in counterfactual scenarios, not by its appearance property, but by its underlying essence. It follows that whilst the primary intension (the function, not the referent) is fixed independently of empirical factors like the chemical makeup of the clear liquid in lakes and rivers, the secondary intension is partly fixed by these factors. This framework can explain Kripke/Putnam-style a posteriori necessities. The reason why a priori reflection cannot tell us that water is H_2O is that a priori reflection only tells us about primary intensions. This is natural since secondary intensions are partly determined by empirical information which is, of course, not available to a priori reflection. The primary intension of 'water is H_2O' says roughly 'whatever clear liquid fills lakes etc. is H_2O', and this really isn't a necessary truth.

If this is correct, then a priori reflection only tells us about what is possible and impossible for the appearance-property determined by a term's primary intension. It follows that a priori reflection will not be a good guide to modality when we are interested in what is possible for the underlying essence of something we are picking out by an inessential appearance property. But in some cases, the appearance property may be exactly what we are interested in. This is plausibly true in the case of phenomenal properties. For example, as Kripke himself appears to suggest, it is plausible that the appearance property by which we pick out pain, that of hurting, *just is* the property referred to by 'pain'. If so, then there is no room for a difference between the appearance property by which we pick out pain and its underlying essence. In the vocabulary introduced, the primary and secondary intensions of phenomenal terms seem to be identical. Chalmers calls such terms 'semantically neutral'.

The second premiss of the argument for property dualism says that if it is necessary that the physical facts will be accompanied by consciousness, then it must be a priori too. The challenge says that this might be an a posteriori necessity of the kind identified by Kripke and Putman. Two-dimensionalism affords a natural response: physical and phenomenal terms are semantically neutral—their primary and secondary intensions are identical. According to the two-dimensional analysis, Kripke/Putman-style a posteriori necessities occur only when the primary and secondary intensions of terms differ. And so there is no room for an a posteriori necessity of this kind here. We have already seen why phenomenal terms might be regarded as semantically

neutral. This response requires that physical terms be semantically neutral too. I return to this in a moment. If both physical and phenomenal terms are semantically neutral, premiss two is not vulnerable to the objection from Kripke/Putnam-style cases.

The two-dimensional framework has theoretical applications independent of its role in the argument for property dualism (Chalmers, 2006). Its analysis of Kripke/Putnam-style a posteriori necessities is intuitively appealing. If this analysis is correct, it shows that we should not see Kripke/Putnam-style cases as grounds for wider skepticism about a priori access to modality. For according to the two-dimensional analysis, the problem in these cases is that secondary intensions are partially determined by empirical factors. The obstacle is not, therefore, that a priori reflection is an imperfect guide to the modal status of assertions. Rather, it is that a priori reflection, unsurprisingly, does not yield the empirical data that is sometimes needed to determine what is being asserted.

Despite its advantages, the two-dimensional response is controversial. One reason for this is that the framework makes the strong semantic claim that *all referring terms* have primary intensions. All referring terms, on this view, pick out their referents by some substantive property belonging to that referent. This is reminiscent of the descriptivist theory of reference associated with Russell and Frege. It conflicts with the view that some terms express what Goff (2017, p. 91) calls 'radically opaque' concepts; concepts that reveal no significant properties of their referents. For this reason, some theorists reject the two-dimensional defense of the second premiss of the argument for property dualism in favor of an alternative line of defense advanced by Nida-Rümelin (2007) and Goff (2017).

Goff (2017) proposes that some concepts have the property of 'transparency', defined as follows: a concept C of a referent E is transparent if and only if what it is for E to be part of reality is a priori accessible to anyone who possesses C in virtue of possessing C. Kripke/Putnam-style a posteriori necessities are then explained in terms of the opacity (i.e. non-transparency) of the concepts involved. For example, it is not a priori that water is H_2O because our concept of 'water' is not transparent: one can have the concept of water without knowing that what it is for water to exist, is for H_2O to exist. (I suppose here that being H_2O really is the underlying essence of water). This analysis is similar to the one proposed by two-dimensionalism. But its proponents do not have to take a stand on whether the referents of terms are always picked out by some significant property belonging to those referents:

this approach leaves room for radically opaque concepts.

The phenomenal transparency response defends premiss two of the argument for property dualism in the same way as the two-dimensional response, except that it substitutes the transparency of physical and phenomenal concepts for the semantic neutrality of physical and phenomenal terms. Both views say that there is something about physical and phenomenal terms or concepts which means that claims expressed using them cannot be Kripke/Putnam-style a posteriori necessities. The two-dimensional approach has the advantage of the wider theoretical applications of its semantic framework. The transparency approach has the advantage of its weaker theoretical commitments. But the same considerations will count in favor of a term's semantic neutrality, and the transparency of the concept it expresses. And so, from here on I will treat two approaches together, using the language of transparency for convenience.

It is plausible that phenomenal concepts are transparent. Goff (2017, pp. 109–125) advances further support for this claim by drawing on the high degree of warrant we accord to introspective judgments. Since my aim here is to demonstrate the falsehood of property dualism *given* the commitments that are meant to lead to it, I will just assume that phenomenal concepts are transparent as property dualists claim. This means they will only appear in Kripke/Putnam-style a posteriori necessities where the a posteriority is attributable to the opacity of other concepts. To defend the second premiss of the argument for property dualism it must be claimed that physical concepts are also transparent. Only then can we be sure that it is not a Kripke/Putnam-style a posteriori necessity that the physical facts are accompanied by consciousness.

At this stage, there is a twist. Proponents of the argument for property dualism *do not* typically argue that physical concepts are transparent. Rather, they point out that, where the first premiss of the argument is accepted, the opacity of physical concepts leads not to physicalism but to panpsychism. The hypothesis that physical concepts are opaque means that they do not reveal the essences of their referents. If so it is possible that whilst familiar physical things like mass and charge do not necessitate the existence of consciousness, they have unfamiliar (proto)mental essences that do. As a result, proponents of the argument for property dualism often see it as an argument for the *disjunction* of property dualism or panpsychism.

The target of this paper is property dualism, not panpsychism. (For an application of a similar line of argument to panpsychism, however, see Weir

(2021b; 2023).) As such, for now, the argument for property dualism can be thought of as presupposing that physical concepts are transparent and that physical things do not therefore have unfamiliar (proto)mental essences. Over the course of the next three sections, I argue that if this is the case, then the result is not property dualism but substance dualism. After that, I explain why this conclusion holds even if physical concepts are opaque. Looking ahead, the opacity of physical concepts does not afford a defense of property dualism against substance dualism any more than it affords a defense of physicalism against property dualism. Instead, in both cases, it leads to a kind of panpsychism.

Even where the objection from Kripke/Putnam-style cases is met, type-B physicalists can reject the second premiss of the argument for property dualism on grounds of *general* skepticism about a priori access to modal truths. This objection says there might be 'strong necessities': necessary truths whose a posteriority is not explicable by the opacity of the concepts expressing them. A drawback of this objection is that there are no uncontroversial examples of strong necessities. Property dualists do not add important claims to their position to deal with strong necessities; they simply reject the hypothesis that strong necessities exist. Just as I assume that phenomenal concepts really are transparent, I also assume that there are no strong necessities (see Cleeveley (2022) for a recent defense of this thesis). I find these assumptions plausible. But I am making them here only in order to show what follows, not because I take them to have been established.

Properties and substances

The modal argument for property dualism just described is not the only line of argument for property dualism. It is, however, among the most influential. And I have argued elsewhere that there all property dualists ought to accept the modal argument, even if they are also motivated by other arguments (Weir, 2023, pp. 149–153). In what follows, I treat the modal argument as part of the standard property dualist position.

Perhaps surprisingly, the argument makes no reference to properties. This is not a peculiarity of my exposition. The argument, if it is sound, shows that consciousness is something over and above physical things. Its proponents infer that we should posit nonphysical phenomenal properties, but not nonphysical substances. They do not offer much explanation for this inference. Where a justification is given, it is usually that substance dualism faces some unsolvable problem about mind-body interaction (Chalmers, 1996, pp. 124-125;

Kim, 2005). This is not a good justification. For as these theorists acknowledge, problems about interaction apply equally to property dualism (Chalmers, 1996, p. 150; Kim, 2005, p. 156).

Likewise, theorists rarely specify what is *meant* by the terms 'property' and 'substance'. And so it is not obvious what they take themselves to be affirming, in saying that there are nonphysical properties but no nonphysical substances. The best guide to this is that property dualists standardly invoke the substance/property distinction in order to differentiate their position from that of Descartes. When Descartes posits nonphysical substances he does specify what he means by this. It is reasonable to suppose that the nonphysical properties posited by property dualists must satisfy the minimum criterion of not being substances of the kind specified by Descartes. Otherwise, the distinction between property dualism and substance dualism will collapse.

In the *Principles of Philosophy*, Descartes gives the following definition: 'The notion of substance is just this—that it can exist all by itself'. He adds that a substance is 'a thing which exists in such a way as to depend on no other thing for its existence' (CSMK, II, pp. 159–210). This is known as the independence definition of substance. When he posits nonphysical substances, Descartes is positing nonphysical things that can exist by themselves. Equivalently, a substance in Descartes' sense is something whose existence does not necessitate the existence of anything else. 'Anything else' here had better mean 'anything over and above it' rather than 'anything nonidentical to it', since Descartes clearly denies that, for example, a body could exist without any of its parts. (For a defense of this reading of Descartes, and the notion of substance that results, see Weir (2021a; 2023, pp. 58–76)).

According to Descartes' definition, substance dualism says that there are nonphysical mental things that could exist without anything else. This accords with the common idea that substance dualism is congenial to supernatural phenomena like ghosts or to religious doctrines involving a disembodied afterlife. A nonphysical substance in Descartes' sense really could exist in a disembodied state. This also makes sense of our categorization of historical thinkers like Plato as substance dualists. Plato does not call the *psyche* a 'substance'—he does not use the term—but he does insist that it can exist without the body, and implies that it can exist without other souls too (e.g. Phaedo, 115c-e). The same reasoning is implicit in the attribution of substance dualism to traditional belief systems and to child psychology (see e.g. Cooper, 1989; Bering, 2004; 2006; Bloom, 2007).

Property dualists say that there are nonphysical properties, but not

nonphysical substances. This is *prima facie* reasonable because properties plausibly have a feature that has been emphasized by trope theorists. They seem to be characterized by what D. C. Williams (1953, p. 7) describes as a 'special form of incompleteness'. In order to bring a property of a thing before one's mind, one has to set aside its other properties. For example, the size of a desk is what is left over once we have set aside its shape, color, density, and so on. Though Williams himself does not go quite so far, it is plausible that the resulting property is 'incomplete' in the sense that it is not the kind of thing that can exist on its own, without any of the other properties of the thing to which it belongs: the size of a desk cannot exist without shape or density; the pitch of a note cannot exist without timbre and volume.

Trope theorists sometimes describe this by saying that properties are 'abstract'. But since abstract has another meaning in the metaphysics of properties, I will stick to the term 'incomplete'. And because there are different ways in which things can be incomplete, I will say that properties are 'metaphysically incomplete'. By contrast, we might describe a bicycle without a wheel as 'artificially complete' and a cat without a tail as 'naturally incomplete'. It will also be useful to talk about something's 'metaphysical complement'. A is a metaphysical complement of B if and only if B could not exist without A or some replacement for A. If it is true that the size of a desk could not exist on its own, without the rest of the desk, the rest of the desk is its metaphysical complement. Likewise, if the rest of the desk could not exist on its own without the size, we can say that the size is a metaphysical complement of the desk.

To say that something is metaphysically incomplete is just to say that it does not satisfy the independence definition of substance. If it is true that properties are metaphysically incomplete, then it is at least *prima facie* reasonable for property dualists to say that there are nonphysical properties, but no nonphysical substances. I do not claim here that that properties really are metaphysically incomplete. I only claim that this is necessary if property dualism is to avoid positing nonphysical substances of the kind defined by Descartes.

When Williams describes properties as incomplete, he has in mind particularized properties or 'tropes'. According to trope theorists, a property is a particular concrete component of its bearer. On this view, properties are a bit like proper parts. But they differ in that a proper part can exist on its own. (As Williams puts it, the tail of a cat can exist without the rest of the cat, but its smile, *pace* Lewis Carroll, cannot). The nearest alternative view says that

properties are immanent universals. These are also thought of as concrete components of their bearers. But unlike a trope, the very same immanent universal can belong to different bearers. If tropes are metaphysically incomplete it is plausible that immanent universals are too. The only difference is that immanent universals exist as long as one instance of them exists.

Platonism says that properties are abstract universals. These are in some sense 'participated in' or 'instantiated' by concrete particulars. The metaphysical incompleteness of properties looks slightly different on this view. Instead of saying that the size of the desk cannot *exist* without the other properties of the desk, platonists will say that it cannot *be instantiated* without other properties of the desk. Likewise, a nominalist might say, for example, that the desk could not stand in the resemblance relations in virtue of which it has its size, without standing in some of the other resemblance relations it stands in. But on either view, the upshot is the same. Positing nonphysical properties does not commit one to nonphysical substances, because the concrete instances of these properties are always accompanied by other (possibly physical) properties.

Property dualism makes initial sense because it is plausible that properties are metaphysically incomplete. But this is not enough for property dualists to avoid nonphysical substances. It is also necessary that the incomplete nonphysical properties of our experiences should all have physical complements. In the next section, I argue that property dualists cannot plausibly hold this. It follows that they cannot avoid positing nonphysical things that are metaphysically complete. If so, then the commitments of property dualists lead to nonphysical substances of the kind defined by Descartes after all. First, I make a few more comments about the substance/property distinction introduced here.

When giving examples of the bearers of metaphysically incomplete properties, like the desk, I do not mean to imply that these are substances. They may be thought of as substances for heuristic purposes. But whether this is accurate will depend on issues beyond the scope of this paper. For example, it is plausible that a desk cannot exist without space to occupy; and it is hard to imagine a region of space that is not situated within a larger region. So it may be that a desk's existence in fact necessitates the entirety of space.

Sometimes people distinguish between the 'bundle view' and the 'substratum view' of substances (Armstrong, 1989, p. 59). Both say that a substance is in some sense a bundle of properties. But the latter posits a further

thing, the 'substratum' which must be combined with the properties to yield a substance. The definitions outlined here do not leave any room for substrata in addition to substances and their metaphysically incomplete properties. If the substratum is metaphysically complete, it is a substance in its own right. If it is metaphysically incomplete, it is natural to class it as a special kind of property.

The independence definition of substance comes from Descartes' *Principles*. In the 'Second Replies' (CSMK, II, p. 114), he defines substance in a second way. Here Descartes says that substances are those things in which attributes, qualities, or modes exist. It is implied that substances need not exist in things in this way. Since 'attribute', 'quality', and 'mode' are Descartes' terms for what we would class as different kinds of property, he appears to be advancing the view that substances are property-bearers that are not themselves properties. This resembles Aristotle's definition of primary substances in *Categories* 2a11-35. It may be thought that this makes adopting Descartes' notion of substance less straightforward.

In fact, the two definitions are plausibly equivalent for Descartes. For the definition of the 'Second Replies' provides an informative account of substances only insofar as we understand the 'existing in' relationship that properties stand in relationship that properties stand in to substances. And the only thing Descartes tells us about this relationship is that it is such that properties 'cannot exist without other things' (CSMK, I, p. 210). But even if the definitions are not equivalent, it seems clear that anything that satisfies the independence definition will also be a substance in the sense that it is not something that has to exist in something else in the way properties do. For it follows from the fact that substances can exist on their own that they do not have to exist in or alongside anything.

It is interesting that paradigm substance dualists always posit nonphysical *selves* or *subjects*, whereas paradigm property dualists invariably posit nonphysical *qualia* or *experiences*. This seems unwarranted. There is nothing in the idea of a property to prevent property dualists from including selves or subjects amongst the nonphysical properties they posit. If a subject is too complex to be identified with a single property it might be identified with an insubstantial combination of properties. It is plausible that combinations of compresent properties can be very complex without achieving the completeness characteristic of substancehood, as illustrated by the example of a desk minus its size.

Likewise, there is nothing to prevent a follower of Hume or Nagarjuna from positing nonphysical substances that are subjectless perceptions or

experiences. This view appears to be held by some contemporary Buddhists including Damchoe Gyaltsen, Abbot of the Institute of Buddhist Dialectics, Dharamsala (*pers. comm.*) and perhaps by Hume who says at 1.4.5 of the *Treatise*, 'perceptions… may exist separately, and have no need of anything else to support their existence. They are, therefore, substances, as far as this definition explains a substance.' Whether either strictly endorses this view depends, amongst other things, on how we should understand Humean and the Buddhist no-self theories. But *if* the idea of an experience without a subject is coherent (in my judgment, it is not) *then* so is this version of substance dualism.

The argument for substance dualism

The thesis that property dualism leads to substance dualism has previously been defended by Schneider (2012) and Zimmerman (2010). Schneider proposes that a mind, for property dualists, will be a bundle of phenomenal properties, and perhaps some physical properties. She argues that the mind should therefore be classed as either a purely mental substance or as a hybrid mental and physical substance. Schneider counts both as nonphysical substances. She adds that for property dualists, zombies would not have minds because property dualists hold that 'consciousness is the mark of the mental' (Schneider, 2012, pp. 67, 70). Since no physical substance is lacking, Schneider infers that the mind, for property dualists, must be a nonphysical substance.

Zimmerman argues that 'garden variety' (i.e. everyday macroscopic) physical objects are not plausibly the bearers of nonphysical phenomenal properties. This is because these objects have vague boundaries. Zimmerman views this as the result of semantic indecision. It follows that positing that a garden variety physical object is the bearer of phenomenal properties makes nature implausibly deferential to our linguistic practices. The only alternative for property dualists is that the physical bearers of phenomenal properties are undiscovered strictly bounded physical objects. Zimmerman proposes that positing such physical objects makes property dualism highly speculative. This is not obviously preferable to positing that phenomenal properties in fact have nonphysical bearers.

Though these arguments are somewhat persuasive, property dualists can respond in a number of ways. Schneider's argument seems to presuppose that the mind is a substance. If we understand a substance as something that satisfies Descartes' independence definition, then this presupposition

requires defense. Zimmerman's argument is only effective to the degree that undiscovered strictly bounded physical substances are considered less plausible than nonphysical substances. Both arguments put property dualists under some pressure to posit nonphysical substances, but neither is decisive. A more powerful argument can be advanced by drawing on the independence definition of substance, and the commitments that lead theorists to endorse property dualism in the first place.

Property dualists can claim that there are nonphysical properties, but no nonphysical substances as defined by Descartes, because properties are plausibly metaphysically incomplete. But this is not enough for property dualists to avoid a commitment to nonphysical substances. For the claim that a nonphysical property is metaphysically incomplete only tells us that it could not exist, or be instantiated, without something else—its metaphysical complement. It could still turn out that the metaphysical complement is nonphysical too. In that case, the result is a nonphysical substance. To avoid this, property dualists must say not only that the nonphysical properties of our experiences are metaphysically incomplete, but that they all have physical complements.

If this is true, then the existence of any actual phenomenal property must necessitate the existence of some physical thing, where this means the kinds of things described by physics and anything they constitute. The problem this raises for property dualism is straightforward. According to the argument for property dualism outlined above, necessary truths expressed in physical and phenomenal terms must be a priori. It follows that if the existence of a phenomenal property necessitates the existence of some physical thing, then it must a priori entail the existence of that physical thing. But it is not plausible that the existence of a phenomenal property a priori entails the existence of any physical thing. So the existence of the phenomenal property does not necessitate the existence of any physical thing either. It follows that there is at least one nonphysical substance.

It is sufficient for this conclusion that there exists just one phenomenal property whose existence does not a priori entail the existence of something physical. But it is useful to present the argument at a more general level, in order to emphasize its similarity to the argument for property dualism. The first premiss, on this version of the argument, says that the phenomenal facts about the world do not a priori entail the existence of anything physical. The second premiss says that if the phenomenal facts do not a priori entail the existence of anything physical, then they do not necessitate the existence of

anything physical. The conclusion is that some nonphysical things satisfy the independence definition of substance. There are powerful grounds for thinking that property dualists should accept this argument.

The first premiss says that the phenomenal facts about the world do not a priori entail the existence of physical things. We could support this by appealing to the conceivability of a 'ghost world' (Cf. Goff, 2010). Just as a zombie world is a minimal physical duplicate of our world without any consciousness, a ghost world is a minimal phenomenal duplicate of our world without anything physical. The ghost world seems just as conceivable as the zombie world. Even most physicalists accept the possibility of conscious nonphysical beings in counterfactual worlds. There appears to be no contradiction in the idea that such beings might have experiences indistinguishable from our own. If the ghost world is conceivable, it follows that the actual phenomenal facts do not a priori entail the existence of anything physical.

If, on the other hand, our conscious experiences do a priori entail the existence of physical things, we ought to be able to advance a straightforward refutation of Berkeleyan idealism and external world skepticism. No such refutation has ever commanded widespread assent. Moreover, putative refutations of these positions typically depend on the claim that our perceptual experiences sometimes guarantee the existence of the objects of perception. The objects of our perceptual experiences very rarely include our brains or nervous systems. So property dualists can only reject the first premiss on these grounds if they are willing to hold that our conscious experience does not depend, metaphysically, on our brains or nervous systems, but on whatever we happen to be looking at. This would be highly unusual.

In fact, I do not think property dualists will object to the argument presented here on the grounds that the first premiss is false. Chalmers (1996, p. 75), for example, explicitly endorses premiss one when he proposes that external world skepticism arises because the facts about the external world do not supervene logically on the facts about experience. And so I assume for now that premiss one is established (I return to this in section six). The *prima facie* grounds for accepting premiss two have already been presented above: the argument for property dualism depends on the thesis that necessary truths expressed by transparent concepts are a priori and that both physical and phenomenal concepts are transparent. If the second premiss of the argument for property dualism is accepted on these grounds, it seems the second premiss of the argument for substance dualism has to be accepted too.

Objections

The second premiss of the argument for substance dualism seems to be supported by exactly the same considerations as the second premiss of the argument for property dualism. Nonetheless, proponents of the argument for property dualism frequently reject something resembling this premiss in existing arguments advanced by Descartes and Kripke. Like the argument just presented, Descartes' and Kripke's arguments can be represented as beginning with the premiss that conscious experience does not a priori entail the existence of anything physical. And they too infer from this (albeit only as an intermediate lemma) that conscious experience could exist in the absence of physical things. If the objections advanced by property dualists against these arguments are successful, then they might apply to the argument of section four too.

To highlight its similarity to the argument of the foregoing section, Descartes' disembodiment argument can be presented as follows. Premiss one says that *my* existence, including my current conscious experience, does not a priori entail the existence of anything physical. The second premiss says that if my existence, including my current conscious experience, does not a priori entail the existence of anything physical, then it does not necessitate the existence of anything physical. From this it is inferred that I could exist—with my current conscious experience—in the absence of anything physical. The argument concludes that I am distinct from my body.

It has been pointed out that Descartes' conclusion is weaker than the lemma used to reach it. But since Descartes goes on to affirm that the mind is a nonphysical substance, that lemma plausibly plays an important implicit role in his reasoning. Chalmers (2002, pp. 195–196; 2010, pp. 199–200) objects to Descartes' argument on the grounds that it could be a Kripke/Putnam style a posteriori necessity that I am embodied. If so then the second premiss of Descartes' argument would be false.

If Chalmers' objection is consistent with the commitments that lead to property dualism, this must be because the claim that I am embodied contains one or more terms that express an opaque concept (or, as Chalmers would prefer to say, a term that is not semantically neutral). Although Chalmers does not specify the relevant term, he presumably has in mind the indexical 'I'. Goff (2010, fn. 9) makes the same objection to Descartes' argument: 'A gap between conceivability and possibility can open up when one introduces indexical reference into one's conception. This is why we cannot infer from the conceivability to the possibility of my ghost counterpart.' If it is true that

'I' expresses an opaque concept, then property dualists do not have to accept the second premiss of Descartes' argument.

It is not clear that the indexical 'I' applied to oneself does express a transparent concept. People have strong modal intuitions about personal identity, and these seem to presuppose that the concept expressed by 'I' is transparent. But either way, the objection to Descartes' argument does not apply to the argument for substance dualism advanced in section four. This is because that argument does not use the indexical 'I'. Like the argument for property dualism, it uses only non-indexical physical and phenomenal terms. Having rejected Descartes' argument Chalmers says 'it may be that there is some way to repair [it], but if so, it will require more than the two-dimensional tools here' (Chalmers, 2010, p. 200). An effective solution is simply to redescribe the facts about consciousness without using indexicals.

It is highly plausible that the phenomenal facts referred to in the argument for substance dualism will in fact involve experiences being undergone by conscious subjects, whether or not these are referred to by indexicals. In the next section, I explain why this fact cannot be used by property dualists to mount an objection against the argument for substance dualism. The objection under consideration here identifies the problem with the use of indexical terms. That objection is easily met by replacing those terms.

In part three of *Naming and Necessity*, Kripke takes something like the view that 'pain' expresses a transparent concept. On this basis, he advances an argument against the token-identity theory. The token-identity theory says that every mental token is identical to some physical token. (A 'token' is just a concrete instance of a property). The first premiss of Kripke's argument says that the existence of a token pain does not a priori entail the existence of any physical token. The second premiss says that if the existence of the pain does not a priori entail the existence of any physical token, then it does not necessitate the existence of any physical token. From this, it is inferred that the pain could exist in the absence of any physical token. The argument concludes that there is no physical token with which the pain is identical.

Kripke's conclusion, like Descartes', is weaker than the lemma that precedes it. And unlike the argument for substance dualism presented in section four, Kripke focuses on a specific conscious state rather than on the phenomenal facts generally, Otherwise, Kripke's argument does not differ importantly from the argument for substance dualism I have presented. So it is likely that a successful defense of the argument for substance dualism would also constitute a vindication of Kripke's argument against the token identity

theory. But of course, my intention here is not to defend the argument for substance dualism *generally*, but merely to show that its conclusion must be accepted by property dualists.

Chalmers (1996, pp. 147–148) presents Kripke's argument as an alternative to the modal argument for property dualism presented above. He objects to it, however, on the grounds that the argument relies on 'intuitions about what counts as *that very thing* across possible worlds, and such intuitions are notoriously unreliable.' If so, then premiss two of Kripke's argument is unwarranted. A priori reflection is not able to tell us whether it is *this very phenomenal property* that could exist without physical things or just something that we are unable to distinguish from it. If this objection is successful against Kripke's argument, the same objection will be successful against the argument for substance dualism.

But this objection entails that either there are strong necessities or physical and/or phenomenal concepts are not transparent. For the claim that a phenomenal state must be accompanied by something physical uses only physical and phenomenal concepts. If these concepts are transparent, then this claim cannot be a Kripke/Putnam-style a posteriori necessity. It is, therefore, either contingent or a strong necessity. The argument for property dualism presupposes that strong necessities do not exist and that physical and phenomenal concepts are transparent. It follows that property dualists cannot consistently accept this objection against the argument for substance dualism.

If this objection *were* successful, then exactly the same objection could be made against the argument for property dualism. The objection would say that premiss two of that argument is false because a priori reflection cannot tell us whether it is *these very physical things* that could exist without consciousness, or just physical things that we are not able to distinguish from them. If so, a priori reflection leaves open the possibility that the actual physical things do necessitate the existence of consciousness after all. Property dualists will reject this objection on the grounds that it entails either that there are strong necessities, or that physical and phenomenal concepts are not transparent. If so, then they must reject it in the case of the argument for substance dualism too.

The objection that Chalmers raises against Kripke's argument is sometimes coupled with the idea that phenomenal properties might be multiply realizable. If so, then the fact that the phenomenal properties can exist without physical things in counterfactual scenarios does not entail that they are not physically constituted in reality. Chalmers (1996, p. 148) makes this point when rejecting

Kripke's argument, and Goff (2017, p. 78) says something similar when responding to Descartes'. But property dualists cannot object on these grounds for two reasons. First, if the existence of a phenomenal property does not a priori entail the existence of anything physical, and that phenomenal property nonetheless has a physical realizer, then phenomenal concepts are opaque. The argument for property dualism assumes that this is false. Secondly, property dualism is already committed to the thesis that phenomenal properties do not have physical realizers.

There is a widespread belief that arguments like Descartes' and Kripke's are defective. This may account for the fact that property dualists have not recognized the threat that the argument of section four poses to their position. For that argument is similar, in important respects, to the arguments of Descartes and Kripke. But if Descartes' argument is defective, this is because it uses the indexical 'I' which is not used in the argument for substance dualism defended here. Kripke's argument appears to be defective only if either there are strong necessities, or if phenomenal and/or physical concepts are opaque. Property dualists deny both disjuncts.

Transcendent panpsychism

So far, we have treated physical concepts as transparent. But as I mentioned in section two, proponents of the argument for property dualism typically hold that physical concepts are in fact transparent. They point out, however, that where the first premiss of the argument for property dualism is accepted, the opacity of physical concepts leads not to physicalism but to panpsychism. The hypothesis that physical concepts are opaque means that they do reveal the essences of their referents. If so, it is possible that whilst familiar physical properties like mass and charge do not necessitate the existence of consciousness, they have unfamiliar (proto)mental essences that do.

Property dualists might hope that they can appeal to the opacity of physical concepts in order to reject the argument for substance dualism. One way they could do this is by positing that familiar physical things have hidden (proto)phenomenal essences. If this is true, then premiss one of the argument for substance dualism will be false after all. For it turns out that whilst the phenomenal facts do not a priori entail the existence of familiar physical things, they do a priori entail the existence of the unfamiliar essences of physical things, either because they *are* the unfamiliar essences, or because they are constituted by them.

The problem with this objection is that it avoids substance dualism only by

positing panpsychism. Property dualism (as I am using the term here), rejects panpsychism. It follows that positing that familiar physical properties have unfamiliar (proto) phenomenal essences will not allow property dualists to avoid positing physical substances.

It is also plausible that the existence of phenomenal properties does not a priori entail anything that is not constituted by phenomenal properties. If so, then the opacity of physical concepts affords no other way to reject the argument for substance dualism.

It might be argued, however, that the phenomenal facts a priori entail some things that are neither phenomenal, nor grounded in, realized by, or otherwise constituted by phenomenal properties. Whether this is true is one of the most profound questions of philosophy. We might describe it as the question of whether there are transcendent features of mentality whose existence can be inferred from that of conscious experience, but that are not themselves constituted by conscious experience. Something like this question is a central theme in Kant, and drives the disagreement between Sartre and Husserl over the 'transcendence of the ego' (Priest, 2000).

There are not many plausible candidates for transcendent features of mentality. The most obvious is subjecthood, the characteristic of being the subject of a conscious experience; other possibilities include agency and personal identity. None of these things obviously transcends conscious experience. On an alternative view, they are fully constituted by phenomenal properties insofar as they exist at all. It is plausible, for example, that the property of being a subject is just the second-order property of having some phenomenal property, If this is true, then subjecthood is not a transcendental feature of mentality.

Suppose, however, we are committed to the thesis that there are transcendent features of mentality. The existence of these things is not plausibly a priori entailed by the existence of familiar physical things. But if physical concepts are opaque then there is logical space for an opponent of the argument for substance dualism to advance a new objection. According to this objection, panpsychism, as it is usually characterized, is false, because physical things do not have unfamiliar essences that constitute phenomenal properties. But physical things *do* have unfamiliar essences that constitute transcendent features of mentality.

We might call this view 'transcendent panpsychism'. Like all versions of panpsychism, it says that familiar physical things have unfamiliar (proto) mental essences. But it rejects the view, which might be called 'phenomenal

panpsychism', according to which these hidden essences are (proto) phenomenal. Instead, it says that they are (proto)transcendent-mental. For example, they might be (proto)subjective or (proto)agential. If either kind of panpsychism is true then the first premiss of the argument for substance dualism turns out to be false.

It is not obvious that transcendent panpsychism has much to recommend it. Like phenomenal panpsychism, it makes the counterintuitive claim that familiar physical things are in fact essentially (proto)mental. Unlike phenomenal panpsychism, it does not make up for this by providing a place for consciousness in the natural world. But even if transcendent panpsychism is viable, it is very different from property dualism as it is usually understood. On this view, phenomenal properties belong to fundamentally (proto)mental substances. These are naturally regarded as either nonphysical or as 'neutral' in the tradition of 'neutral monism'. They are not ordinary physical substances with phenomenal properties as property dualism, as it is usually understood, posits.

Default substance dualism

Property dualists hold that necessary truths expressed by transparent concepts must be a priori and that phenomenal concepts are transparent. The phenomenal facts do not a priori entail the existence of familiar physical things. If physical concepts are also transparent, then this means that the phenomenal facts do not necessitate the existence of physical things. It follows that there is at least one nonphysical substance. If physical concepts are opaque, then the phenomenal facts might a priori entail the existence of the unfamiliar (proto) mental essences of physical things. But that is panpsychism, not property dualism as it is usually understood. If this is true then property dualism is incoherent and the commitments that are meant to lead to it actually lead to substance dualism. Apart from the moderate complexity of the arguments needed to show it, there are a number of reasons why metaphysicians might not have noticed this.

First, theorists have naturally been preoccupied with whether property dualism can be defended against physicalism. After all, physicalism is the dominant view, whereas substance dualism is not usually taken seriously; and so in most contexts, defending property dualism against substance dualism serves no dialectical purpose. Secondly, theorists have been very unclear on what the difference between substance dualism and property dualism amounts to. For example, when discussing Kripke's argument, Chalmers (1996,

pp. 147-149) presents it simply as an inconclusive argument against physicalism, with no indication that, if sound, it also establishes substance dualism. Thirdly, as we have seen, arguments similar to the argument for substance dualism have generally been thought to be defective–albeit for reasons that do not render the argument for substance dualism defective. Fourthly, the distinction between transcendent panpsychism and property dualism has not been recognized.

One factor that has plausibly muddied the waters over what is at issue between property dualism and substance dualism is the tendency, mentioned above, of paradigm substance dualists to posit nonphysical selves or subjects, whilst paradigm property dualists posit nonphysical experiences. I have argued that the important question is whether a position posits nonphysical things that satisfy Descartes' independence definition of substance. But from the perspective of philosophical anthropology, it may be an equally interesting question whether there is an immaterial self; even if it would be an odd use of the term 'substance' that reserved it for such entities. It might even be argued that in order to show that property dualism leads to *paradigmatic* substance dualism, one must not only show that it leads to nonphysical substances, but that these include subjects or selves. This seems reasonable. However, the idea that there could be experiences without a subject (as opposed to the more moderate thesis that the subject is nothing over and above the experiences) is unpopular. As such, whilst I do not rule out subjectless substance dualism by definition, such a position is unlikely to find many supporters.

The argument of this paper suggests that traditional substance dualist views like Descartes', have an intellectual naturalness that is often overlooked. This conclusion may have a significance wider than its metaphysical implications. Developmental psychologists have argued that from early childhood 'we implicitly endorse a strong substance dualism of the sort defended by philosophers like Plato and Descartes' (Bloom, 2007, p. 149). The evidence suggests that substance dualism is a 'cognitive default' (Bering, 2006, p. 454). This is also supported by the prevalence of substance dualism across cultures. According to one explanation, this is an evolutionary by-product caused by the development, in humans, of distinct cognitive systems for material objects and social entities (Bloom, 2004). On a different view, default substance dualism results from selective pressures in the human social environment (Bering, 2006). There is at present no consensus.

The arguments of this paper afford an alternative or supplementary explanation. Uncontroversially, we have a strong tendency, rightly or wrongly,

to reason as though necessary truths must be a priori. This is clear from the intuitive appeal of arguments that can be shown to depend on this principle. The arguments presented in this paper suggest that consistent application of this principle leads to substance dualism. In order to show this, it has been necessary to take account of various details concerning the metaphysics of properties and substances, and the nature of physical and phenomenal terms. But the argument only makes precise something we grasp inchoately with ease: a priori reflection (alone) affords no grounds for thinking that the mind needs the body. It is highly plausible that our implicit reliance on the principle that necessary truths should be knowable a priori is part of what accounts for the apparent naturalness of substance dualism.

Conflict of Interests

The author has no competing interests.

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