

Why ‘non-mental’ won’t work: on Hempel’s dilemma and the characterization of the ‘physical’

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Abstract Recent discussions of physicalism have focused on the question how the physical ought to be characterized. Many have argued that any characterization of the physical should include the stipulation that the physical is non-mental, and others have claimed that a systematic substitution of ‘non-mental’ for ‘physical’ is all that is needed for philosophical purposes. I argue here that both claims are incorrect: substituting ‘non-mental’ for ‘physical’ in the causal argument for physicalism does not deliver the physicalist conclusion, and the specification that the physical is non-mental is irrelevant to the task of formulating physicalism as a substantive, controversial thesis.

Keywords Physicalism · Characterization of physical · Non-mental · Causal argument for physicalism

1

In a series of recent papers philosophers have debated the merits of substituting the term ‘non-mental’ for every instance of ‘physical’ within the Causal Argument for physicalism, as part of a more general strategy of characterizing the ‘physical’ (at least partially) in terms of the ‘non-mental’.¹ The crucial premise of the Causal Argument specifies that physics is *causally complete*, which is to say that

¹ See Spurrett and Papineau (1999), Gillett and Witmer (2001), Montero and Papineau (2005). For arguments that ‘non-mental’ might be used as a definitional criterion of ‘physical’ see Montero (1999), Crook and Gillett (2001), and Wilson (2006).

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(C_P) Every physical event is determined, in so far as it is determined at all, by preceding physical conditions and laws.

And what motivates the replacement of ‘physical’ with ‘non-mental’ within (C_P) is its promise as a means of bypassing a well-known dilemma attributed to Carl Hempel (1980): If, on the one hand, we understand ‘physical’ via reference to current physics then physicalism—construed roughly as the thesis that everything is (or is realized in) the physical—is likely false, since the ontology of future physics will very probably supersede that of current physics. On the other hand, if we define ‘physical’ by reference to some future, ideal physics, then the thesis of physicalism lacks determinate content; in particular, it is conceivable that future physicists will find need to advert to mental phenomena so as to complete their catalogue of the fundamental properties and forces, in which case physicalism as a mind/body theory will be indistinguishable from its traditional rivals.² Applying this dilemma to the case at hand it appears that (C_P), the key plank in the Causal Argument for physicalism, is either false, unacceptably vague, or consistent with the existence of fundamental mental phenomena, and thus with the falsity of physicalism intuitively understood.

By way of response David Spurrett and David Papineau (1999) have argued that physicalists need not entangle themselves in terminological disputes about the meaning of ‘physical’ in order to put the Causal Argument to good use, for they have available an alternative formulation of (C_P) that may be deployed to the same effect. As Spurrett and Papineau see it,

The substantial issue is the completeness of the non-mental: if we list all the essential causes of non-mental effects, including the movements of matter, do we ever have to leave the realm of the non-mental? (p. 26)

And if the answer to this question is “No,” we may simply drop (C_P) in favor of

(C_{NM}) Every non-mental event is determined, in so far as it is determined at all, by preceding non-mental conditions and laws,

in which case schema (A) of the Causal Argument for physicalism,

(A) (1) Mental events have physical effects.

(C_P) Every physical event is determined, in so far as it is determined at all, by preceding physical conditions and laws.

(P) So, mental events are physical events.

² In fact these two threats—the *no-determinate-content* and the *possibility-of-fundamental-mentality*—should be understood as alternative interpretations of the second horn of Hempel’s dilemma and treated separately. As I shall argue below, in the absence of a suitable response to the first interpretation, the second one is beside the point.

may be replaced by schema (B):

(B) (1') Mental events have non-mental effects.

(C_{NM}) Every non-mental event is determined, in so far as it is determined at all, by preceding non-mental conditions and laws.

(NM) So, mental events are non-mental events.^{3,4}

According to its proponents this last schema (call it the repackaged Causal Argument) is just what is needed to make the case for physicalism, without involving ourselves in the messy business of saying exactly what the physical is supposed to be.

This paper aims to show that the switch from 'physical' to 'non-mental' as exemplified in schema (B) is more trouble than it's worth. Indeed, the maneuver weakens the case for the physicalist conclusion it is designed to support, because more than one instantiation of (C_{NM}) is inconsistent with (C_P) and, therefore, (NM) is not equivalent to (P). Since (NM) may be true while physicalism is false, schema (B) cannot be relied upon to do the work physicalists require of it. In particular, since (B) establishes a thesis indistinguishable from *neutral monism*, and since the standard anti-physicalist arguments establish at most the disjunctive thesis that *either dualism or neutral monism is true*, construing 'physical' as 'non-mental' fails to deliver a version of physicalism appropriately contrastive with the main motivations for dualism. Thus, the non-mental strategy results in a physicalism so devoid of content that the debate between physicalists and anti-physicalists cannot be made intelligible, except at the most superficial level. Whatever the merits of Hempel's dilemma, then, swapping 'non-mental' for 'physical' so as to avoid it, even strictly for purposes of advancing the Causal Argument, will not do.

2

I begin by examining one *prima facie* problem for the repackaged Causal Argument, pressed by Gillett and Witmer (2001), which concerns the nature of our evidence for the completeness claim expressed in (C_{NM}). According to them, while our evidence for the completeness of *physics* is comparatively weighty, the claim that every

³ I allow to remain implicit the widely accepted assumption that physical (non-mental) events are not systematically overdetermined by mental and physical (non-mental) causes. I further allow that both (P) and (NM) may be satisfied in the absence of mental-physical (non-mental) identification at the level of types.

⁴ Many have been struck by the paradoxical ring of this thesis, but it need not have "the effect of making the idea of physical reduction of the mental a simple verbal contradiction," as Kim (2005: 160) warns. It could be taken as equivalent to the thesis that mental events "can be identified without using mental categories" (Papineau 2001: 12), which carries no comparably eliminativist overtones; or, alternatively, it may be interpreted as saying that mental events are *realized* by non-mental events, where 'realization' does not connote identity (with anything non-mental).

non-mental event—physical or otherwise—is determined by *non-mental* antecedents is a much stronger thesis, and correspondingly less likely to find empirical support. Thus, in opposition to Spurrett and Papineau’s contention that twentieth-century physiological research strongly suggests the completeness of the non-mental, Gillett and Witmer are decidedly less sanguine:

In contrast [to physics], a startling number and variety of factors, usually with *ceteris paribus* conditions, must be invoked in explaining a bodily movement and these factors reach beyond physiology itself to other sciences such as biochemistry or genetics. Differences between physics and higher non-mental sciences such as physiology appear to underpin these contrasting situations...for [in contrast to physics] the special sciences must constantly stray into other fields of inquiry and their findings, not least because their objects of study are often composed by the entities of such sciences. This partially explains why the laws of such non-mental special sciences are *ceteris paribus* in nature and provides an obvious, and grave, difficulty for such sciences producing complete explanations. (p. 307)

But it is hard to see why the admitted incompleteness of *physiology*—an incompleteness guaranteed by the fact that physical, chemical and biological causes may have physiological effects—should frustrate inductive arguments against *sui generis* mental causes or for the completeness of the non-mental generally. Such incompleteness is surely to be expected since, as Gillett and Witmer note, special scientific entities are plausibly composed of the entities studied in the sciences of the relatively more fundamental, and we should no more expect physiology to be causally isolated from chemistry, for example, than we should expect to find that physical causes are irrelevant to chemical events. Generally speaking, physicalism rests comfortably with higher-level phenomena being affected by occurrences at the relatively lower-levels as a matter of course.⁵ As far as I can see, however, the resulting incompleteness of *each* non-mental special science has no tendency to suggest that the *conjunction* of the non-mental sciences is incomplete (in the sense that particular non-mental events are inexplicable without appeal to irreducibly mental causes), and Papineau’s inductive argument against such irreducible mental forces, such as it is, is not compromised by an incompleteness of the first sort.⁶

Moreover, it is unclear that Spurrett and Papineau understand the repackaged Causal Argument to involve a “change in the type of evidence” required to underpin its key completeness premise, as Gillett and Witmer (p. 307) contend; for it is the evidence from 20th-century physiology which, according to Papineau, “clinch[es] the case for the completeness of physics,” (2001: 31), and it is to that same body of evidence that he and Spurrett appeal in seeking to bolster (C_{NM}). But

⁵ Is the philosophically significant point that practitioners of the special sciences must be prepared to pursue their problems into *any* other science at all, and not just into the sciences of the relatively *lower*-levels? But the same must be true in the case of physics, or else the possibility, made vivid by the second horn of Hempel’s dilemma, that future physics might “include in its ontology outright reference to the mental” (Gillett and Witmer, p. 306) may safely be ignored.

⁶ For a different response to Gillett and Witmer’s arguments, see Montero and Papineau (2005).

if this body of evidence fortifies the thesis that all causally efficacious mental events are physical, it surely must support the claim that all such events are non-mental (or describable in a non-mental vocabulary), for the former entails the latter.⁷ It would seem, then, that the repackaged Causal Argument as Spurrett and Papineau conceive it rests on just the same evidence and, consequently, enjoys exactly the same strength as the original Causal Argument, the only difference being that it allows us to circumvent saying precisely what we mean when we say that the physical is causally complete. And if this is so, then the repackaged Causal Argument is indeed “just what we need for philosophical purposes” (Papineau 2001: 12).

3

Nevertheless, all is not well. Let's imagine for purposes of argument that current physics is in fact complete so that, defining 'physical' over present day physics, (C_P) is true. Given the assumption that the mental causally interacts with the physical, both (P) and the completeness principle specified in (C_{NM}) plausibly follow. But in actuality current physics is incomplete, so defining (C_P) in its terms would render the principle false; and just from the truth of (C_{NM})—the thesis that the non-mental realm as a *whole* is complete—a conclusion suitably equivalent to (P) cannot be derived.⁸ For suppose we take the union (call it U) of all the sciences from physics to (but exclusive of) psychology. Since U excludes any science the vocabulary of which either includes or implicates mental predicates, each term included in the vocabulary of U is a non-mental term, from which it follows that every event describable by U is describable in a non-mental vocabulary. Now if U is causally complete then the non-mental is causally complete, and (C_{NM}) is satisfied. Yet it certainly does not follow from the completeness of U that every physical event is determined, in so far as it is determined at all, by preceding physical conditions and laws, for it could be that some physical events cannot be accounted for without ineliminable reference to chemical or biological or other higher-level non-mental causes. Thus the causal completeness of physics, (C_P), does not follow from the causal completeness of the non-mental, (C_{NM}).

The above result relies in an obvious way upon the presupposition that there is a distinction between physics “proper” and the various “special” natural sciences such as chemistry and biology, and the philosophical import of the result presupposes that whereas 'non-mental' is insensitive as to the distinction between them, an adequate characterization of physicalism requires that the distinction in

⁷ It may be that Gillett and Witmer believe (C_P) to derive its support *solely* from physical findings, so that the physiological findings with which Spurrett and Papineau are impressed simply do not enter the dialectical picture. The “appeal of the Causal Argument,” they write, “appears to derive from” the warrant we enjoy for (C_P); but given that the evidence we currently possess for (C_{NM}) is comparatively scanty, it is the original Causal Argument that offers physicalists “a much better chance of successfully warranting their beliefs” (p. 308). Yet this can hardly be so if the evidence for (C_P) just is the evidence for (C_{NM}), which, rightly or wrongly, Spurrett and Papineau evidently believe it to be.

⁸ To clarify, the contrast in entailment being drawn is between what follows from the assumption that fundamental *physics* is complete, and what follows solely from the assumption that the realm of the non-mental (inclusive of the various special sciences) is complete.

question be drawn. These presuppositions seem sufficiently warranted by the context, inasmuch as (i) the best formulation of physicalism, by Papineau's lights, assumes the distinction in question (see below), and (ii) Spurrett and Papineau claim (1999: 25) that 'non-mental' is the substituens appropriate for use when investigating the relation between the mental and the physical. However, whether the problem generated by the relevant substitution is all that serious may certainly be questioned, and an affirmative response to the question requires elaboration and defense.

For one thing, it may appear that if the mental turns out to be describable in a non-mental vocabulary in any case then (C_{NM}) amounts to (C_P), for all practical purposes. But whether or not it does depends crucially on whose purposes are in view. With all due respect to the fact that "the mental is physicalism's chief target" (Crane and Mellor 1990: 185), we should not allow this emphasis of philosophical priority to obscure the fact that ontological physicalism is quite broad in scope, promising to capture not just mentality but everything else within the physical net. So while the existence of *sui generis* mental forces would suffice for the falsity of physicalism, physicalism would be equally falsified if emergent properties and forces reared their heads at the levels of biology or chemistry—it would be just as falsified, that is, if we agree that physicalism is "best formulated" as the "claim that everything that interacts causally with the physical world is physical," where 'physical' is taken narrowly so as to exclude any 'special' (chemical, biological,...) categories (Papineau 2001: 11), or as the equally common claim that all entities are "nothing over and above" the physical ones (taken again in the narrow sense). So even allowing for (C_{NM}), and with it the thesis that any mental event is in some sense non-mental, if *physics* turns out to be incomplete, or if some entities *are* something over and above the physical entities, then the physicalist's victory must be considered qualified at best. At all events, I claim, a formulation of physicalism (or a formulation of the completeness of physics) which is, in principle, impervious to these distinctions, must be deemed inadequate as it stands.

And there is further cause to take the underspecification introduced by replacing 'physical' with 'non-mental' seriously. First, physicalism is not uncommonly *defined* by way of the causal completeness of physics (witness Papineau's remark above), and even where the definiens is more expansive that principle is included as a non-negotiable component.⁹ So whereas it is perhaps debatable that the completeness of physics must be endorsed by "anyone who advocates a broadly materialistic metaphysics," as Horgan (1993: 560) asserts, it is less reasonable to think that a statement of the physicalist thesis could afford the liberality permitted by a blanket substitution of 'non-mental' for 'physical', even where the statement in question is offered for "purely philosophical purposes." Second, physicalism is not merely a thesis concerning the ontological status of the world's *contents* (the "stuff" of the world); it also places constraints on the world's *structure* or *form*, and,

⁹ It is easy to see why: a denial of the completeness of physics (and in particular an affirmation that some physical goings-on cannot be explained except by recourse to irreducible mental forces) may with justification be considered a hallmark of traditional dualism, and a physicalism compatible with it would be a physicalism only in name; see Kim (1989) for discussion.

therefore, the way in which mentality fits within it on a physicalist scheme. As Jessica Wilson rightly notes,

Even if a future physics-based account of the physical placed *no* restrictions on what features the relatively fundamental entities treated by future physics could have, the question of physicalism's truth would still depend on the entirely separate question of whether all the relatively non-fundamental entities not treated by future (ideal) physics were or were not over and above the relatively fundamental entities treated by future (ideal) physics. (2006: 68)

Yet the substituens which Spurrett and Papineau contend is best suited to an investigation of the mind and its place in nature (and therefore, presumably, to an assessment of physicalism about the mental) is ambiguous as between theories which affirm the "nothing over and above" thesis, and those which deny it. Thus, for example, John Searle's (1992) "biological naturalism," which combines a form of biological emergence¹⁰ with an identification of consciousness with biological (and so 'non-mental') processes, is a self-confessedly anti-physicalist theory—a categorization many will be prepared to endorse; but Searle's theory is indistinguishable from physicalism on the 'non-mental' approach, a result which, given their preferred understanding of physicalism, Spurrett and Papineau should agree is problematic.

All this to illustrate that a *univocal* interpretation of 'physical' as 'non-mental' generates nontrivial ambiguities between physicalism and alternative theories of the mental that are either committed to, or compatible with, states of affairs physicalism rules out. But this is not yet to demonstrate that Spurrett and Papineau's approach is a failure. For example, it may with initial plausibility be urged that the failure of (C_P) in the kind of case I've described hardly amounts to a victory for the anti-physicalist, either, since, given (C_{NM}), we are evidently left with "the worthwhile conclusion that the mental must be identical with the nonmental" (Papineau 2001: 12). I myself do not think this conclusion is as worthwhile as Papineau believes it to be. Since I shall take up this issue in some detail in the sections following, however, I simply register the thought and set it aside.

More to the present point, one may object that Spurrett and Papineau do not insist upon a univocal reading of 'physical', notwithstanding their suggestion that 'non-mental' is the reading best suited to the task of investigating the mind/body problem; they may, therefore, simply invite us to provide an alternative substitution for 'physical' should we decide that 'non-mental' doesn't quite do the trick. Indeed they may; and I shall consider an alternative substitution designed to avoid the difficulties encountered here just below. For the time being, however, it is worth

¹⁰ Searlean "emergence" does not, of course, entail the falsity of the causal completeness of physics. But this is a mere accidental feature of the example, and makes no difference for present purposes. One may simply substitute another recognizably anti-physicalist theory (perhaps along the lines of the emergent functionalism discussed in Welshon 2002) according to which (C_P) and (P) are false consistently with the truth of (C_{NM}) and (NM), to illustrate the way in which a characterization of the 'physical' as the 'non-mental' results in too sloppy a taxonomy for serious use in the philosophy of mind.

remarking that there are good reasons to seek *some* univocal interpretation of ‘physical’, even if a univocal reading of it as ‘non-mental’ ought to be resisted. Naturally, which features of the mental are deemed most salient will be in large part a contextual affair, dependent upon the interests of the inquirer—one may, e.g., be interested in considering how the mental relates to the non-mental, or how the qualitative relates to the non-qualitative, or the normative to the non-normative, or whatever—and the flexibility offered by Spurrett and Papineau’s general strategy might for that reason appear to be a virtue. But this apparent virtue may well veil a vice, as its inherent lack of systematicity leaves us with an approach that seems objectionably ad hoc. Presumably, *some* notion of the physical lies behind the ideas that the physical *isn’t* normative or qualitative or mental or...; and, taking the challenge raised by Hempel in what seems to be its proper spirit, the point is surely to unearth to some extent what this notion *is*. To be sure, the force of this complaint will ultimately depend upon the theoretical aspirations of physicalism (or of particular physicalists), and it would be wrongheaded to demand a systematic approach from Spurrett and Papineau where they need not agree one is required; nevertheless, it is desirable on the face of it to have available a formulation of the ‘physical’ whereby our intuitive judgments concerning what is or isn’t in keeping with the spirit of physicalism may be grounded in a principled fashion, especially in so far as such judgments are often voiced and debated in the literature.¹¹ Or so it seems to me: but the main reason for judging Spurrett and Papineau’s *via negativa* strategy for characterizing the physical inadequate (as, to issue a final promissory note, I shall argue in what follows) is entirely independent of its unsystematicity, so we need not arrive at a consensus on the question here.

A final reply on Spurrett and Papineau’s behalf is worth considering.¹² One may be tempted to think that, in as much as physicalism is intended as a thesis about the *actual* world, the mere *compatibility* of a physicalism based on the ‘non-mental’ with emergent non-physical phenomena need be of no real concern, since physicalists are not obliged to formulate their thesis in a way that rules out such possibilities as are no longer generally considered actual.¹³ This reply is not easy to assess independently of considerations about the theoretical aims of physicalism (as noted above). Plausibly, however, it is a presumptive desideratum of an ontological theory like physicalism that it be formulated in such a way as to guide our counterfactual reasoning about which worlds count as physicalist worlds and why. And in fact the literature is full of such reasoning on a myriad of possibilities, including worlds containing fundamental teleological forces, miracles, and abstracta floating about in the platoplasm. These discussions give all appearances of being legitimate attempts to come to terms with the constraints imposed by a physicalist ontology, and it does not seem too much to ask for a reasonably articulated version of the theory capable of providing some measure of guidance in this pursuit. More

¹¹ See Stoljar (2001a) for discussion.

¹² I wish to thank an anonymous referee for pressing me on this point.

¹³ I note in passing that there may yet be room for reasonable doubt about the strength of the inductive evidence against emergent phenomena, in view of the character of the experimental methodologies whereby the pertinent evidence is amassed (see Robert Bishop 2006); but nothing in my argument requires taking a stance on the issue one way or the other.

significant for our purposes, however, is the following dialectical point: What *motivates* the 'non-mental' strategy as a response to (specifically, the second horn of) Hempel's dilemma is the desire to produce a thesis of physicalism inconsistent with such possibilities as emergentism, panpsychism and the like. This motivation seems respectable enough even where proponents of the strategy, as, for example, Spurrett and Papineau, do not consider those possibilities to be "live." But however that may be, it seems to me that in advancing an approach the aim of which is precisely to rule out the compatibility of physicalism with such possibilities, proponents of that approach cannot in good faith dismiss its shortcomings in the manner here suggested, even if another theorist, unperturbed by such possibilities as are no longer considered actual, perhaps could.

To sum up, we have seen that a systematic replacement of 'non-mental' for 'physical' does not in itself guarantee the physicalist conclusion it was intended to deliver, since the premises and conclusion of the repackaged Causal Argument are compatible with the falsity of such things as physical causal completeness, physicalist supervenience,¹⁴ and the idea that all higher-level entities are "nothing over and above" the fundamental physical ones—all of which, while of course *inconsistent* with physicalism, are consistent with the completeness of the non-mental and the describability of the mental in terms of the non-mental. Thus, without additional assumptions, such as the assumption that everything non-mental either is or is realized in the physical, (C_{NM}), and by extension the repackaged Causal Argument in which it figures, cannot be relied upon to do the work required of it; neither does 'non-mental' allow for the precision required in contemporary discussions about the nature of mind.

4

But so what? Doesn't it stand to reason that the completeness of the *natural sciences* and the ensuing identification of mentality with items in its domain delivers a respectable version of physicalism more generously construed—if not the *narrow* physicalism of Papineau et al., then a *broader* variety (call it 'materialism') unruffled by there being a measure of ontological and causal autonomy in chemistry, biology and the like? *I* think it does, and I doubt I'm alone in so thinking. But this is just where the 'non-mental' strategy begins to bite: far from preserving a robust version of physicalism in the face of Hempel's dilemma, the strategy in fact detaches 'physicalism' from historical materialism to such an extent that physicalism's detractors should find no interesting quarrel with it at all.

To explain. Let's agree that the Causal Argument expresses the most compelling reason to accept physicalism. Its key premise is the one specifying that physics is

¹⁴ What warrants the belief in physicalist supervenience, according to Papineau's (1990) argument, is that it follows from (C_P). (C_{NM}) may thus be deployed in reaching the similar conclusion that everything supervenes on the non-mental (to the extent his argument works), but the underspecification produced by the relevant substituens makes room for a violation of physicalist supervenience in an obvious way.

causally complete.¹⁵ Unfortunately, courtesy of Hempel, the term ‘physical’ is verboten; ‘non-mental’ is therefore offered as its substitute. But, as we have seen, ‘non-mental’ is too broad a category to express the thesis that the physical, construed narrowly, is causally complete. The obvious patch for this difficulty is to append to the term replacing ‘physical’ everything *else* the narrowly physical is not, so that the ‘physical’ is understood not merely as the ‘non-mental’, but *also* as the ‘non-chemical, non-biological, non-...’, and so on. For simplicity’s sake, let’s dub the domain denoted by our new expression the domain of the *non*, the premise asserting its completeness, *the causal completeness of the non*, the science which studies non-entities *non-science*, and, finally, the thesis which affirms the identity of all causally efficacious events with events in this domain, *nonism*.

Notice that nonism as it stands does not unambiguously avoid the objection observed in the foregoing section, since the non can be characterized in terms of non-science as we know it today, or it can be defined in terms of some future, ideal science of the non. The first option is an obvious non-starter (sorry). Present day non-science just picks out present day physics, so if it is present day non-science to which the nonist appeals he has only succeeded in spelling ‘physical’ with three letters, and the first horn of Hempel’s dilemma attaches to nonism with equal force.¹⁶

But what about characterizing the non in terms of future, ideal non-science? That is, couldn’t we simply make explicit that the non entities are *fundamental*, where fundamentality is understood by appeal to non-science at the limit of inquiry? Isn’t it precisely here that the nonist’s strategy finds purchase? For nonism so understood entails that whatever *else* future non-science might admit into its ontology it *will not include outright reference to the mental*, which is just to say that the mental is not *sui generis*, or fundamental. Moreover, it seems to entail both that there are no physicalistically objectionable emergent phenomena, and that any fundamental entity realizing any relatively non-fundamental entity will be of the sort that physicalists have always had in mind. *This* construal of nonism would appear to deliver precisely the conclusion that the repackaged Causal Argument was intended to: namely, that *anything* outside the realm of the non (including, of course, the mental) must ultimately be identical to something within it. So Papineau:

The same point applies if we want to apply the causal argument to chemical, biological, or economic states. As long as we can be confident that all nonchemical effects are fully caused by nonchemical (nonbiological, noneconomic...) states, then we can conclude that all chemical (biological,

¹⁵ Notice that whereas (C_P) is not logically required for (C_{NM}), it is crucial to the *argument* for (C_{NM}). The case against *sui generis* mental causes, as Papineau tells the story, essentially involves our failure to discover any *sui generis* forces in chemistry, biology, and, what “clinches the case,” physiology. It is this collection of failures that forms the premise in the inductive argument against *sui generis* mental forces, and in the absence of these failures it is at best unclear how either (C_P) or (C_{NM}) could be *inductively* supported at all.

¹⁶ The point here is that, for all a list-based characterization of nonism tells us, there may yet be high-level emergent phenomena not ruled out by the characterization if the list of entities characterizing the non is incomplete.

economic...) states must be identical with something nonchemical (nonbiological, noneconomic...). (2001: 13)

Plugging 'non' into the repackaged Causal Argument thus has the effect of relegating all special scientific entities, including the psychological ones, to the dependent and derived. And isn't this, particularly the denial of *fundamental mentality*, enough to frustrate the dualist and to set apart nonism as a thesis sufficiently contrastive with its traditional rivals after all?

Not really: fundamentality is a red herring, and the proponents of nonism have avoided Hempel's dilemma only at the cost of emptying their position of any distinctives that might give the anti-physicalist reason to reject it (which, naturally, is not to say that the anti-physicalist should *accept* it). To be sure, nonism succeeds in distinguishing itself from such things as emergentism and panpsychism, and to that extent it forms a thesis incompatible with historically important anti-physicalist conjectures. But merely by stipulating that characteristically mental features are not fundamental we have not thereby produced a version of physicalism distinguishable from all of its rivals, nor, importantly, have we managed to secure a thesis that clearly conflicts with the most basic of anti-physicalist commitments.

Taking the first point first, the nonist evidently supposes that this negative characterization of the physical preserves the important physicalist intuition that those features of the mental which dualists take to be fundamental are really thoroughly at home within the physical world. The suggestion appears to be that since we have some nontrivial grasp on the nature of the mental, we can simply round up the features distinctive of mentality and specify that, whatever exactly the physical is, it isn't like *that*.¹⁷ This is not exactly to characterize the physical, but it seems to allow for something the physicalist wishes to say, which is that accommodating the mental doesn't require the introduction of characteristically mental categories at the "ground level." But this is insufficient to vouchsafe a distinctive thesis, for, aside from it's being unclear just what it is about paradigmatically *nonphysical* entities that rules them out as physical,¹⁸ the exclusion of mentality from the fundamental realm does not by itself impose any conditions on what features a thing must exemplify if it *is* to be fundamental, because it does not tell us what the characteristic features of the fundamental entities *are*. No surprise there, one's apt to respond—that's precisely the *point* of a negative characterization! But this omission is in fact far more problematic than has generally been recognized.

Why so? Because: to say that, for any distinctive feature of the mental F, F is not fundamental, and to refrain from saying what fundamental features there are, is simply to posit some ultimate layer of reality (the non-chemical, non-biological, non-...) the character of which remains unspecified. What would 'physicalism' look like were we to embrace this suggestion? It would be a thesis according to which there exists some fundamental level of reality, R, such that R is *not* characterized by F, and everything that exists either is or is realized in R; full stop. I do not believe we are in a position to evaluate this claim. But even if we were, we wouldn't be

¹⁷ See for example Crook and Gillett (2001).

¹⁸ See Barbara Montero (1999: 184–185) for discussion of this point.

evaluating physicalism: if this is what we mean by ‘physicalism’ then ‘physicalism’ is only verbally different from neutral monism, a theory which likewise holds that the mental and the non-mental aren’t different in kind, and that they are ultimately explicable by appeal to a nameless substratum that somehow accommodates both. Yet neutral monism is of course, no less than dualism, an historically *anti*-physicalist theory, and physicalism cannot be distinguished from it on the present approach; for to say that the fundamental properties are not mental doesn’t guarantee that they’re *physical*, either. Thus, not only does nonism fail to distinguish physicalism from its relevant rivals but, what’s worse, it seems destined to veil the ‘physical’ in that same shroud of obscurity covering the neutral entities, resulting in a ‘physicalism’ that is different indeed from what most have taken it to be.

One might wonder whether this is really such a bad thing. Perhaps, given their united stand against fundamental mentality, a “neutral monism flavored” physicalism may yet be judged a physicalistically viable theory, if there is reason to believe that the allegedly neutral entities are really just physical ones after all.¹⁹ Indeed, one might think, maybe neutral monism has really *been* a version of physicalism all along, and all that remains is to provide some principled means by which the neutral entities may be subsumed into the physical domain.²⁰ Alternatively, one might be tempted to just *call* such entities ‘physical’ and have done with it.²¹ Or again, one might suggest that we should *expect* there to be some revision in physicalism’s aspirations in the face of Hempel’s dilemma, and that a characterization of physicalism rendering it compatible with neutral monism is a much less serious thing than a characterization rendering it compatible with outright dualism.

But there is no good reason to think that the nonist can comfortably occupy this middle ground. Simply to “call” neutral entities ‘physical’ is, in effect, to concede that physicalism and neutral monism are merely verbally distinct. But, turning now to the crucial point, such a concession must be resisted inasmuch as the repackaged Causal Argument is supposed to support a conclusion *incompatible* with anti-physicalism’s most basic commitments, and this it cannot do under the nonist construal. For the standard arguments against physicalism—e.g., the conceivability arguments, the knowledge argument, and certainly any inductive arguments based upon past reductive failures—do not establish the fundamentality of the mental in

¹⁹ The suspicion is sometimes voiced that neutral monism is really a closet form of phenomenism or panpsychism, so one might be tempted to think that characterizing the physical as the non-mental would rule it out. Here I just register my view that the suspicion is not justifiable, and direct interested parties to the discussions of those accusations in Lockwood (1981) and Stubenberg (2005, §9).

²⁰ Daniel Stoljar’s (2001b) proposal is best seen in this light. He concedes that if the version of physicalism he defends is really a closet form of the more “unpalatable” neutral monism, it would “constitute a major reason” to think that he has resolved the mind/body debate “simply by giving up on physicalism” (p. 271). Unfortunately, Stoljar’s response to this charge presupposes the availability of a characterization of the physical that sails through the horns of Hempel’s dilemma (p. 257, notes 9–10), and thus cannot be invoked to ground a distinction between ‘physical’ and ‘neutral’ when such a characterization is just what’s being sought.

²¹ Such is more or less the approach taken by Strawson when he asserts that the “Experiential character” of conscious experience “just is” physical. Unfortunately, what he *means* by this is “something completely different from what some materialists have apparently meant by saying such things,” since the thought that conscious experience “can be described by current physics, or by some nonrevolutionary extension of it...amounts to radical ‘eliminativism’...and is mad” (2003: 50).

any case. Rather, at most, they establish the disjunctive thesis that either dualism *or* neutral monism is true. Consequently, a construal of physicalism compatible with neutral monism is a construal of physicalism which is compatible with the conclusions of the most important anti-physicalist arguments on the market—in which case nonism's compatibility with neutral monism is hardly innocuous, so far as appropriately contrasting with dualism is concerned.

To elaborate, at the most basic level of commitment what the dualist wishes to deny is that mentality is fundamentally physical. But to the extent that the dualist is committed to this thesis, her commitment arises in virtue of a priori conviction to the effect that particular features of the mental cannot be adequately captured in physical (or chemical, or biological,...) categories. The point seems obvious enough, especially when we reflect that arguments for dualism proceed first by isolating some feature of mentality deemed to be essential to it, and then by arguing that the feature in question either finds “no echo” in the case of the broadly physical, or is incompatible with something about *it*. But what possible reason could the dualist produce for thinking that mentality couldn't be subsumed into the realm of the *non*? All nonism amounts to is the thesis that mentality is fundamentally something non-chemical, non-biological, non-physiological..., with the added caveat that (a) this something can be described in *some* or other non-mental vocabulary, but with no stipulation to the effect that (b) this vocabulary must be (or indeed be anything *like*) that of *current physics*. Of course, the dualist has typically been at pains to deny (a). But it is crucial to recognize that such denials have, by and large, been voiced against the backdrop of a positive characterization of the candidate non-mental vocabulary; and given the absence of any specification akin to (b) there is no obvious reason anti-physicalists should find the nonist conjecture terribly troubling.

Indeed, far from dismissing the suggestion out of hand the dualist may view nonism as a serious contender, or at any rate happily concede it as an alternative the truth of which is not ruled out by the arguments militating against physicalism. As Chalmers points out, to the degree his anti-physicalist arguments work they leave us with two alternatives: on the one hand, we “might take experience itself as a fundamental feature of the world, alongside space-time, spin, charge, and the like,” so that “phenomenal properties will have to be taken as *basic* properties.” On the other hand, it may be that “there is some *other* class of novel fundamental properties from which phenomenal properties are derived,” properties which “are not themselves phenomenal but [such that] together they can yield the phenomenal” (1996: 126–127). To be sure, such properties won't be *physical* either, according to Chalmers. But then, inasmuch as ‘physical’ in Chalmers’ mouth means rather more than ‘non-chemical, non-biological, non-...’, nothing the nonist has espoused demands that they should be.²² Similar remarks apply to the knowledge

²² Precisely how ‘physical’ is understood by Chalmers is a bit unclear, and post-Hempel it isn't obvious what is supposed to be grounding Chalmers' claim. The characterization he provides is one according to which physical properties are “the fundamental properties...invoked by a completed theory of physics” (1996: 33), understood with the proviso that ‘completed physics’ must bear some “recognizable” similarity to current physical theory. As to the suggestion that some radically different sort of physics will ultimately account for consciousness, however, he simply notes that it isn't “easy to evaluate this claim in the absence of any detailed proposal” (see pp. 118ff. for discussion).

argument against physicalism, the whole ensemble of conceivability arguments and, generally, any pessimistic induction based upon the persistent failure of past reductive attempts. None of these unambiguously demonstrates the fundamentality of the mental, for all are quite consistent with mentality's being derived from distinct "fundamental" (albeit "neutral," "protopsychic," or at any rate *nonphysical*) entities.²³

It's of course possible that some dualists will want to insist that the mental or some feature thereof *must* be "fundamental," and that whatever non-mental entities and goings-on there might be, no explanation of this feature in *their* terms will be forthcoming. But in this case it is hard to see how the dualist could avoid being charged with overreaching the most plausible arguments in support of her view. In fact, it is in sensitivity to just this concern that most philosophers who deny that physics can account for a particular feature of the mental append to that judgment a proviso: "absent a major revision in our conceptual repertoire" or some "revolutionary change" in scientific theorizing, or what have you—after all, it would take an unusual degree of clairvoyance to know a priori that something like this *couldn't* take place, especially in the absence of any rough proposal about what the pertinent changes would have to be.²⁴ Moreover, such qualifications appear to be quite in order when we consider that confident assertions (such as Driesch's 1914) to the effect that reproduction, gene transmission and cognition could *never* be accounted for by more "fundamental" processes, are widely considered, in hindsight, to have overextended the evidence upon which those judgments were based, even if they were understandable enough given the candidate reductive/explanatory models available at the time they were made.²⁵

None of this is to say there is no room at all for the suspicion, voiced by Chalmers and others, that any "recognizably physicalistic" accounting of features seemingly unique to mentality will continue to elude our best efforts. But this is hardly inconsistent with the recognition that moving from the *distinctiveness* of characteristic mental features to their metaphysical *transcendence* vis-à-vis the physical is licensed, if indeed it is, only in considering them in tandem with *features that are characteristic of physical properties* (how else could the explanation in question be "recognizably" physicalistic?); and the request to specify what these characteristic features are supposed to be is pretty much what Hempel's dilemma

²³ Thus Chalmers expresses sympathy with Russell's (1927) neutral monism, though he recognizes that the cost of that theory (like that of nonism) "is the postulation of a class of properties that we do not understand" (1996: 298). For further discussion of the compatibility of neutral monism with conceivability arguments and the knowledge argument, see Chalmers (2006) and Alter (2007). One important possible exception may be Kripke's (1972) modal argument, if the argument is intended to demonstrate that anything identical with a mental kind would have to be essentially (fundamentally) mental; on the other hand, if all it establishes is the weaker conclusion that no mental kind is essentially physical, it is as consistent with neutral monism as the others.

²⁴ Compare the discussion of future physics in Nagel (1974).

²⁵ Arguably, even Descartes' view that physical occurrences are irrelevant to "pure understanding" was constructed in clear view of the character of the physics of his day: "a reason for his dualism," writes Margaret Wilson, "may be found in his commitment to mechanistic explanation in physics, together with the perfectly creditable belief that human intelligence could never be accounted for on the available mechanistic models" (1978: 183).

amounts to. Moreover, whatever one thinks about the prospects of accounting for mentality via some or other extension of physical science, the essential point is that whereas it can be reasonable to deny that some at least roughly articulated reductive or explanatory base for a given phenomenon is adequate unto the task of accounting for it, it's not easy to justify (as a matter either of history or of logic) a generalization from that instance to the necessary "fundamentality" of the phenomenon, or to the impossibility of its being accounted for by something still *more* fundamental—especially in the event that the "something" in question is posited sans any positive specification at all. So for all we know nonism could be right, the anti-physicalist might (and often *does*) say; but there doesn't appear to be any problem with her saying *that* and rejecting a positively articulated physicalist thesis²⁶ outright, in one breath.

What *could* give the anti-physicalist pause, clearly, is the specification of some kind of constraint on the nature of the non, something that might allow her to assess whether, for whichever essential quality of the mental *Q* she's impressed with, *Q* is in fact amenable to nonistic treatment. And the way to deliver such a constraint, in keeping with the physicalist's aims, is to specify that future non-science must be in significant respects *like* current physics, particularly in respect of the *sorts* of entities it treats. But the request to relate *positively* what these significant respects are is just what the nonist is eager to decline, since among the lessons he has taken from his materialist forebears is that characterizing the physical is not an activity to be conducted from the armchair, but is an a posteriori affair best left to the physicists.²⁷ And the *negative* respect in which currently catalogued physical entities and future non-scientific ones resemble—their joint failure to exemplify fundamental mentality—is objectionable to anti-physicalists only to the extent that they're committed to a denial of neutral monism, which, as we have seen, they are not. Thus, whereas a positive specification of the relevant similarities would seem to be sufficient for the task at hand (since philosophers have traditionally got on pretty well just by directing their attention toward whatever positive specification of the 'physical' they've been handed) the negative characterization on offer leaves precious little for anti-physicalists to evaluate, and even less against which they might reasonably protest. Either way, then, the nonist's strategy for defining the physical turns out to be useless: once given *some* positive specification of the physical by reference to which the basic contours of a physicalist thesis might be discerned, an additional clause stipulating that the physical isn't mental (or chemical, or...) is evidently idle—for what anti-physicalist arguments *are* there that make any use of that clause?—but when *no* specification of the 'physical' is offered at all, the 'non-mental' (non-chemical, non-...) clause is again idle—for what anti-physicalist arguments making use of that clause could there possibly *be*?

The nonist's difficulty with Hempel's dilemma, then, is not so much that on the second horn of this dilemma future non-scientists might make "outright reference to the mental," it is rather that, even if they do not, we have no idea whether this is

²⁶ For example, Andrew Melnyk's (1997).

²⁷ I simply acknowledge this shift in orientation without commentary; but see Crane and Mellor (p. 185–186) and the discussions in Montero (1999) and Wilson (2006).

something that should worry anti-physicalists in the least. So, if physicalists wish to characterize their theory in a way clearly inimical to anti-physicalism's commitments, the repackaged Causal Argument is far from all that is needed for philosophical purposes; something more than a negative characterization is required.

5

If the argument so far has been correct, nonism fails to embody a version of physicalism that appropriately contrasts with the key commitments of anti-physicalism and the repackaged Causal Argument fails to deliver a distinctively physicalist thesis. As such, the non-mental maneuver cannot be considered to have successfully achieved the aims for which it was introduced. Still, it remains to be considered whether a no-fundamental-mentality (NFM) clause can be independently motivated. In particular, it may be that a characterization of the physical including such a clause would enable us at least to motivate the mind/body problem and keep clear about exactly what points of doctrine are at issue in the debate, as Jessica Wilson (2006) has with great plausibility argued that it should.

And she thinks that it would: according to her, a characterization of the physical imposing the NFM constraint not only illuminates “how best to pose the [mind/body] problem itself” (p. 89) but, in addition, “preserves the historical associations of physicalism as the descendent of materialism and motivates the full spectrum of versions of the mind-body problem” (p. 91). By contrast, a characterization of the physical *sans* this constraint not only fails to respect physicalism's anti-dualist aspirations but also fails properly to motivate the mind/body problem, since “an account of body on which the physical could be fundamentally mental solves the problem” (p. 89) before it could even arise. Wilson's suggestion, then, is that in imposing the NFM constraint the physicalist thereby disqualifies as fundamental those features of mentality which look to resist analysis in terms of a domain of entities *lacking* these features; and this would be *enough* to motivate the “still perplexing problem” of the relation between body and mind. On the other hand, an account of the ‘physical’ that does not exclude fundamental mentality would simply remove the apparent tension between body and mind; thus, insofar as there *is* an apparent tension between these things, the NFM constraint can't be done *without*. It follows from her analysis that the NFM constraint is both necessary and sufficient to get the mind/body debate up and running.²⁸

Wilson is right to dial in on these considerations as being relevant to whether a given analysis of the physical is up to par; the question is whether the NFM constraint properly connects with the issues they raise. On this she writes:

...given that we must now understand “body” in terms of the physical, an adequate account of the physical should make clear why the mental is so

²⁸ In fact Wilson has more to say (and indeed much of value to say) concerning the characterization of the physical; my present remarks are directed only toward the contention that the inclusion of a no-fundamental-mentality clause is necessary or otherwise helpful.

apparently different from the physical that there is at least a *prima facie* difficulty in reconciling them. An account of the physical that imposes the NFM constraint provides a basis for a difficulty-making difference: if physical entities cannot themselves [i.e., individually] possess or bestow mentality, then there is a *prima facie* difficulty in seeing how relatively non-fundamental entities ultimately composed of physical entities...can themselves be mental, given that their composing entities are not. (p. 89)

But the usefulness of the NFM condition to these aims is only apparent, in several respects. For one thing, in ruling out the possibility that physical entities may be such as to individually possess or bestow mentality we disqualify as physical neither the entities posited by neutral monism, nor (what appears to be her target) those involved in Chalmers' closely allied protopsychism. For on the latter theory the "mere instantiation" of an individual protopsychic property "does not entail experience, but [the] instantiation of numerous such properties could do so jointly" (1996: 154), and on the former thesis mental and physical items are likewise constituted by aggregates of the entities that are neutral between them. In general, since Wilson's formulation of physicalism is compatible with neutral monism it must confront and respond to the problems observed in Sect. 4.²⁹

Relatedly, it is unclear that the NFM constraint really amounts to a "difficulty-making difference"—one that lays bare the perceived conflict between body and mind—as Wilson claims. In *some* sense it certainly does: if the mental is composed of non-mental stuff, there is a *question*—and a difficulty in *that* sense—that may legitimately be raised about how mental phenomena are related to their non-mental constituents. But this is not yet to deliver a *tension* or *conflict* between the mental and the physical, nor does it "make clear why the mental is so apparently different from the physical" in a way that would motivate the mind/body debate. For given that the character of the relevant non-mental entities is uncircumscribed by any concepts the imposition of which would provide some understanding of what they are like, those entities don't "appear" as anything in particular—still less anything "so apparently different" from the mental that a well-defined and perplexing problem results concerning the reconcilability of the two.

Crucially, there is a difference between the dualist's contention that the mental and the physical *cannot* be reconciled, and the weaker contention that we cannot see how they *can* be. The latter contention may be motivated in one of two ways: either by appeal to positively characterized and seemingly conflictive features of the mental and the physical (in which case we might always reject dualism in favor of a

²⁹ One might wonder whether Wilson's additional condition on a thing's being physical, viz., that it be "treated, approximately accurately, by current or future (in the limit of inquiry, ideal) versions of fundamental physics" (p. 72) would be sufficient to block protopsychism's compatibility with physicalism. The answer is that it would not: Chalmers allows that a future "final" or "fundamental" theory might admit protopsychic properties (assuming these are not beyond the ken of empirical inquiry) alongside those we currently count as physical, so as to produce a joint explanation of consciousness (cf. 1996: 126–129). From Wilson's perspective this would be a paradigm case of a physicalistically "inappropriate extension" of fundamental physics, but the present point is that nothing in the NFM constraint explains *why* the extension is inappropriate, since the properties in question are not fundamentally mental.

materialist mysterianism such as McGinn's 1999), or simply by failing to characterize positively the relevant domain of non-mental entities with which mentality is in need of reconciliation. But whereas the first motivation for the weaker contention derives from a perceived inconsistency (or anyway a "gap") between the domains at issue, the second derives solely from our ignorance as to the specific character of one of them, and it's hard to see how anything as strong as an inconsistency, a conflict or even an analogous "gap" between them could be generated from that.³⁰ There *is* a gap, to be sure; but it isn't a gap that results from nonism's *failure to include mentality within its otherwise considerable explanatory range*, but rather one that ensues from *our not knowing just what explanatory tools it has and how those tools are supposed to be applied*. Correspondingly, it is unclear how a metaphysical reconciliation between the mental and the non could be attempted (or even how the viability of such a project could be assessed) without a suitable articulation of that in which the supposed conflict between them consists. And although one *difference* between them is clear (the mental is mental and the non, fundamentally, isn't), that amounts to a "difficulty-making difference" only if we have reason to believe that the mental couldn't be fundamentally *something* else; and so far forth no such reason presents itself.

Wilson's strategy is thus motivated by respectable concerns—in particular, to capture "what points of doctrine are at issue in existing debates involving" the mental and physical (p. 85) and to preserve physicalism as a recognizable descendent of materialism—but the NFM constraint satisfies those motivations in a superficial way. For it does not produce a thesis the anti-materialist is obliged on pain of inconsistency to deny, and neither does it suffice to transfer whatever historically perceived conflict between mind and body there is to the mental and the physical so construed.

What, finally, about the necessity of the NFM constraint to posing the mind/body problem? Even if the relevant constraint does not suffice to motivate the debate between physicalists and their opponents, is Wilson correct to think that a construal of the 'physical' which ignores the relevant clause could not properly motivate the dispute? I think not. As evidence that such construals *can* motivate the dispute, I simply note that they have: the moderns got on pretty well with the attribute of extension and, later, with material corpuscles characterized by the "primary qualities," the classical emergentists likewise with "mechanistic materialism," and contemporary anti-physicalists have been more or less content to focus on whatever current physical theory has to say. But the abstract possibility of *something* 'not-fundamentally-mental' eventually accounting for mentality is one that many in that latter camp have been quite happy to concede—after all, who knows?—without perceiving the concession to pose any interesting threat to their overall aims.

The foregoing considerations do not, however, refute Wilson's contention that an account of the physical not imposing the NFM constraint would allow for panpsychism, which result would erase all mystery concerning the relation of body

³⁰ I'm inclined to think this is what Spinoza had in mind when he objected to Descartes on the grounds that the conception of thought involves no other conception of substance at all, and there could therefore be no inconsistency in the idea that both thought and extension are dual aspects of a single (neutral) reality (cf. Spinoza [1677] 1985, *Ethics* I, note to prop. x.).

and mind by rendering the “truth about how mentality occurs in complex systems” no stranger than “the truth about how mass occurs in complex systems,” since it would involve merely an “ontologically innocent function of the same...feature existing at the level of its parts” (p. 89). This rather limited function of the NFM constraint is perhaps the strongest consideration in support of adopting it, but I am not fully convinced by Wilson’s argument that a characterization of the physical consistent with pansychism would simply lay the mind/body problem to rest. As William James argued some time ago, such a “mind-stuff” theory makes no strides toward accounting for the unity of conscious experience, since the existence of “higher mental states” is not straightforwardly explained merely by “viewing them as *identical with lower ones* summed together.” Fundamentally mental or no, a “higher level [mental] state” does not manifest itself as simply “a lot of lower [mental] states” in combination, and a theory postulating such lower states does not illuminate how a bunch of *individually* conscious bits could, by mere addition, come together to produce one conscious whole ([1890] 1918: 162).³¹ Mystery enough about the mind would thus appear to remain even where the elements said to compose it *are* graced with a measure of “mind dust,” and the denial that they are so graced is arguably no more necessary than it is sufficient to generate puzzlement over the tie between body and mind.

6

So the non-mental strategy fails: a conception of physicalism based upon it does not provide a thesis substantive enough to push against, neither does it ensure a distinction between physicalism and alternative anti-physicalist theories. Nor, finally, is it necessary or particularly helpful in the philosophy of mind. As a general matter, there cannot be a philosophically interesting dispute about the nature of the mental if one of the parties to that dispute refrains from saying, even if just for the sake of dialectical convenience, what they take the nature of mentality to be: we must hear more about the physical than what it isn’t. But to the extent that saying anything more forces us back to those terminological disputes the nonist wishes to evade, the non-mental strategy, and with it the repackaged Causal Argument for physicalism, turns out to be an ineffective means of meeting the threat that motivated it.

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³¹ Thus a Kantian paralogism against materialism from the unity of consciousness may be extended *mutatis mutandis* to the pansychist’s proposal. As also noted by Hasker (1999), the idea that attributing “mental...properties to the ultimate constituents of matter” will make it “possible to explain the mental properties of human beings” looks as suspect as the idea that non-conscious material particles in combination could do the trick, if in either case “a person’s being aware of a complex object cannot consist of parts of the person being aware of parts of the object” (p. 140).

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