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Careful, Physicalists: Mind–Body Supervenience Can Be Too Superduper

Introduction

Physicalists take the world to be, in some robust sense, fundamentally physical. However, many physicalists want to be realists about the mental, where that includes acknowledging genuine mental properties. A major task for such physicalists is to specify how those mental properties are grounded in the physical world so as to ensure that physicalism still holds. So we face the question of how can the physicalist ensure that mental properties are physicalistically acceptable?

Mind-body supervenience, according to which there can be no mental difference without a physical difference, initially appeared to offer a promising answer.¹ Standard formulations of mind-body supervenience tended, however, to specify merely a covariance between mental and physical properties. And as Jaegwon Kim rightly points out, "Mind-body supervenience as a bare claim about how mental and physical properties covary will be accepted by the double-aspect theorist, the neutral monist, the emergentist, and the epiphenomenalist; it can be accepted even by the substance dualist" (2005, p. 34). Thus, such formulations of mind-body supervenience are too metaphysically thin to ensure that mental properties are physicalistically acceptable. As a result, physicalists have recently turned to requiring that the mental-physical property

¹ For the purposes of the present paper, this generic version of mind-body supervenience – that there can be no mental difference without a physical difference – will suffice. The version of supervenience involved here is what Brian McLaughlin (1995) refers to as "the core idea of supervenience." For a presentation of various formulations of supervenience, see McLaughlin (1995).

correlations of mind-body supervenience be due to an ontological dependency relation meeting certain constraints. That is, there is a push in the physicalist camp to beef up supervenience into a “superdupervenience” that grounds supervenient mental properties in their physical bases so as to ensure that mental properties are physicalistically acceptable.²

Jessica Wilson (1999) suggests that the following constraint makes supervenience superduper:

Condition on causal powers (CCP): Each individual causal power associated with a supervenient property is numerically identical with a causal power associated with its base property.

According to Wilson, a mind-body supervenience restricted by CCP ensures that mental properties are, in the sense required by physicalism, “nothing over and above” their physical bases. Indeed, argues Wilson, a wide variety of physicalist accounts, both non-reductive and reductive, can be seen as set up to secure CCP, which further supports the claim that CCP ensures the physicalistic acceptability of properties that supervene on physical properties.³

I will argue, however, that imposing CCP on mind-body supervenience fails to ensure the physicalistic acceptability of mental properties. The problem, I contend, is that while CCP might guard against supervenient mental properties being *insufficiently* grounded in their physical bases it fails to guard against supervenient mental properties being *too deeply* grounded in their physical bases.

² Terence Horgan (1993) introduced the term “superdupervenience.”

³ In making this point about physicalist accounts aiming at CCP, Wilson’s examples of non-reductive accounts include, for instance, Stephen Yablo’s (1992) determinable/determinate relation and Sydney Shoemaker’s (2001) realization relation, while, for reductive accounts, Wilson concentrates on identity theory.

The layered model

Wilson develops CCP within a layered model of the world, where there is a mereological, or micro-macro, hierarchy of levels that correspond to the different domains of science. For illustration of this familiar model, Wilson cites Kim's description of it as:

a hierarchically stratified structure of 'levels' or 'orders' of entities and their characteristic properties. It is generally thought that there is a bottom level, one consisting of whatever microphysics is going to tell us are the most basic physical particles out of which all matter is composed.... As we ascend to higher levels, we find structures that are made up of entities belonging to the lower levels, and, moreover, the entities at any given level are thought to be characterized by a set of properties distinctive of that level. (Kim 1993, p. 190)

Furthermore, Wilson is sensitive to two different sorts of "inter-level" relations that can hold between properties. Wilson notes that the layered model:

can lead one to think that the only inter-level relation between properties at issue is that between properties instantiated in *different* entities (since, as the picture is usually drawn, different entities exist at different levels). It is indeed crucial to investigate the relation holding between, for example, the property of having a certain charge, instantiated in electrons and protons, and the bonding properties that are instantiated in atoms made up of these constituents. It is also crucial, however, to investigate the relation holding between apparently different properties that are instantiated in the *same* entities. For example, we want to understand how the property of fragility, instantiated in some quantity of stuff, is related to the property of having a certain molecular structure, instantiated in the same quantity of stuff. And we are particularly interested in understanding how the mental and physical properties of persons are related. It is this latter sort of 'inter-level' relation between properties on which I shall focus here. (1999, pp. 35-36)

So, in working with the layered model, one must keep in mind two different sorts of relations between properties. One sort relates properties that are instantiated in different objects, while the other sort, call it a "same-object relation," relates properties that are instantiated in the same objects. Wilson's focus is on how to ensure the physicalistic acceptability of properties that supervene, with a same-object relation, on physical properties. And she claims that CCP is the answer.

Numerical identity is an ontological equalizer

Before challenging the success of CCP, let us pause to appreciate an important point about numerical identity: When “two” things (whether it be “two” objects, “two” properties, “two” causal powers, etc.) are numerically identical, neither one can be more ontologically fundamental than the other. After all, any “two” things related by numerical identity are actually *one and the same* thing and, so, equivalent in all respects. With this grasp of numerical identity as an ontological equalizer, we can now turn to revealing CCP’s failure to ensure the physicalistic acceptability of mental properties that supervene on physical properties.⁴

CCP’s failure to ensure the physicalistic acceptability of mental properties

As indicated in the introduction, mind-body supervenience, as merely specifying a covariance between mental and physical properties, is insufficient for securing the physicalistic acceptability of mental properties because it is clearly compatible with non-physicalist positions such as emergentism. And, with her eye on the threat of emergentism, Wilson argues that CCP is a sufficient addition to mind-body supervenience for ruling out such pictures on which mental properties are not physicalistically acceptable.

Consider, though, the following version of panpsychism:

Identity panpsychism: Every physical property is identical with a mental property, including the physical properties of the micro-objects at the fundamental level of the micro-macro hierarchy.⁵

⁴ From here on, all references to identity should be understood as referring to numerical identity.

⁵ One might take the physical, as a matter of definition, to be non-mental. In which case, the mental-physical property identities of identity panpsychism, indeed any mental-physical identity whatsoever, will be ruled out by the very notion of the physical. Such an understanding of the physical and its potential for ruling out mental-physical property identities at the fundamental level will be addressed below, in the section titled “Characterizing the physical as non-mental.”

This view does not make the mental *more* fundamental than the physical. Rather, with identity as an ontological equalizer, such mental-physical identities yield a world that is *just as* fundamentally mental as it is physical. So, identity panpsychism is a variety of panpsychism because it has mentality permeating the physical world to even its most fundamental level. And such a version of panpsychism is presumably not compatible with physicalism.⁶ Yet mind-body supervenience, as merely specifying a covariance between mental and physical properties, is compatible with identity panpsychism.⁷

There are, then, two different ways in which mind-body supervenience, as a bare claim about how mental and physical properties covary, fails to ensure that mental properties are physicalistically acceptable. One way is in being compatible with mental properties being *insufficiently* grounded in their physical bases, as is the case in emergentism. A second way is in being compatible with mental properties being *too deeply* grounded in their physical bases, as is the case in identity panpsychism, where mental properties are identical with fundamental physical properties.

And while CCP might prevent the first sort of failure, observe that it does not prevent the second sort of failure. If a supervenient mental property is identical with its physical base property, then each individual causal power associated with the supervenient mental property is

⁶ Galen Strawson (2006) does argue that physicalism is actually compatible with panpsychism. Indeed, according to Strawson, physicalism *entails* panpsychism. However, Strawson is clearly working with a notion of physicalism that is too metaphysically thin to capture the sort of physicalism central to the debate in philosophy of mind. Strawson himself acknowledges this:

It is true that there is a sense in which this [understanding of the term ‘physical’] makes my use of the term vacuous, for, relative to our universe, ‘physical stuff’ is now equivalent to ‘real and concrete stuff’, and cannot be anything to do with the term ‘physical’ that is used to mark out a position in what is usually taken to be a substantive debate about the ultimate nature of concrete reality (physicalism vs immaterialism vs dualism vs pluralism vs...). (2006, p. 8)

⁷ Identity theory (the claim that every mental property is identical with a physical property) *entails* the supervenience thesis that there can be no mental difference without a physical difference. While identity panpsychism (which claims only that every physical property is identical with a mental property) does not entail identity theory, it is nonetheless compatible with identity theory and, therefore, also compatible with the supervenience thesis that there can be no mental difference without a physical difference.

identical with a causal power associated with its physical base property. Furthermore, if a supervenient mental property is identical with its physical base property, then whenever the physical base property is instantiated in an object the supervenient mental property will be instantiated in that very same object, for the two properties are one and the same. Hence, identity panpsychism is compatible with a CCP version of mind-body supervenience that is a same-object relation. So even with Wilson's focus on mind-body supervenience as a same-object relation, CCP fails to supplement mind-body supervenience in a way that ensures the physicalistic acceptability of mental properties.

Moreover, suppose that every fundamental physical property *except one* is identical with a mental property. Does having that single, non-mental property at the fundamental level make the fundamental level physicalistically acceptable? It would appear not. And I do not see any non-arbitrary line physicalists could draw, below 100%, for the required, minimal percentage of fundamental physical properties that are non-mental properties. On physicalism, the world is supposed to be fundamentally physical in a robust sense. But if even a single mental property is just as basic in the hierarchy of levels as any given physical property, then the world is apparently not fundamentally physical in the sense required by physicalism. And a CCP version of mind-body supervenience fails to ensure that a mental property is not identical with a fundamental physical property and, so, fails to ensure the physicalistic acceptability of mental properties.

Obviously, the present argument against CCP assumes that physicalism is committed to the physical ultimately having ontological *priority* over the mental. While the intuitive plausibility of this claim can be motivated by considering views like identity panpsychism, it is difficult to explain *why* physicalism is committed to the ontological priority of the physical over

the mental.⁸ The difficulty, though, might simply be due to the commitment being so fundamental to physicalism that it cannot be derived from any other, more basic tenets of physicalism. And, as we will see later, Wilson herself clearly takes physicalism to be deeply committed to the ontological priority of the physical over the mental.

The central argument for the failure of CCP to ensure the physicalistic acceptability of mental properties that supervene on physical properties is now fully presented. The remainder of the paper will be devoted to addressing potential responses to this argument.

Emphasizing that all the fundamental properties remain physical

One might object that a physicalist can countenance a mental property being identical with a fundamental physical property, for the fundamental physical property will still be physical. That is, even with a mental-physical property identity at the fundamental level, the physicalist can maintain that all the fundamental properties are physical.

However, according to the present argument against CCP, physicalism is incompatible with a mental property being identical with a fundamental physical property because such an identity would make the mental just as basic or fundamental a feature of the world as the physical. And pointing out that a fundamental physical property remains physical when identical with a mental property in no way shows the ontological *priority* of the physical over the mental. That is, all the fundamental properties may remain physical, but there will nonetheless be a

⁸ One might try to do so by taking physicalism to entail that any mental phenomena is explainable in terms of physical phenomena, and the assumption that the relevant kind of explanation requires ontological priority. Here, however, I am focused on physicalism as a metaphysical thesis, and the notion of explanation often has epistemological goals associated with it. Furthermore, the assumption that the relevant kind of explanation requires ontological priority seems rather close to assuming that, on physicalism, the physical must have ontological priority over the mental. We would still lack, then, an informative account of why physicalism is committed to the ontological priority of the physical over the mental.

mental property that is *just as* fundamental in the micro-macro hierarchy as any given physical property—identity is an ontological equalizer.

Exploiting the assumption of physicalistically acceptable supervenience bases

In developing her account of how a CCP version of mind-body supervenience ensures the physicalistic acceptability of mental properties, Wilson (1999) explicitly assumes that mental properties supervene on *physicalistically acceptable* properties. There appear to be two motivations for this. First, one might not, strictly speaking, want to call macro-entities (e.g. brains and their neurological properties) “physical.” One might, for example, reserve the notion of a physical entity for the micro-entities posited by fundamental physics.⁹ Second, Wilson’s focus is on supervenience as a same-object relation. In advancing CCP, then, it is beyond Wilson’s project to address how the physical properties of the micro-constituents of a macro-object make the properties of that macro-object physicalistically acceptable. Thus, it makes sense for Wilson to assume that mental properties supervene on *physicalistically acceptable* properties.

In Wilson’s defense, one might attempt to exploit that assumption the following way. Granted, identity of a mental property with a fundamental physical property renders the fundamental physical property physicalistically unacceptable. But then the supervenience base of that mental property is physicalistically unacceptable so that Wilson’s assumption is not in place. Therefore, Wilson can still maintain that a CCP version of mind-body supervenience ensures the physicalistic acceptability of mental properties that supervene on *physicalistically acceptable* properties.

⁹ In the next section, “Characterizing the physical as non-mental,” we will take a closer look at this sort of characterization of the physical and how it might be used in order to respond to this paper’s central argument against CCP. Here, however, consideration is limited to the requirement that an entity is physical only if it exists at the fundamental (or relatively fundamental) level in the micro-macro hierarchy.

Nonetheless, it remains established that CCP *alone* is insufficient for securing the physicalistic acceptability of mental properties that supervene on physical properties. Furthermore, CCP plus supervenience on *physicalistically acceptable* properties faces serious difficulties concerning what it is to be “physical” or “physicalistically acceptable,” especially when what is to be “physical” or “physicalistically acceptable” is supposed to rule out mental-physical property identities at the fundamental level.

Characterizing the physical as non-mental

As mentioned in the previous section, a physicalist might characterize a physical entity as an entity that is posited by fundamental physics (henceforth, just physics). This sort of account, however, faces a notorious problem that has come to be called “Hempel’s dilemma.”¹⁰ One common formulation of the dilemma is the following: If the physicalist’s account of the physical relies on current physics, then physicalism is implausible, for it seems highly unlikely that current physics is complete. If, on the other hand, the physicalist characterizes the physical in terms of future, ideal physics, then physicalism lacks determinate content, for it is unknown what entities future physics will end up positing.

In order to avoid getting caught on the second horn of this dilemma, physicalists have suggested imposing restrictions on the nature of the entities posited by future, ideal physics. One such suggestion is the requirement of being non-mental (see, for example, Papineau, 2001). With this constraint on the notion of the physical, one could respond to the present argument against CCP thusly: a CCP version of mind-body supervenience is *not* consistent with a mental property

¹⁰ For Carl Hempel’s presentation of the dilemma, see Hempel (1969).

being identical with a physical property at the fundamental level, for the definition of “physical” rules out such an identity.¹¹

Moreover, Wilson (2006) advocates such an account of the physical:

An entity existing at a world w is physical if and only if:

- (i') it is treated, approximately accurately, by current or future (in the limit of inquiry, ideal) versions of fundamental physics at w , and
- (ii) it is not fundamentally mental (that is, does not individually either possess or bestow mentality). (p. 72)

Wilson does not, however, motivate this characterization of the physical in terms of its ability to avoid the second horn of Hempel's dilemma, *where that horn is read as a concern about formulations of physicalism being indeterminate in content or trivially true*. On such readings of the second horn, argues Wilson, the second horn can be avoided without appealing to condition (ii), which she calls “the NFM (no fundamental mentality) constraint.” Indeed, Wilson does not take those threats of indeterminacy or triviality to pose any significant problem for characterizing the physical by reference to future, ideal physics. Instead, claims Wilson:

If there is a point to the second horn, it is rather in the inappropriate extension worry: that an account of the physical based in future (ideal) physics doesn't rule out the remote but presently live possibility that physics might eventually posit entities that are intuitively physically unacceptable. Most problematically, future physics might posit entities that are fundamentally mental – this is, such as to individually possess or bestow mentality, like the conscious sub-atomic particles posited by pan- or proto-psychists... (2006, p. 68)

And Wilson claims that this inappropriate extension worry gives physicalists “good reason to impose the NFM (no fundamental mentality) constraint on their operative account of the physical” (2006, p. 70).¹²

¹¹ Strictly speaking, on the given physics-based account of the physical, no *physical* property at all will be identical with a mental property. At best, *physicalistically acceptable* properties of macro-objects, such as micro-structural properties, will be identical with mental properties. And, of course, this result is precisely what the current response embraces, for it ensures that mentality is not found at the fundamental level.

¹² Wilson is clearly in agreement, then, with the present paper's assumption that physicalism is committed to the ontological *priority* of the physical over the mental.

I agree that imposing the NFM constraint on the notion of the physical does save a CCP version of mind-body supervenience from being compatible with a mental-physical property identity at the fundamental level. It seems to me, however, that such an employment of the NFM constraint builds too much metaphysics into the notion of the physical. The mind-body problem of how to understand the relation of the mind to the body (or the physical) is a substantive issue in philosophy of mind. And among the attempts to offer a solution to the mind-body problem are varieties of panpsychism. Indeed, panpsychism has an extensive history and impressive pedigree of advocates that reflects ontologically serious investigation into the possibility of mentality being located at the fundamental physical level.¹³ Thus, to stipulate by the definition of “physical” that there is no sort of mentality at the fundamental physical level would appear to inappropriately handle important metaphysical issues.

For instance, advocates of panpsychism have highlighted that physics tends to use purely relational or dispositional properties in characterizing entities at the fundamental level. And panpsychists have exploited this opening, arguing that physics leaves room at the fundamental level for mentality as a non-dispositional, intrinsic feature of fundamental entities.¹⁴ Now whether or not one ultimately finds this line of argument to be successful, it initially offers an interesting account of how the entities characterized by physics could be mental entities. However, if one were to adopt the NFM constraint, then the issue of whether or not fundamental physical entities are mental would be “settled” simply by the definition of “physical.”

Furthermore, suppose that central commitments of non-physicalist positions were embodied in their definitions of the physical and/or mental. Consider, for example, a substance dualist who adopts the following constraint in characterizing a *mental* entity:

¹³ For a comprehensive account of the history of panpsychism, see David Skrbina (2005).

¹⁴ For a recent example of this line of argument, see Strawson (2006).

No fundamental physicality (NFP): an entity is mental only if it is not fundamentally physical (that is, does not possess physicality or have a basis in physicality that would render it nothing over and above the physical).

Surely physicalists would see this NFP constraint on the notion of the mental as inappropriately addressing important metaphysical issues. And the present point is that physicalists should be similarly concerned about having the central tenets of their own theory incorporated into their characterization of the physical (or mental).

Thus, in the context of the mind-body problem, its key terms “mental” and “physical” should be kept as neutral as possible and not serve as a primary means by which competing approaches to the mind-body problem encode their own distinctive commitments. The definition of “physical” is, therefore, not the appropriate place for locating physicalism’s commitment to the entities characterized by physics being non-mental.

Now, Wilson (2006) also motivates the NFM constraint with a pragmatic consideration concerning the mind-body problem. This pragmatic motivation is to ground the *prima facie* difficulty of the mind-body problem. And she raises the concern that without the NFM constraint in characterizing the physical the mind-body problem would be too easily solved:

If the physical can be fundamentally mental, the truth about how mentality occurs in complex systems needn’t be any stranger than the truth about how mass occurs in complex systems: in either case, the feature existing at the higher-level could be seen simply as an additive or other relatively ontologically innocent function of the same (or relevantly similar) feature as existing at the level of its parts. (2006, p. 89)

I grant that the mind-body problem is typically driven in terms of an explanatory gap between the non-conscious and the conscious, the non-experiential and the experiential, etc.

Consequently, for the traditional formulation of the mind-body problem along such lines, its *prima facie* difficulty depends on the supposition that the physical is not fundamentally mental.

It does not follow, though, that the supposition must be taken to be true as a matter of definition. So long as the supposition is strongly motivated by *a posteriori* considerations, then it can perform its role in motivating the mind-body problem to the extent that it is a difficult problem *prima facie*.

This line of reply is considered by Wilson but then charged with effectively conceding that the NFM constraint is required in order to motivate the mind-body problem:

[O]ne might preserve the appearance of a *prima facie* incompatibility between mental and physical entities by reference to our finding it extremely unlikely, as an *a posteriori* matter, that the relatively fundamental entities might themselves be mental. But if this unlikelihood is supposed to be the only source of seeming incompatibility, this would be effectively to admit that the supposition that the physical is not fundamentally mental – that is, the NFM constraint – is needed in order to properly motivate the problem. (2006, pp. 89-90).

Wilson's charge, however, does not go through. The problem arises when she cites the NFM constraint. Wilson is correct when she says, "this would be effectively to admit that the supposition that the physical is not fundamentally mental...is needed in order to properly motivate the problem." Yet such an admission need not involve admitting that the NFM constraint is required to motivate the mind-body problem. If one adopts the NFM constraint, then it is true *as a matter of definition* that the physical is not fundamentally mental. And, again, in admitting that the *prima facie* difficulty of the mind-body problem requires the supposition that the physical is not fundamentally mental, one need not admit that the supposition must be taken to be true as a matter of definition! Indeed, the suggestion here is *not* to take it to be true as a matter of definition and instead, in formulating the mind-body problem, to take the supposition to be motivated by *a posteriori* considerations. Thus, given that we do typically find it, as an *a posteriori* matter, highly unlikely that the physical is fundamentally mental, the pragmatic goal of motivating the mind-body problem can be met without appealing to the NFM constraint.

Moreover, even if one were to give up the supposition that the physical is not fundamentally mental, the mind-body problem would not, as Wilson suggests, be guaranteed an easy a solution. A leading objection to panpsychism is the “composition” or “combination” problem. According to this problem, it is not at all easy to see how a macro-mind (or macro-experiential property) can exist in virtue of a composition or combination of micro-minds (or micro-experiential properties).

For example, in response to the panpsychism advanced by Strawson (2006), Philip Goff (2006) argues:

[L]et us suppose that each of the billion ultimates that compose my brain is a subject of experience: that there is something that it is like to be each of the ultimates of which my brain is composed. Imagine that each of the ultimates in my brain feels slightly pained. It is unintelligible why the arrangement of these ultimates in my brain should give rise to some *new* subject of experience, over and above the billion slightly pained subjects of experience we already have. The emergence of novel macroexperiential properties from the coming together of microexperiential properties is as brute and miraculous as the emergence of experiential properties from non-experiential properties. (p. 54)

In response to Strawson as well, Peter Carruthers and Elizabeth Schechter (2006) push similar concerns about explaining macro-experientiality in terms of micro-experientiality. And, in light of the composition problem, their conclusion is that panpsychism cannot bridge the explanatory gap of the mind-body problem:

Panpsychism was urged on us as the one move that might enable us to see how the explanatory gap could one day be bridged. But it turns out to be a blind alley. Even if the ultimates of the universe are experiential in nature, the explanatory gap remains untouched. (p. 39)

There doesn't appear to be, then, much cause for Wilson's concern that the mind-body problem would be too easily solved were one to give up the supposition that the physical is not fundamentally mental.

Now, of course, the mind-body problem would no longer be in terms of an explanatory gap between the non-conscious and the conscious, the non-experiential and the experiential, etc., which have historically been at the core of the mind-body problem. So, the mind-body problem would break from its traditional form were it taken in the form of the panpsychist's composition problem (which, again, is the problem of explaining how the micro-experiential entities composing one's body yield a macro-experiential entity). But this is no reason to adopt the NFM constraint, for, as argued above, the traditional form of the mind-body problem can be sufficiently motivated without the NFM constraint. Nor is there cause here to criticize the panpsychist for not paying proper attention to the mind-body problem. In arguing for mentality at the fundamental physical level, panpsychists are directly addressing the traditional problem by criticizing one of the assumptions driving it. Furthermore, there remains for the panpsychist the ontologically serious task of answering the composition problem. Therefore, pointing out how the mind-body problem transforms in the hands of the panpsychist provides neither reason to adopt the NFM constraint nor reason to worry that panpsychists aren't paying their metaphysical dues with respect to the mind-body problem.

To conclude this section, physicalism is indeed incompatible with a mental property being identical with a fundamental physical property. However, I do not, as Wilson does, take this to be reason to characterize the physical using the NFM constraint. Such a move, I have argued, inappropriately handles important metaphysical issues, especially in the context of the mind-body problem.

Focusing on non-reductive physicalism

Wilson (1999) writes:

Conceiving of a physicalist supervenience in terms of causal powers would do more than allow physicalists to determine whether a given property superdupervened on another. It would also provide a method for non-reductive physicalists to establish that a given supervenient property is distinct from its base property, by showing that the base property has (one or more) causal powers *different* from those of the supervenient property. In this case the set of causal powers associated with the supervenient property would be a proper subset of the set of causal powers associated with the base property, thus providing a clear-cut account (which has too often been lacking) of how a higher-level (say, mental) property could be distinct from, and yet 'nothing over and above', a lower-level physicalistically acceptable property. (p. 45)

So, according to Wilson, when the set of causal powers associated with a mental property is a proper subset of the set of causal powers associated with its physical base, the mental property, although distinct from its physical base, will still be physicalistically acceptable in virtue of satisfying CCP. And since, on non-reductive physicalism, mental properties cannot be identical with physical properties, the identification of a mental property with a fundamental physical property is incompatible with non-reductive physicalism. Thus, an advocate of Wilson's CCP might retreat to non-reductive physicalism, claiming that a CCP version of mind-body supervenience is sufficient for securing the physicalistic acceptability of mental properties for all versions of *non-reductive* physicalism. And given the dominance of non-reductive physicalism among contemporary physicalists, CCP would thereby remain an important tool in the physicalist camp for securing the physicalistic acceptability of mental properties.

There is reason to question, however, the safety of such a retreat. Consider again a micro-object at the fundamental level of the micro-macro hierarchy. Also, once again channel the spirit of panpsychism and endow the fundamental micro-object with mentality. However, instead of it having a mental property that is identical with one of its physical properties, suppose that it has a

mental property that non-reductively supervenes on one of its physical properties. Suppose further that CCP is satisfied, so that each causal power associated with the mental property is identical with a causal power associated with its physical base. But the physical base here is a fundamental property and, so, mental causal powers are thereby associated with a fundamental property, which seems physicalistically unacceptable.

The main difficulty here is that a CCP version of non-reductive mind-body supervenience, in requiring mental causal powers to be identical with physical causal powers, is utterly insensitive to whether or not the physical causal powers involved are *fundamental* causal powers. Consequently, a CCP version of non-reductive mind-body supervenience is compatible with mental causal powers being identical with fundamental physical causal powers. And with identity as an ontological equalizer, it follows that a CCP version of non-reductive mind-body supervenience is compatible with fundamental mental causal powers. But fundamental mental causal powers are presumably no more compatible with physicalism than fundamental mental properties. Thus, a CCP version of mind-body supervenience, *even with the restriction that no mental property is identical with any physical property*, fails to secure the physicalistic acceptability of mental properties, for it fails to ensure that the causal powers associated with mental properties are not fundamental causal powers.

Conclusion

I have argued that imposing CCP on mind-body supervenience fails to ensure the physicalistic acceptability of mental properties. The argument does not appeal to cases in which supervenient mental properties are *insufficiently* grounded in their physical bases but, instead, exploits another way in which supervenient mental properties can be physicalistically unacceptable, namely, by being *too deeply* grounded in their physical bases. And if, as Wilson

claims, a wide variety of physicalist positions are looking to CCP to ensure the physicalistic acceptability of mental properties that supervene on physical properties, then they should equally heed the following warning: mind-body supervenience can be too superduper for the physicalist.

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