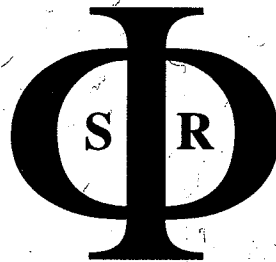


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SENSES, SENSATIONS AND BRAIN PROCESSES: A CRITICISM OF THE PROPERTY DUALISM ARGUMENT*

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I. Introduction

The property dualism argument (PDA) is alleged to refute *physicalism* and establish *property dualism*. More specifically, it is designed to show that even if physicalists are correct in their identification of token mental events, such as Smith's pain at *t*, with token physical events, such as Smith's brain state *X* at *t*, they are nonetheless compelled to admit the existence of irreducible mental properties because the *senses*, or "modes of presentation" expressed by mentalistic descriptions such as 'Smith's pain at *t*' must be irreducible mental properties. The argument first appeared in J.J.C. Smart's classic paper "Sensations and Brain Processes,"¹ and it has been endorsed and criticized in a number of recent publications.² Here, however, I will be concerned primarily with Stephen White's presentation of the PDA in his (1986) paper "Curse of the Qualia."³ I will demonstrate that, depending upon how one interprets the phrases 'mental property' and 'physical property', the PDA is either invalid or its conclusion is so weak that it is compatible with physicalism.

II. Setting the Stage:

What is Property Dualism and What is Physicalism?

What is *property dualism*, and how does it differ from *physicalism*? The standard physicalist—e.g. U.T. Place⁴, or more recently Christopher Hill⁵—maintains that all objects, events and properties, including mental objects, events and properties, are *physical* objects, events and properties. The physicalist and property dualist do not disagree concerning the identification of mental objects and mental events (tokens) with physical objects and physical events (tokens); the property dualist grants that all objects and token events are physical. The disagreement concerns mental properties (or perhaps mental event types). The physicalist maintains that *all* mental properties, such as *being in pain*, are identical to physical properties, such as *being in brain state X*, and, moreover, that property identities such as '*being in pain* is identical to *being in brain state X*,' if true, are true merely *a posteriori*. The physicalist maintains that it is *conceivable* that not all mental properties are physical properties, but he maintains that nonetheless, all mental properties are physical properties. Thus physicalism is defined as follows:

physicalism: All mental properties are physical properties. (But it is *conceptually possible* that some mental properties are not physical properties.)

The property dualist, on the other hand, maintains that at least some mental properties are not physical properties. But the property dualist who endorses the PDA, though he maintains that the physicalist is wrong, does not maintain that the physicalist is conceptually confused. The advocate of the PDA does not commit the intensional fallacy. He does not argue, for example, that *being in pain* is not the same property as *being in brain state X* because the term 'being in pain' does not *mean* the same thing as the term 'being in brain state X'; nor does he argue that *being in pain* is not identical to *being in brain state X* because one can believe that one is in pain, and not believe that one is instantiating brain state X. The physicalist and the advocate of the PDA agree that such arguments are fallacious, and thus they agree that it is at least conceptually possible that there be true, yet *a posteriori*, property identities. Property dualism is therefore defined as follows:

property dualism: Some mental properties are *not* physical properties. (But it is *conceptually possible* that all mental properties are physical properties.)

The physicalist and the property dualist thus do not agree concerning the extensions of the terms 'mental property' and 'physical property.' The physicalist maintains that all properties are in the (actual) extension of 'physical property,' while the property dualist maintains some properties are not in the (actual) extension of 'physical property.' Consequently, unless the property dualist and the physicalist are talking past one another, they must agree concerning the *intensions* or *reference fixers* associated with the terms 'mental property' and 'physical property.' (Suppose you think that all *bleeps* are *globs*, but I think some *bleeps* are not *globs*. Do we have a genuine, not merely verbal, disagreement? We have a genuine disagreement only if we agree about what we *mean by* 'glob' and 'bleeb,' i.e. only if we agree about the *intensions* associated with these terms.) So, what are the common intensions associated with the terms 'mental property' and 'physical property?' In posing this question I am not demanding precise, empirically testable, necessary and sufficient conditions for a property's being *physical*. All I demand is a rough, but principled account of what it is in virtue of which physical properties *are* physical properties and mental properties *are* mental properties. *What is it for* a physical property to be *physical*? And *what is it for* a mental property to be *mental*?

The only appropriate and charitable characterization of the intensions of

'physical property' and 'mental property' is metalinguistic (or perhaps metaconceptual): Roughly, a property is a *mental property* if and only if it is, or could be, *designated by* (or is the *referent* or *extension* of) a mentalistic expression, and a property is a *physical property* if and only if it is *designated* by a term or description in some *potential, justified, physical theory*.⁶ Thus I suggest that the following *designative intensions* are, at least approximately, the intensions associated with 'mental property' and 'physical property':

A property *p* is a *mental property* iff *p* can be *designated* by a *mentalistic term*.

A property *p* is a *physical property* iff *p* can be *designated* by a *physicalistic term*.

Now many questions can be raised concerning this characterization of the intensions of 'mental property' and 'physical property': What is a "physicalistic" or "mentalistic" term? And what notion of "can" is being invoked? These are important questions, but I will not stop to consider them here, for my purpose is to discredit the PDA. Thus I am concerned only to defend the claim that the *designative intensions* constitute a charitable interpretation of how the advocate of the PDA uses 'mental property' and 'physical property'. I offer two considerations in support of this claim.

First if one uses the *designative intensions*, then one can make sense of the disagreement between the physicalist and the property dualist. Assuming the *designative intensions*, the physicalist must be understood as maintaining

Physicalism₁: Every property that *can* be *designated* by a mentalistic term *can* be *designated* by some physicalistic term.

And the property dualist must be understood as maintaining

Property Dualism₁: Some properties that *can* be *designated* by a mentalistic term *cannot* be *designated* by any physicalistic term.⁷

(Again, it is not clear what modality is involved here, but never mind.)

Moreover, if we assume that *the designative intensions* are at least approximately correct, then we can explain why the advocate of the PDA allows that *physicalism*, though false, is at least *conceptually possible*, and cannot be refuted by arguments that appeal to the different *meanings* of mentalistic and physicalistic expressions: *Physicalism₁* does not claim, nor entail, that for every mentalistic expression there is a *synonymous* physicalistic expression, and thus it does not entail that property identities such as '*being in pain* is identical to *being in brain state X*' are true *a priori*. Nor does it entail that mentalistic and physicalistic expressions can be everywhere substituted for one another, *salve veritate*.

Second, a charitable interpretation of the PDA seems to require associating such metalinguistic intensions with the phrases 'mental property' and 'physical property'. For the conclusion of the PDA is that some mental properties are not physical properties, but, as will be illustrated below, all of the premises of the PDA are metalinguistic and state theses concerning either the "modes of presentation" in virtue of which *terms* refer, or the epistemological status of certain kinds of *sentences*. How can premises stating theses about *terms* and *sentences* entail a conclusion about *properties*? The *designative intension* provides a means of bridging this gap.

III. The Property Dualism Argument.

White presents the PDA as an objection to Block's "Physicalist-Functionalism," the details of which are not relevant to my purposes here.⁸ For my purposes the target of the PDA is a standard physicalist, in the tradition of U.T. Place and H. Feigl. What I take to be the essence of White's argument is stated in the following passage:

We are assuming, for simplicity, that a person's qualitative state of pain at *t*, say Smith's, is identical with a physical state, say Smith's brain state X at *t*. Even if this is the case, however, not only do the sense of the expression 'Smith's pain at *t*' and the sense of the expression 'Smith's brain state X at *t*' differ, but the fact that they are coreferential cannot be established on a priori grounds. Thus there must be different properties of Smith's pain (i.e. Smith's brain state X) in virtue of which it is the referent of both terms. In the case of the expressions 'the morning star' and 'the evening star', it is in virtue of the property of being the last heavenly body visible in the morning that Venus is the referent of the first expression. And (since 'the morning star' is not coreferential a priori with 'the evening star') it is in virtue of the *logically distinct* property of being the first heavenly body visible in the evening that it is the referent of the second. The general principle is that if two expressions refer to the same object, and this fact cannot be established a priori, they do so in virtue of different routes to the referent provided by different modes of presentation of the referent. These modes of presentation of the object fall on the object's side of the language/world dichotomy. In other words they are aspects of the object in virtue of which our conceptual apparatus picks the object out; they are not aspects of that conceptual apparatus itself. Hence the natural candidates for these modes of presentation are properties...

...Since there is no physicalistic description that one could plausibly suppose is coreferential a priori with an expression like 'Smith's pain at *t*', no physical property of a pain (i.e. a brain state of type X) could provide the route by which it was picked out by such an expression.⁹

Interpreting this passage is not a trivial task, but I think the following is

an accurate and charitable reconstruction of the argument. White assumes a Fregean analysis of true, *a posteriori*, identity claims, and a Fregean theory of reference and content in general; *i.e.* White assumes

(1) The General Principle: If α is identical to β is a true *a posteriori* identity claim, then the terms α and β express distinct senses, or modes of presentation.

and White also (implicitly) assumes

(2) If α is identical to β is not true, then the terms α and β express distinct, senses, or modes of presentation.

(Note that it is important to carefully distinguish the *expresses* relation from the *designates* relation: a term is said to *express* its sense or mode of presentation and to *designate* or *refer to* its referent or extension.) Moreover, White assumes that modes of presentation are mind independent properties. Thus

(3) Modes of presentation, or senses, are mind independent properties.

And finally, White assumes that if there are true identity claims whereby the designatum of a physicalistic term is identified with the designatum of a mentalistic term, then these claims are *a posteriori*. Thus one instance of this general claim is

(4) For all possible physicalistic terms δ , if 'Smith's pain at t is identical to δ ' is true, then 'Smith's pain at t is identical to δ ' is (merely) *a posteriori*.

Now White infers from (1)-(4) that

(5) The sense or mode of presentation expressed by 'Smith's pain at t ' is not a physical property.

And, assuming the designative intension of 'physical property', (5) can be more perspicuously stated as

(5') For all possible physicalistic terms δ , the property designated by δ is distinct from the mode of presentation expressed by the mentalistic term 'Smith's pain at t '.

The conclusion, (5'), entails *Property Dualism*₁. Thus if the PDA establishes (5'), White's version of the PDA succeeds in establishing *Property Dualism*₁, and refuting *Physicalism*₁.

If my reconstruction White's argument is accurate, then White's statement of the PDA is invalid; the conclusion (5') does not follow from (1)-(4). To simplify the argument, let us give the mode of presentation expressed by 'Smith's pain at t ' a name. Let us call this mode of presentation 'MOP₁'. Now it *does* follow from (1)-(4) that

(5*) For all possible physicalistic terms δ , the property expressed by δ is distinct from MOP₁.

(For any δ , either 'Smith's pain at t is identical to δ ' is true, or it is not true. If it is not true, then by (2) 'Smith's pain at t' and δ express distinct modes of presentation. If true, then, by (3), it is a posteriori, and then by (1) 'Smith's pain at t' and δ express distinct modes of presentation.) The conclusion (5'), however, states that MOP_1 cannot be *designated*, or *referred to*, by a physicalistic term, and (5') does *not* follow from (1)-(4). If my reconstruction is accurate, then White has confused sense and reference; more specifically he confuses the claim that no physicalistic term *expresses* MOP_1 , with the claim that no physicalistic term *refers to*, or *designates*, MOP_1 .

Perhaps, however, I am misinterpreting of the conclusion of the argument; *i.e.* perhaps White and the other advocates of the PDA do not associate the *designative intensions* with 'mental property' and 'physical property'. If so, then though I am correct in interpreting White to be inferring (5) from (1)-(4), I am incorrect in interpreting (5) as being equivalent to (5'). Moreover, note that if *what it is for* a property to be a physical property is for it to be *expressed* by a possible physicalistic term, then White's conclusion, (5), is *not* equivalent to (5'); rather (5) is equivalent to (5*), and, as was previously pointed out, (5*) *does* follow from (1)-(4).¹⁰ So if the intensions White associates with 'mental property' and 'physical property' are not the *designative intensions*, but rather the *expressive intensions*:

A property p is a *physical property* iff p can be *expressed* by a *physicalistic term*.

A property p is a *mental property* iff p can be *expressed* by a *mentalist term*.

then White's statement of the PDA is valid, though the conclusion of the PDA is now (5*), rather than (5').

So does White's version of the PDA succeed in establishing *property dualism*, and refuting *physicalism*, after all? If we reject the *designative intensions* in favor of the *expressive intensions*, then *property dualism* and *physicalism* are more perspicuously stated as follows:

Physicalism₂: Every property that can be *expressed* by a mentalistic term can also be *expressed* by a physicalistic term.

Property Dualism₂: Some properties that can be *expressed* by mentalistic terms cannot be *expressed* by any physicalistic term.

Premises (1)-(4) entail (5*), and, under the assumption that the mode of presentation expressed by the term 'Smith's pain at t' is a mental property, (5*) entails *Property Dualism₂*. Now *Property Dualism₂* is wholly compatible with *Physicalism₁*. The claim that all properties that can be *designated* by mentalistic terms can also be *designated* by physicalistic terms is perfectly compatible with the claim that some properties that can be

expressed by mentalistic terms cannot also be expressed by physicalistic terms. Thus an argument in support of *Property Dualism*₂ is not an argument against *Physicalism*₁. *Property Dualism*₂ is, however, incompatible with *Physicalism*₂. Therefore, if *physicalism* can plausibly be identified with *Physicalism*₂, then the PDA succeeds in refuting *physicalism* after all.

Physicalism, however, cannot plausibly be identified with *Physicalism*₂. That is, physicalists such as J.J.C. Smart, H. Feigl and U.T. Place cannot be interpreted as defending anything like *Physicalism*₂. To see this, note that the truth of property identities such as, 'being in pain is identical to undergoing C-fiber stimulation' would be *irrelevant* to the truth of *Physicalism*₂. That is, even if the physicalist demonstrated that for every mentalistic term *M* there is at least one physicalistic term *P* such that the property identity 'M is identical to P' is true, this would not be enough to establish the truth of *Physicalism*₂. Rather, to show that *Physicalism*₂ was true, the physicalist would have to show that for every mentalistic term *M* there is at least one physicalistic term *P* such that *M* and *P* express the same sense or "mode of presentation." Thus the property identity 'M is identical to P' would have to be not only true, but true *a priori*. But it is clear that *Physicalism*₂ is not the thesis defended by Smart, Feigl and Place. Smart clearly states that his thesis "does not claim that sensation statements can be translated into statements about brain processes"¹¹ and Place states that he is "not claiming that statements about sensations and mental images are reducible to or analyzable into statements about brain processes."¹² *Property Dualism*₂, the conclusion entailed by premises (1)-(4), is equivalent to the extremely weak claim that not every mentalistic term is *synonymous* with some possible physicalistic term. The physicalist, who is not impressed by arguments which commit the intensional fallacy, will certainly agree with this claim.

IV. Conclusion.

If the *designative intensions* are used to interpret 'mental property' and 'physical property', then one can make sense of the disagreement between the physicalist and the advocate of the PDA, but the PDA is invalid. Yet if the *expressive intensions* are used to interpret these phrases, then the PDA is valid, but the conclusion of the argument is so weak that it is compatible with *physicalism*. I conclude that the PDA fails to refute *physicalism*.*

Notes

* I am in debt to Stephen White, Jeff McConnell, and Andrew Botterol for very helpful discussions. I also owe thanks to Terry Horgan, who commented on this

paper at the 1997 meeting of the Southwestern Philosophical Society, and raised a number of very interesting issues.

¹ J.J.C. Smart, "Sensations and Brain Processes," *Philosophical Review*, 68:141-156 (1959). Smart attributes the argument to Max Black.

² The PDA is endorsed by not only White, but also by Loar, "Phenomenological States," *Philosophical Perspectives* 4 (1990): 85, (Loar attributes the argument to neither White nor Smart, though Loar's presentation of the argument is very similar to White's.), and also by Searle, *The Rediscovery of the Mind*, (Cambridge: MIT Press 1992), pp. 35-40, and also by McConnell, "In Defense of the Knowledge Argument," *Philosophical Topics*, vol. 22 No. 1 &2, Spring & Fall (1994). The PDA is criticized by Christopher Hill, in *Sensations: A Defense of Type Materialism*, Cambridge Studies in Philosophy (New York: Cambridge University Press 1991). (Hill also rejects the PDA, though, in my view, for the wrong reasons. See Hill pp. 98-101.)

³ Stephen White, "Curse of the Qualia," *Synthese*, 68: 333-368 (1986). White does not employ the PDA to support property dualism. Rather White employs the PDA to allegedly show that *synthetic physicalism* must be rejected in favor of *analytic physicalism*. (*Synthetic Physicalism* maintains that for all physicalistic terms P and mentalistic terms M, $M = P$, if true, is merely a posteriori. *Analytic Physicalism* maintains that for all mentalistic terms M there is at least one physicalistic expression P such that $M = P$, is true a priori.)

⁴ U.T. Place, "Is Consciousness a Brain Process?" *British Journal of Psychology*, XLVII, 1966, 44-50.

⁵ *ibid.*

⁶ Herbert Feigl, in, *The 'Mental' and the 'Physical': The Essay and a Postscript* (Minneapolis: University of Minnesota Press, 1958) argues that "the only consistent and philosophically fruitful meaning of 'physical'...is that of a *conceptual system* anchored in sensory observation and designed for increasingly comprehensive and coherent explanations of the intersubjectively confirmable facts of observation" (p. 87, italics mine). If Feigl is right, and I think he is, then the debate between the physicalist and the property dualist is not so much a debate in metaphysics over what sorts of properties there are, but rather a debate in the philosophy of language over the expressive power of a certain sort of theory. But if this is right, then it is not all clear what the philosophical significance of the debate might be. John Searle reports Chomsky as saying, "as soon as we come to understand anything, we call it "physical"" (Searle, *ibid.*, p. 25.) I suspect that Chomsky is right about this.

⁷ Once the formal mode is adopted, several versions of physicalism and property dualism can be discerned. Consider the following versions of physicalism:

Super Ultra Strong Physicalism: Every property is designated by a physicalistic term.

Ultra Strong Physicalism: Every property can be designated by a physicalistic term.

Strong Physicalism: Every mental property is designated by a physicalistic term.

Super Ultra Strong Physicalism is so strong that no realist concerning properties is likely to endorse it; surely there are properties which we do not designate with any of our terms. Similar remarks apply to Ultra Strong Physicalism: What reason could a realist about properties have for thinking that all properties even *can be* designated by us? *Strong Physicalism* seems to be weaker than *Ultra Strong Physicalism* because the domain of the quantifier is restricted to mental properties, but it is still too strong: A person who calls himself a physicalist does not claim to *know* which physical properties are identical to the mental properties; rather the physicalist claims that such identities obtain and are, in principle, discoverable. And this is the claim presented by *Physicalism*, as defined above.

And consider the following versions of *property dualism*:

Ultra Weak Property Dualism: Some properties are not designated by any *physicalistic* term.

Weak Property Dualism: Some properties cannot be designated by any *physicalistic* term.

Strong Property Dualism: Every mental property cannot be designated by any *physicalistic* term.

Ultra Weak Property Dualism and *Weak Property Dualism* are so weak that no realist concerning properties is likely to deny them. Moreover, these versions of property dualism are compatible with *physicalism*. Thus, if there is a disagreement between the physicalist and the property dualist, then property dualism cannot be identified with either of these weak forms. *Strong Property Dualism*, though certainly incompatible with *physicalism*, is too strong: In rejecting physicalism, the property dualist need not maintain that *no* mental property is identical to a physical property, rather he need only maintain that *some* mental property is not identical to any physical property. Therefore for my purpose here the property dualist is best understood as maintaining *Property Dualism*, as defined above.

⁸ The term 'physicalist-functionalism' is due to White. Block presents this view in "Are Absent Qualia Possible?", *The Philosophical Review* 89:257-74 (1980).

⁹ White actually goes on from here and considers the suggestion that the mode of presentation associated with the mentalistic term 'Smith's pain at t' is a "topic neutral property" expressed by a "topic neutral term." (The terminology is due to Smart.) I omit this part of White's argument because (i) while I have a vague idea as to how the distinction between mentalistic and physicalistic terms is to be drawn, I have no idea how the distinction between physicalistic and "topic neutral" terms is to be drawn. Is 'feels like what it feels like when C-fibers are stimulated' mental, physical, or topic neutral? And by what well motivated *principle* is this decision made? (ii) For my purposes here the crucial point is White's claim that the mode of presentation expressed by the mentalistic term 'Smith's pain at t' is not a physical property.

¹⁰ This diagnosis receives some support from Loar. Loar presents premises very similar to (1)-(4), and then he states that, given an identity claim such as 'Smith's pain at t is identical to brain state X', the property dualist "should reply that

this identity could be true only if the [mental] term [expresses] a reference fixing property...and that this...property cannot itself be physical-functional.¹¹ Loar then presents a brief argument in support of this claim in a footnote:

[Suppose, for *reductio*, that the mode of presentation expressed by 'Smith's pain at t' is a physical property.] Then...the *sense* of the term would be a physical property. *But then* there would be an a priori connection between that [mental] term and some physical term, viz. one that *more directly expresses* that sense, which is inconsistent with the premise [i.e. premise (4)] (my boldface).

In this footnote Loar seems to infer from, (i) property P is a physical property, that, (ii) property P is "more directly *expressed*" by a "physical term." If the intension associated with the term 'physical property' is the *designative intension*, then this inference is invalid; it does not follow from the fact that a property is physical, and thus can be *designated* by a physicalistic term, that it can also be *expressed* by a physicalistic term. But if the intension associated with the term 'physical property' is the *expressive intension*, then this inference is valid.

¹¹ Smart, *ibid.*, p. 144.

¹² Place, *ibid.*, p. 44.

Editorial Policy

Each January issue of the *Southwest Philosophy Review* contains papers presented at the annual meeting of the Southwestern Philosophical Society. Papers in the July issue are selected by the editor, with the advice of the members of the Advisory Board and other referees, from open submissions to the *Review*. Comments on papers previously published in the *Review*, including papers from annual meetings, are solicited and will be considered for publication.

Unsolicited book reviews will be considered and books for review are requested from publishers and authors, with preference for publications by members of the Southwestern Philosophical Society.

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Upon acceptance of a paper for publication, the author will be requested to provide the editor with a computer diskette containing the file of the manuscript.

