

Interventions/Discussions

Physicalism, Supervenience, and Dependence: A Reply to Campbell

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1.

In a recent article in this journal, Neil Campbell has argued that certain problems with the doctrine of psycho-physical supervenience can be overcome if supervenience is viewed as a relation between predicates rather than as a relation between properties. Campbell suggests that, when properly understood, this predicate version of supervenience “expresses a form of psycho-physical dependence that might be useful to those who wish to argue for a supervenience-based physicalism” (Campbell 2000, p. 314, n.7). My aim in this note is to indicate why I think we ought to resist this suggestion of Campbell’s. First, I will argue quite generally that any appeal to a distinction between predicates and properties is irrelevant to issues concerning physicalism and supervenience. And, second, I will argue that Campbell’s own predicate version of supervenience fails to capture a notion of dependence that physicalists are likely to find useful. The upshot is that viewing supervenience as a relation between predicates does not help in articulating a more plausible version of physicalism.

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2.

Supervenience is typically viewed as a relation between sets of properties. Thus, a set of properties A is said to supervene on a set of properties B if and only if there can be no change in the A properties without a corresponding change in the B properties. Among the many different varieties of supervenience are weak and strong supervenience.¹ Jaegwon Kim (1993) articulates them as follows:

A set of properties A *weakly supervenes* on a set of properties B if and only if, necessarily, for any property F in A, if an object x has F, then there exists a property G in B such that x has G, and if any y has G, it has F.

A set of properties A *strongly supervenes* on a set of properties B if and only if, necessarily, for each x and for each property F in A, if x has F, then there is a property G in B such that x has G, and necessarily if any y has G, it has F.

Let us call these *property supervenience theses*.

In the philosophy of mind, the concept of supervenience has received attention because it has promised to capture the content of physicalism. According to physicalism, the mental depends on the physical in the following sense: there can be no change in mental nature without a corresponding change in physical nature. It has therefore been thought that physicalists are committed to the thesis that the mental supervenes, either weakly or strongly, on the physical.

Kim, however, has argued that neither of the above supervenience theses adequately captures the content of physicalism. To see why, note that it is compatible with weak supervenience that there could be two objects x and y, each existing in different worlds, that are alike in their physical properties but which differ in their mental properties. If this is possible, however, then it seems clear that physicalism cannot be equivalent to the claim that the mental weakly supervenes on the physical, since physicalism is incompatible with the existence of two individuals who are physically alike but mentally different, so weak supervenience seems too weak to capture the content of physicalism.²

On the other hand, note that it is a consequence of strong supervenience that, necessarily, if any object x has a mental property M, then there is some physical property P such that x also has P. But this rules out the possibility of non-physical creatures that possess mental properties. And many philosophers feel that this is not a thesis that should be ruled out by a definition of physicalism,³ so strong supervenience seems too strong to capture the content of physicalism.⁴

In short, it seems that neither of these supervenience theses adequately captures the content of physicalism, and, hence, that more needs to be done to articulate what physicalists are committed to by virtue of being physicalists.

3.

It is at this point that Campbell makes an interesting suggestion, remarking that “Kim’s failure to appreciate the difference between conceiving of the relation [of supervenience] as one that holds between properties and one between predicates reopens the possibility that Davidson’s version of [weak] supervenience describes a relation of dependence” (Campbell 2000, p. 304). What is it to view supervenience as a relation between predicates? Following Davidson (1985), let us say that a set of predicates A supervenes on a set of predicates B if and only if there can be no change in the ascription of A predicates to an object without a corresponding change in the ascription of B predicates to that object.⁵

Let us therefore reformulate our two property supervenience theses using predicates, as follows:

A set of predicates A *weakly supervenes* on a set of predicates B if and only if, necessarily, for any predicate F in A, if F is true of an object x, then there exists a predicate G in B such that G is true of x, and if G is true of any y, then F is true of y.

A set of predicates A *strongly supervenes* on a set of predicates B if and only if, necessarily, for each x and for each predicate F in A, if F is true of x, then there is a predicate G in B such that G is true of x, and necessarily if G is true of any y, then F is true of y.

Call these *predicate supervenience theses*.⁶ Do these predicate supervenience theses fare any better than their corresponding property supervenience theses as attempts to capture the content of physicalism? It seems to me that they do not.

The objection to the property version of weak supervenience alleged that it did not secure the sort of dependence of mental nature on physical nature that physicalism requires. And this was because it is compatible with the property version of weak supervenience that two individuals could be physically identical but mentally different. But note that it is compatible with the predicate version of weak supervenience that two individuals could have the same physical predicates ascribed to them and yet have different mental predicates ascribed to them, for consider two individuals x and y existing in different possible worlds. It is compatible with the predicate version of weak supervenience that the same physical predicates are ascribed to x and y, even though different mental predicates are ascribed to them. And this is precisely what physicalism denies.

The objection to the property version of strong supervenience, on the other hand, alleged that it rules out the possibility of creatures that have mental properties but lack physical properties. However, the predicate version of strong supervenience entails the very same thing concerning the ascription of predicates. For it is a consequence of the predicate version of strong supervenience that any creature to which mental predicates can truly be ascribed must also be a creature to which physical predicates can truly be ascribed. But again, this rules out certain possibilities that seem, at least *prima facie*, to be genuine ones, so it seems that the predicate version of strong supervenience is open to the same objections pressed against the property version of strong supervenience.

In short, the replacement of property supervenience theses with predicate supervenience theses does not help in capturing the content of physicalism. The problem should be clear: since replacing talk of properties with talk of predicates does not affect the modal force of the relevant supervenience theses, any problems with a given property supervenience thesis will carry over without residue to the corresponding predicate supervenience thesis.

4.

Why does Campbell think otherwise? The answer to this question can be found in Davidson's views on interpretation. Davidson's view is that the ascription of mental predicates is governed by various principles of interpretation. Thus, when ascribing a mental predicate to an agent, we need to consider three things: "(1) the behaviour of the agent; (2) the agent's relation to his or her environment; and (3) in accordance with the principle of charity, the assumption that if the agent has any beliefs at all, then they will conform largely to our own" (Campbell 2000, p. 309). Moreover, since on Davidson's view interpretation begins with physical predicates, it is only against the backdrop of the ascription of such predicates that the principles of interpretation can operate, and mental predicates can be ascribed.

The important thing for Campbell is that the relation implicit in this Davidsonian view is pragmatic rather than metaphysical, since it "describes a dependence that exists in our linguistic practices, a relation between our physical descriptions and mental descriptions" (Campbell 2000, p. 310). Let us follow Campbell in calling this the *pragmatic dependence thesis*.⁷

As he puts it, the concept of pragmatic dependence amounts to the thesis that "if, on any particular occasion, the same physical predicates can be ascribed to two agents, then we are justified in ascribing the same mental predicates to both and, alternatively, if we are to ascribe different mental predicates to two agents, then we must ascribe different physical predicates to both" (Campbell 2000, p. 308). The core of Campbell's pragmatic dependence thesis can therefore be summarized as follows: if

the same physical predicates are ascribed to two agents, then the same mental predicates must be ascribed to them. The ascription of mental predicates to an agent is therefore constrained by, and so depends on, what physical predicates are ascribed to that agent. Thus, “there is a significant sense in which mental predicates depend on physical ones, for without the physical evidence there is no reason to ascribe mental states to an agent” (Campbell 2000, p. 310). It is in this sense that the pragmatic dependence thesis is said by Campbell to express a dependency relation.

Although this summary is extremely brief, and overlooks many of the more interesting aspects of Campbell’s article, it will suffice for the points I wish to make. I argued that predicate versions of supervenience fare no better than their property supervenience analogues as attempts to capture the content of physicalism. In particular, I argued that the version of weak predicate supervenience I described is open to the same objections brought against the thesis of weak property supervenience. Campbell anticipates this objection, however, and, in response to the worry that Davidson’s version of weak supervenience may be no better off than the version of weak supervenience criticized by Kim, claims that “the fact that Davidson’s version of supervenience is modally weak does not create an obstacle to regarding it as a relation of dependence in this world” (Campbell 2000, p. 312). This seems to me to be a mistake, for two reasons.

First, even if it is granted that Campbell’s pragmatic dependence thesis captures *a* notion of dependence, this notion of dependence is unlikely to be of use to physicalists wishing to argue for a supervenience-based physicalism. The problem should be familiar. Consider two individuals, *x* and *y*, both of whom exist within the actual world. According to the pragmatic dependence thesis, if an interpreter *A* ascribes the same physical predicates to *x* and *y*, then *A* must ascribe the same mental predicates to *x* and *y*. But this leaves open the possibility that there is an individual *z* in another world *w* who is ascribed the same physical predicates as are ascribed to *x* and *y*, but who is ascribed different mental predicates. This possibility is compatible with the pragmatic dependence thesis—since the pragmatic dependence thesis is restricted to the actual world—but it is incompatible with physicalism, so even if Campbell is right in claiming that his pragmatic version of predicate supervenience constitutes *a* dependency relation, this dependency relation is of dubious help to physicalists wishing to articulate a plausible version of psycho-physical supervenience.

A more serious problem, however, is that the claim that the pragmatic dependence thesis expresses a relation of dependence *even in this world* is open to counterexample. The counterexample I have in mind makes use of Ned Block’s so-called “Blockhead” example.⁸ Let Head be a normal human being who responds to typewritten questions by outputting typewritten responses of her own. Thus, if asked question Q1, Head responds by outputting sentence R1; if asked question Q2 Head responds by out-

putting sentence R2; and so on. Blockhead, on the other hand, is a machine that has been programmed to respond to typewritten questions by outputting typewritten sentences. However, Blockhead does this by a process called "string searching." Thus, if asked question Q1, Blockhead has been programmed to output sentence R1. If then asked question Q2, Blockhead has been programmed to respond by finding the string beginning with sentences Q1, R1, and Q2, and then outputting the fourth sentence of that string. Based solely on their behaviour and the relevant relations to their physical environments, it seems that the same physical predicates are ascribable to both Head and Blockhead, so, according to the pragmatic dependence thesis it would seem that we must ascribe the same mental predicates to both. But it should be clear that it would be a mistake to ascribe the same mental predicates to Head and Blockhead, for while the predicate "is intelligent" is truly ascribable to Head, it is surely not truly ascribable to Blockhead. To the contrary, as Block remarks, Blockhead has "the intelligence of a toaster" (Block 1981, p. 21).

Moreover, the example is not limited to discussions of intelligence, or to outputs that consist of typewritten sentences, since we could imagine a version of Blockhead that plays its entire life by string searching. Such a creature would be indistinguishable from Head in all actual and possible physical respects, but would, arguably, be mentally different. Thus, Blockhead appears to constitute a counterexample to Campbell's claim that the pragmatic dependence thesis expresses a relation of dependence even in this world.

5.

In conclusion, Campbell is surely correct when he points out that Kim does not distinguish clearly between properties and predicates when discussing supervenience. However, I very much doubt that this matters: first, because viewed as attempts to capture the content of physicalism, predicate supervenience theses are open to the same criticisms brought against property supervenience theses, and, second, because Campbell's attempt to construct a pragmatic form of psycho-physical dependence does not help physicalists in articulating what they are committed to by virtue of being physicalists. Thus, while the debate between nominalists and realists about the nature of properties remains interesting and important, it does not seem to me to be a debate that has much bearing on issues having to do with physicalism in the philosophy of mind.⁹

Notes

- 1 In addition to weak and strong supervenience, Kim also discusses global supervenience. For reasons of space, however, I will ignore global supervenience in what follows.

- 2 In other words, the weak supervenience of mental nature on physical nature is not sufficient for physicalism. Nevertheless, it may well be that the weak supervenience of mental nature on physical nature is *necessary* for physicalism.
- 3 See, for example, David Lewis's discussion of this problem in Lewis 1983.
- 4 This objection is different from the objections considered by Campbell in his discussion of strong supervenience. For a more thorough discussion of Kim's objections to strong supervenience, see Campbell (2000), esp. pp. 305-307.
- 5 Like Campbell, I am not here concerned with the plausibility of nominalism in general, or with Davidson's particular version of it. I am merely interested in seeing what implications Davidson's nominalism has for physicalism, on the assumption that it is coherent.
- 6 Here and throughout, I assume that the meanings of the predicates remain constant.
- 7 Although Campbell is primarily concerned with explicating Davidson's version of supervenience, for simplicity I will not distinguish between Campbell's interpretation of Davidson's thesis and Campbell's own views. I will therefore use the phrase "the pragmatic dependence thesis" to refer both to Campbell's interpretation of Davidson's version of supervenience as well as to Campbell's own views on supervenience.
- 8 See Block 1981.
- 9 Thanks to David Hunter, Daniel Stoljar, and Robert Streiffer for comments on previous drafts, and to Eric Dayton for his support and encouragement.

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