

Against Disanalogy-Style Responses to the Exclusion Problem

Kevin Morris

Received: 2 December 2014 / Revised: 8 February 2015 / Accepted: 11 February 2015 /
Published online: 27 February 2015
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Abstract This paper focuses on an influential line of response to the exclusion problem for nonreductive physicalism, one defended with the most subtlety by Karen Bennett. According to this line of thought, a successful nonreductive response to the exclusion problem, a response that allows one to maintain each of the core components of nonreductive physicalism, may consist in showing that the manner in which the effects of mental causes also have distinct and sufficient physical causes is disanalogous to other types of cases in which an effect may have distinct sufficient causes. After laying out the formulation of the exclusion problem that Bennett endorses, along with her response to the problem, I offer an initial critique of this response insofar as it is couched in terms of her preferred formulation. I then present a general critique of disanalogy-style responses to the exclusion problem. I argue that extant implementations of this strategy are at best underdeveloped, and suggest that lack of clarity in the use of “overdetermination” may function to mask the shortcomings of this strategy. While others have questioned the details of such responses, the worries that I raise concern the very logic of the exclusion problem and how such responses fit into this logic.

Keywords Exclusion problem · Mental causation · Nonreductive physicalism

Introduction

The traditional Cartesian problem of mental causation arises from the supposition that minds are nonspatial entities or substances, and puzzlement as to how such entities could possibly causally influence the behavior of physical entities.¹ While few now endorse Descartes’ radical views about the mind, new commitments about

¹See Descartes 1641/1988 and 1643/1991. This line of objection was famously developed by a Princess Elisabeth in a series of letters with Descartes; see Descartes 1643/1991.

K. Morris (✉)
Department of Philosophy, Tulane University, New Orleans, LA, USA
e-mail: kevin.michael.morris@gmail.com

the nature of mind, and how mental states and processes are related to physical ones, bring with them new problems of mental causation. For suppose that the physical domain is causally self-sufficient or “complete”, that every physical effect that has a sufficient cause at a time has a sufficient physical cause at that time. Further, suppose that mental properties and processes, while dependent on physical features of the world, are yet distinct from them, while at the same time causally efficacious with respect to the physical domain. Such are the commitments of *nonreductive physicalism*. *The exclusion problem* targets this metaphysical outlook by claiming that, when these commitments are put together, the result is an odd and perhaps absurd double-counting of causes. For it appears that any effect, or at least any physical effect, for which a mental state is a cause already has a distinct and sufficient physical cause.² According to the exclusion problem, a view with such implications about the causal structure of the world cannot be true—that either the causal self-sufficiency of the physical, the distinctness of the mental from the physical, or the causal efficacy of the mental vis-à-vis the physical must be rejected—that nonreductive physicalism is, as Jaegwon Kim (1989a) says, a myth.³

My focus in what follows will be on an influential line of response to this “exclusionist” reasoning, one defended with the most care and subtlety by Karen Bennett.⁴ According to this line of thought, a successful nonreductive response to the exclusion problem, a response that allows one to maintain each of the core components of nonreductive physicalism, may consist in showing that given the metaphysics of nonreductive physicalism, the manner in which the effects of mental causes also have distinct and sufficient physical causes is *disanalogous* to other types of cases in which an effect may have distinct sufficient causes. In particular, consider classic “textbook cases” of causal overdetermination. Suppose, for example, that a felon is sentenced to death by firing squad. The squad fires and two bullets simultaneously puncture the heart of the felon. The death of the felon, it seems, has two causes at a time—two sufficient causes, since both bullets seem sufficient for the death.⁵ According to the line of thought here of interest, when it comes to responding to the exclusion problem, the task for a nonreductive physicalist consists in showing that mental causation on

² The “causal completeness” of the physical domain just dictates that mental causes of physical occurrences, if distinct from physical ones, are always in addition to already-sufficient physical causes. However, “same-level” mental causation—mental occurrences causing other mental occurrences, such as an experience causing a particular thought—will be jeopardized by any argument against mental-to-physical causation if mental-to-mental causation requires mental-to-physical causation. And it may be argued that this follows from physicalist assumptions about the relationship between the mental and the physical, especially the supervenience of the mental on the physical (see Kim 2005a for discussion).

³ See Kim 1989a, 1998, and 2005a for developments of the exclusion problem; see also Kim 1989b. Heil 2003 uses related considerations to argue against ontological views that posit levels of reality; Merricks 2003 uses similar reasoning to argue for eliminativism about ordinary objects, given a causal criterion of existence for such objects; Papineau 2006 uses similar premises to argue for physicalism on the grounds that given the causal self-sufficiency of the physical, and the causal efficacy of the mental, mental properties must be either identical to physical properties or metaphysically supervene on them.

⁴ See Bennett 2003 and 2008. For related lines of thought, see Kallestrup 2006; Marcus 2005, and Sider 2003.

⁵ Other examples of “textbook overdetermination” may include: two rocks simultaneously striking a window, where the effect is the breaking of the window; a lit match thrown into a pile of hay and a bolt of lightning simultaneously striking a barn, where the effect is the burning of the barn. Cases like these have figured in discussions of the causal relation in virtue of the issues that they raise for proposed analyses of causation (see, for example, Mackie 1974). Buzle 1979 claims that such “overdetermination” is impossible. For discussion and responses, see Funkhouser 2002 and Schaffer 2003.

nonreductive physicalism *differs* from such cases along some salient dimension. Thus Bennett (2003, 474) writes that the best strategy for a nonreductive physicalist is to argue that “the effects of mental causes are not overdetermined, and to explain *why* they are not”, to “break the analogy” between mental causation on nonreductive physicalism and textbook overdetermination.

While I agree that it is imperative for a nonreductive physicalist to “break the analogy” with textbook cases, I do not think that this can constitute a nonreductive response to the exclusion problem. Others have questioned the details of Bennett’s proposal, such as whether or not it succeeds in establishing what she views as the key point of disanalogy (Keaton and Polger 2014), as well as assumptions about the relationship between certain counterfactual truths and causal overdetermination (Won 2014). My worries, however, concern not the details but rather the very logic of the exclusion problem and how disanalogy-style responses like Bennett’s fit into this logic. Moreover, I believe that the alleged attractiveness of such responses stems, at least in part, from lack of clarity concerning the exclusion problem itself; and that this, in turn, may in part be attributed to inconsistent and unclear use of “overdetermination” and cognate expressions.

My focus will be on Bennett’s particular version of this style of response to the exclusion problem, though I believe that my conclusions apply generally. In the next section, I lay out the formulation of the exclusion problem that Bennett endorses, as her proposed response is couched in terms of the specifics of this formulation. After presenting the details of her response to the exclusion problem, I raise several initial questions about this response insofar as it is couched in terms of Bennett’s preferred formulation of the problem. I then present a general critique of disanalogy-style responses to the exclusion problem. Here I argue that extant implementations of this line of response are at best underdeveloped, and that lack of clarity in the use of “overdetermination” may function to mask its shortcomings. I conclude by contrasting disanalogy-style responses with alternative lines of response that nonreductive physicalists have offered to the exclusion problem, and remarking on the significance of my results.

A Formulation of the Exclusion Problem

It is not difficult to feel the force of the exclusionist reasoning sketched above. In a particular case, if I raise my arm, and suppose that there is within the physical domain a sufficient cause for the raising of my arm, it is hardly intuitive to further maintain that the raising of my arm is caused by my intentions, volitions, beliefs, and experiences, if these are distinct from the physical causes of that behavior. Likewise, it is hardly natural to suppose that there are features of reality that while causes, are always and everywhere strictly in addition to already-sufficient physical causes, at least with respect to the physical domain.⁶ It is, however, not obvious how the exclusion problem should be formulated or codified. A predominant approach, and the one that Bennett endorses, goes as follows. It begins with the core commitments of nonreductive physicalism,

⁶ See fn. 2.

along the lines of the following, which were implicit in the initial presentation of the exclusion problem above⁷:

1. *Distinctness*: Mental causes are distinct from physical causes.
2. *Completeness*: Every physical event that has a sufficient cause at a time has a sufficient physical cause at that time.
3. *Efficacy*: Some physical events have mental causes.

Call the set consisting of (1), (2) and (3) “NRP”. On the approach here of interest, the exclusion problem is codified by adding to NRP a “nonoverdetermination thesis” and an “exclusion principle”:

N. *Nonoverdetermination*: The physical effects of mental causes are not overdetermined.

E. *Exclusion*: No event can have more than one sufficient cause at a time unless it is a genuine case of overdetermination.

To introduce an issue that will recur, the precise meaning of (N) and (E) turns on how “overdetermine” and its cognates are understood. The standard line takes this to be fixed by “textbook cases” like the firing squad example. The nonoverdetermination thesis then says that mental causation does not work like firing squad-type cases, while the exclusion principle says that there can be more than one sufficient cause for an effect only if it is a firing squad-type case. It is because of this that Bennett (2008, 281) adds to (N) the qualifier that the physical effects of mental causes “are not on a par with the deaths of firing squad victims”. This still leaves room for refinement, since emphasis may be played on different features of firing squad-type cases. But setting aside this issue for now, the idea at work in this formulation is as follows. Call the set consisting of NRP, along with (N) and (E), “NE”. NE seems inconsistent. After all, NRP seems to imply that the effects of mental causes have more than one sufficient cause. But this cannot be, since the nonoverdetermination thesis (N) says that the effects of mental causes are not like the deaths of firing squad victims, while the exclusion principle (E) says that there can be more than one cause for the same effect only if it is a firing squad-type case. Therefore, given (N) and (E), nonreductive physicalism must be false. Hence, on this formulation, a “nonreductive solution” will consist in showing that one or both of (N) and (E) should be rejected.

A motivation for this manner of formulating the problem can be stated as follows. The exclusion problem is in some manner a problem about an overabundance of causes. However, it would seem gratuitously strong to formulate the problem in terms

⁷ Versions of these principles are given in Árnadóttir and Crane 2013; Bennett 2003 and 2008, Kim 2005a and 2005b, and elsewhere. For discussion of the completeness thesis, see Papineau 2006. I assume that causes are events, and that an event is a thing having a property. My statement of the exclusion principle presumes, following much work on the exclusion problem (Carey 2011 is an exception), that the issue is whether an effect can have more than one *sufficient* cause at a time. When the exclusion principle is understood in this way, the supposition is that (3) takes mental causes to be *sufficient* causes for some physical effects. I believe that most of the relevant issues can be framed in terms of a single sufficient cause and some further, distinct cause for the same effect, regardless of whether the further cause is a *sufficient* cause. A related issue, which deserves attention but will be set aside, is how “sufficient” in “sufficient cause” ought to be understood.

of a general ban on more than one sufficient cause for the same effect. This can be seen by noting that were the problem to be so formulated, a nonreductive response could consist in arguing for the coherence of firing squad-type cases. But it is hard to imagine that *this* should suffice for an adequate response, since aside from perhaps involving distinct causes for the same effect, such cases do not seem to be very closely related to the sort of causal picture that nonreductive physicalism appears to imply. For example, whereas nonreductive physicalism supposes that mental causes, while distinct from physical causes, are dependent on them, this is not so in textbook cases. Given this, it would seem wise for a defender of exclusionist reasoning to formulate the problem using a more refined principle: to insist *not* that no event whatsoever can have more than one sufficient cause at a time, but rather that no event can have more than one sufficient cause at a time if it is not a firing squad-type case. This is the exclusion principle (E) which, when combined with (N), appears to have the consequence that not all of the commitments of nonreductive physicalism can be true.⁸

Bennett's "Compatibilist" Response to the Exclusion Problem

Bennett (2003, 474) defines a *compatibilist* as one who denies the exclusion principle (E). Given the formulation of the problem in terms of (N) and (E), Bennett supposes that the "compatibilist's task" is to argue that "the effects of mental causes are not overdetermined, and to explain *why* they are not", to "break the analogy" between mental causation and textbook overdetermination. While the motivation for assigning this task to the compatibilist is not entirely transparent, the assumption appears to be that if the compatibilist accomplishes this task, this will suffice to show that an event can have more than one sufficient cause at a time, yet not be a case of textbook overdetermination, and thus that (E) is false. Whether this is the case, and indeed the very logic of Bennett's approach to the exclusion problem, will be taken up in detail in the following sections.

Others have noted, for example, that on nonreductive physicalism, mental causes depend on physical causes in a manner not found in textbook cases.⁹ However, the point of disanalogy that Bennett (2003, 2008) emphasizes is a bit more subtle.¹⁰ In particular, she first notes that in textbook cases, if one of the causes had not occurred, the effect would have still come about. Suppose that *c* is the firing of one bullet, *c** is the firing of the other bullet, and *e* is the death of the felon. The following counterfactuals both seem nonvacuously true:

- If *c* had occurred without *c**, *e* would have still come about.
- If *c** had occurred without *c*, *e* would have still come about.

It is natural to take the nonvacuous truth of these counterfactuals to be symptomatic of the independence of the causes in these kinds of cases; for example, that they have

⁸ This line of thought in favor of using (N) and (E) to formulate the exclusion problem is perhaps most explicit in Carey 2011.

⁹ See, for example, Árnadóttir and Crane 2013; Block 1990; Kallestrup 2006; Kim 1989a, 1989b, 2005a, and 2005b; Marcus 2005, and Sider 2003.

¹⁰ See also Kallestrup 2006 and Kim 1989a and 1989b.

possible antecedents supposes that the causes are at least modally independent. More generally, Bennett urges (2003, 477) that it is the nonvacuous truth of such counterfactuals that distinguishes firing squad-type cases, in which there appear to be two distinct causes for the same effect, from superficially similar cases, such as those involving joint causation or in which one of the putative causes “is not really a cause at all”; she thus concludes that the nonvacuous truth of counterfactuals like these is necessary for overdetermination.

Bennett then proceeds (2003, 481–90) to argue that given the metaphysics of nonreductive physicalism, and in particular the thesis that mental features metaphysically supervene on physical ones, where a mental and a physical cause seem to bring about the same effect, it will either be vacuous or false that if the physical cause had occurred without the mental cause, then the effect would have still come about. It will be vacuous, since impossible, if the physical cause is taken to be that physical state of the world that metaphysically necessitates the mental cause. It will be false if the physical cause is merely taken to be what is sometimes called the “core realizer” of the mental cause.¹¹ This is so, Bennett claims, on the grounds that if the “core realizer” were to be instantiated without the mental cause, it would be instantiated in an environment such that it does not bring about the same effect. Putting this together, the conclusion is that the effects of mental causes are not on a par with the deaths of firing squad victims. The nonvacuous truth of the counterfactuals is a necessary condition for overdetermination, but this condition fails for mental and physical causes on a nonreductive physicalist outlook. Therefore, mental causes do not overdetermine their physical effects. Thus, the analogy between mental causation and textbook overdetermination can be broken, and the exclusion problem can thus be “traced” by the nonreductive physicalist.

Remarks on the Logic of Disanalogy-Style Responses

My aim, again, is not to question the details of Bennett’s response. Rather, I believe that the problems that it faces are in a way more basic. The first set of questions that I will raise about her response, and disanalogy-style responses generally, will suppose Bennett’s preferred formulation of the problem in terms of (N) and (E). I will argue that even on this formulation, the sort of response to the exclusion problem that she offers is problematic.

Compatibilism, Exclusion, and Nonoverdetermination

In advancing her response to the exclusion problem, Bennett in effect endorses a counterfactual criterion for what it is to have a textbook case, a counterfactual criterion for causes to “really overdetermine” an effect. Given this, the versions of the

¹¹ This way of characterizing Bennett’s reasoning in terms of “core” realizers is drawn from Keaton and Polger 2014; the distinction between “core” and “total” realizers is from Shoemaker 1981. For example, on a “wide” view of mental content, the “core realizer” for a belief may be a neurophysiological state. However, this state does not metaphysically suffice for a belief with that content, since further environmental conditions are needed as well; these, together with the neurological state, are the “total” realizer for the belief.

nonoverdetermination thesis (N) and the exclusion principle (E) that she works with can be stated more precisely as follows:

N_C . The physical effects of mental causes are not overdetermined (it is not nonvacuously true that if one of the causes were to occur without the other, then the effect would have still come about).

E_C . No event can have more than one sufficient cause at a time unless it is nonvacuously true that if one of the causes were to occur without the other, then the effect would have still come about.

Related refinements of the nonoverdetermination thesis (N) and the exclusion principle (E) can be developed by emphasizing different features of textbook cases. For example, one could take the independence of the causes in such cases, for instance that they appear to trace distinct causal pathways, to be the core feature of such cases, and in doing so generate alternative refinements of (N) and (E).¹²

On reflection, however, it is not obvious how the logic of Bennett's response should be understood on this formulation of the problem. In particular, it appears that if all glosses that might be imposed on the exclusion principle are set aside, showing that counterfactuals that are nonvacuously true in firing squad-type cases do not nonvacuously hold for mental and physical causes for the same effect must be understood as an argument *for* N_C . That is, it appears that endorsing a counterfactual criterion for having a firing squad-type case, and arguing that such a criterion is not met for mental and physical causes, shows that the physical effects of mental causes are not overdetermined, where "overdetermination" has been precisified in the manner that Bennett recommends. This is *not* how Bennett presents her line of response; she appears to take it as bearing directly on the exclusion principle, and as providing an independent reason to reject that principle. But it is not obvious how it is supposed to accomplish such a thing. Further, while I have focused on Bennett's manner of implementing a disanalogy-style response to the exclusion problem, the point is general and, in a way, is a matter of the content of (N) and (E): insofar as some feature of textbook cases is taken to be the defining condition for a cause's "really overdetermining" some effect, establishing that this feature is *absent* from mental causes for physical effects, given the metaphysics of nonreductive physicalism, will establish the relevant instance of (N). It will *not*, without some further considerations, directly rule against its being the case that no effect can have more than one sufficient cause at a time unless it is a genuine case of overdetermination. It will not, that is, directly rule against the exclusion principle.

There is, it should be conceded, *a sense* in which an argument *for* the nonoverdetermination thesis (N) *is* thereby an argument *against* the exclusion principle (E). This is just insofar (N) and (E) yield an inconsistent set when

¹² This will yield logically distinct versions of (N) and (E) only insofar as the independence of the causes in textbook cases is not itself spelled out in terms of the truth of Bennett's counterfactuals; hence the extent to which the thesis (E_p) given below differs from (E_C) will depend on how "independent" is explicated.

combined with the core components of nonreductive physicalism. Thus, if the core components of nonreductive physicalism are taken on board, and if (N) is also accepted, (E) must be rejected. This would, however, be nothing like an independent argument against (E). Further, there is some reason to think that an independent argument against (E) is desirable. The reason is that once (N) and (E) are suitably refined and explicated, it appears that the content of disanalogy-style approaches to the exclusion problem—that given the metaphysics of nonreductive physicalism, mental causation is disanalogous to textbook cases of overdetermination in one or more respects—has been wholeheartedly endorsed by exclusionists like Kim. From the introduction of exclusionist worries into the contemporary scene nearly 25 years ago, through his more recent work, Kim clearly recognizes that the nonreductive physicalist's metaphysics has the consequence that mental causes are not independent from physical causes as the causes are independent in firing squad-type cases.¹³ Likewise, he appears to accept the disanalogy along the counterfactual criterion for overdetermination that Bennett works to establish.¹⁴ Now, and to introduce an issue that will recur below, Kim is not entirely consistent in his use of “overdetermine”. Despite this, however, he surely thinks that the exclusion principle is true. Quite apart from whether or not it *is* true, or the cogency of the considerations that Kim offers in favor of it, it would be surprising if he was guilty of such a gross oversight in the very logic of the exclusion problem. But this would be the case if disanalogy along the counterfactual criterion was sufficient to reject the exclusion principle. That is, insofar as Kim accepts the exclusion principle and the sort of disanalogies with textbook overdetermination that Bennett and others have sought to establish, it follows that either Kim is guilty of a gross oversight in the logic of the exclusion problem, or more than disanalogy is needed to reject the exclusion principle. It is the latter disjunct, I believe, that is true.

The Exclusion Problem and the Exclusion Principle

The critical discussions just advanced follow Bennett in supposing that if (E) were falsified, this would be sufficient to provide a nonreductive response to the exclusion problem. This is certainly the case if the exclusion problem really *does* amount to the inconsistency (E) and (N) with the core commitments of nonreductive physicalism. But the very claim that the exclusion problem should be so codified is a substantive thesis, and one that may be questioned. In particular, it may be urged that on prominent refinements, (E) is itself gratuitously general, and goes well beyond the complaint that an “exclusionist” should wish to lodge against nonreductive physicalism.

Suppose, for example, that “overdetermination” is understood in the manner that Bennett proposes and that the exclusion principle is cashed out as E_C ; likewise, suppose that the independence of the causes in textbook cases is emphasized, such that the exclusion principle becomes the following:

¹³ See, for example, Kim 1989a, 44; 1989, 83–92; 2005a, 42 and 46–52; and 2005b, 196.

¹⁴ See, for example, Kim 1989a, 1989b, and 2005b, 196.

E_I . No event can have more than one sufficient cause at a time unless the causes are independent in the way that they are in textbook cases.

It may be claimed that both (E_C) and (E_I) are falsifiable for the wrong reasons, just as the principle that no effect whatsoever can have more than one sufficient cause at a time is falsifiable for the wrong reasons, and in this way are gratuitously general. Consider certain part/whole cases: a salvo of shots is fired at a felon, only *one* of which hits the felon. The particular shot is causally sufficient for the death of the felon, and so is the entire salvo, for it includes the shot as a part.¹⁵ Likewise, in providing a nonreductive response to the exclusion problem, Steinvör Árnadóttir and Tim Crane (2013, 258) give the following example: the indentation that a hammer makes in soft clay on top of which it is placed is caused by the head of the hammer *and* by the whole hammer, where the indentation is made by the head of the hammer and not by its shaft. These seem to be counterexamples to (E_C) and (E_I). Regarding (E_C), it appears to be false that if one of the causes had been present without the other, then the effect would have still come about: arguably, it is false that if the salvo had been fired without the particular shot, then the death of the felon still would have occurred; and it appears to be false that if the hammer had been placed on the soft clay without the head being placed on the clay, then the hammer head-shaped indentation in the clay would have still come about. Regarding (E_I), while these cases seem to involve distinct sufficient causes at a time, the causes do not appear to be independent in the way that they are in textbook cases of overdetermination.

Árnadóttir and Crane (2013, 257) use cases like this to conclude that *there is no exclusion problem*: such cases show that the exclusion principle is false; thus, on a formulation of the problem that uses the exclusion principle and the nonoverdetermination thesis, each of the core commitments of nonreductive physicalism can be maintained. While I do not deny that the exclusion principle, when refined in the manner of either (E_C) or (E_I), “is not even plausible on its face” and is “subject to a number of counter-examples” before “any physicalist commitments enter the picture”, it may be claimed that the right conclusion to draw is that the problem itself has been misrepresented. After all, it seems that the problem has been dismissed without any discussion of either mental causation or the metaphysics of nonreductive physicalism and, in particular, without any concern for whether, on nonreductive physicalism, mental and physical causes *are* related in anything like the manner in which a particular shot is related to an entire salvo of shots. And, at least in part because of this, it is far from clear why an exclusionist like Kim should be committed to denying that both a part and a whole that includes that part may count as distinct sufficient causes for the same event.¹⁶

¹⁵ This example is drawn from Shoemaker 2007.

¹⁶ Shoemaker 2007 uses part/whole cases to respond to the exclusion problem by arguing that on his version of nonreductive physicalism, mental causes are parts of physical causes. This does not undermine the point here, since on the formulation that uses (N) and (E), such cases falsify the exclusion principle, *regardless* of any thesis about the relationship between mental and physical causes on nonreductive physicalism and part/whole cases. Likewise, while one could debate the legitimacy and proper interpretation of the part/whole cases themselves, I do not believe that this would undermine my case: that the formulation allows that the problem *could* be solved in this way indicates that the problem has been misrepresented.

The issue of how the exclusion problem is best formulated or codified does, I believe, warrant further discussion.¹⁷ However, if the remarks here are on track, those who have advanced disanalogy-style responses in the context of the formulation here under discussion may be faulted as follows. First, apart from the issue of how establishing points of disanalogy between mental causation and textbook cases of overdetermination can falsify the exclusion principle (E), they have been mistaken in thinking that falsifying (E) can constitute a nonreductive response to the exclusion problem. For if the remarks here are on track, the falsification of such a principle may be no more troubling to an exclusionist than the falsification of the gratuitously general principle that no event whatsoever can have more than one sufficient cause at a time. Second, it cannot be said that a compatibilist, as one who denies the exclusion principle, must “break the analogy” between mental causation and textbook cases of overdetermination. For if the remarks here are on track, (E) can be falsified independently of any analogy-breaking, since it can be falsified without any concern for either mental causation or nonreductive physicalism or textbook cases of overdetermination.

To summarize the main critical results so far, I first argued the logic of Bennett’s response and perhaps disanalogy-style responses generally is obscure, since taken at face value they directly establish not the falsity of (E) but the truth of (N). I then argued that there is some reason to think that even if such responses could be seen to falsify (E), the significance of this may be questioned on the grounds that (E) might be falsifiable in other ways as well and that the falsity of (E), as it has typically been understood, may fail to suffice for an adequate nonreductive response to the exclusion problem.

A Critique and Diagnosis of Disanalogy-Style Responses

Those who are sympathetic to disanalogy-style responses to the exclusion problem will likely feel that I have misunderstood the point of these responses. There is a

¹⁷ See Morris ([unpublished manuscript](#)) for discussion. While a thorough analysis of this issue here would take me too far afield, a few points are worth noting. First, the idea is not that a nonreductive solution to the exclusion problem must exhibit what it is about the mental *qua* mental that allows for mental causes to figure as causes in addition to sufficient physical causes. Nor is it being demanded that a nonreductive solution show how mental causation is possible in the sense of providing a mechanism whereby mental causation takes place. Rather, the claim is just that an adequate solution should show that it is not the case that, on nonreductive physicalism, mental causation is problematic. In her influential discussion of the exclusion problem, Bennett (2003, 471) remarks that the exclusion problem is forceful, in part, because it does not “attempt to claim that there is something about the nature of the mental that renders it incapable of causing anything”; rather, it contends that even if mental properties “are perfectly suited to causing things, there is nothing around for them to cause”. In this sense, she supposes (*ibid.*) that the exclusion problem differs from the problems of mental causation that arise for Cartesian dualism, Davidsonian anomalous monism, and externalism about content. But it is compatible with this that the exclusion problem arises, at least in part, from the specific commitments of nonreductive physicalism, and that an adequate solution should at least in part address these commitments, especially those that concern the nonreductive physicalist’s account of the relationship between mental and physical phenomena. Moreover, insofar as one accepts that an exclusionist *is* within his or her rights to reject a formulation of the problem in terms of the thesis that no event whatsoever can have more than one sufficient cause at a time, and to do so on the grounds that such a formulation permits for spurious “solutions”, an argument is needed if one is to suppose that the same verdict should not also apply to the present case.

sense in which this is the case. For while Bennett couches her response in terms of the formulation that uses (N) and (E), I think that her real target, as well as the target of those who have endorsed related responses, is not quite what the exclusion principle (E) actually asserts. Rather, I think that the real target has been the thesis that, given the metaphysics of nonreductive physicalism, it is problematic to suppose that the physical effects of mental causes also have distinct and sufficient physical causes. That is, I think that the real target has been the claim that given how the nonreductive physicalist takes mental causes to be related to physical causes, and mental properties to be related to physical properties generally, physical occurrences cannot have mental causes and distinct and sufficient physical causes. A defender of a disanalogy-style response aims to show that this *not* the case by arguing that mental and physical causes are not, on nonreductive physicalism, related as the causes are related in textbook cases of overdetermination. While the target thesis here may seem similar to the exclusion principle (E), or perhaps (E) together with (N), this is not the case. This can be seen by noting, as was suggested above, that it appears that (E) may be falsified without the claim that, given the metaphysics of nonreductive physicalism, it is problematic to suppose that the physical effects of mental causes also have distinct and sufficient physical causes, being falsified.

Unfortunately, it is not easy to see how a disanalogy-style response like the one that Bennett advances *could* falsify a thesis along these lines. The problem is that the capacity of any such response to falsify a thesis to the effect that on nonreductive physicalism, mental causation is problematic, depends on the truth of an instance of the following:

- A. If mental causation on nonreductive physicalism is problematic, then it is like textbook cases of overdetermination in some respect or respects X.

In other words, the success of a disanalogy-style response depends on its being the case that the point of analogy is necessary for mental causation to be problematic or objectionable on the metaphysics of nonreductive physicalism. The response then aims to show that on nonreductive physicalism, mental causation is disanalogous in the relevant respect. It concludes, in other words, that given how the nonreductive physicalist takes mental causes to be related to physical ones, and mental properties to physical properties more generally, it is unproblematic to hold that some physical occurrences have both mental causes and distinct and sufficient physical causes. The problem, however, is that there is *prima facie* little reason to think that (A) is true and that despite such a thesis being central to the success of disanalogy-style responses, I do not believe that it has ever been explicitly defended. Suppose, for example, that a counterfactual criterion for overdetermination is endorsed. In this case, (A) says that mental causation on nonreductive physicalism is problematic or objectionable only if it is the case that, where the nonreductive physicalist takes some physical effect to have both a mental cause and a distinct and sufficient physical cause, if one of the causes were absent, then the effect would have still come about. Likewise, suppose that the distinctive mark of textbook cases of overdetermination is the independence of the causes. In this case, (A) says that mental causation on nonreductive physicalism is problematic only if it is the case that, where the nonreductive physicalist takes some

physical effect to have both a mental cause and a distinct and sufficient physical cause, the mental and physical causes are independent in the way that the causes are independent in firing squad-type cases.

Neither refinement of (A) is, on the face of it, very plausible. While perhaps there is an argument for such claims, it should be emphasized that such an argument is *needed*. In developing the exclusion problem, Kim is well aware that the nonreductive physicalist's mental and physical causes are not related as the causes are related in traditional cases of over determination. But he nonetheless maintains that it is highly problematic, if not absurd, to endorse the causal picture of the world that nonreductive physicalism seems to imply. This is just to say that (A) cannot be *assumed*. It may even be regarded as a central point of contention between exclusionists like Kim and nonreductive physicalists. Despite this, and despite the work that has gone into establishing points of disanalogy between mental causation on nonreductive physicalism and textbook cases of overdetermination, nobody has laid the requisite foundation for this nonreductive response to the exclusion problem.

Why have things seemed otherwise? Why has it seemed that a nonreductive response could consist in drawing out points of disanalogy between mental causation and textbook cases of overdetermination? For one thing, it may be that (A) has been confused with its more plausible converse:

- B. If mental causation on nonreductive physicalism is like textbook cases of overdetermination in some respect or respects X, then it is problematic.

(B) is not implausible, and something like it may be seen to motivate disanalogy-style responses. Thus it is sometimes noted that if mental causation on nonreductive physicalism were like textbook cases, it would lead to rather unpalatable consequences: for example, textbook cases, at least in part due to the independence of the causes, appear to involve coincidences or perhaps orchestrated circumstances. But given the prevalence of mental causes for physical behavior, such a model for mental causation would populate the world with bizarre, systematic yet apparently inexplicable causal regularities. This idea is expressed nicely by Ted Sider in the following passage (2003, 722):

Imagine a paranoid who thinks that every time someone is shot, there are two causally independent shooters. He is crazy, but why? One reason (not the only one) is that it would be a *coincidence* that all these sharpshooters just happen to fire at the same places at the same times. This great regularity would need an explanation, and none could be given. [This] would require a massive, unexplained correlation between multiple causes.

Given this, it *is* imperative for the nonreductive physicalist to show that mental causation, on nonreductive physicalism, differs from textbook cases of overdetermination. Bennett is thus correct when she says (2003, 474) that a nonreductive physicalist “needs to be able to argue that the effects of mental causes are not overdetermined, and to explain *why* they are not”. Likewise, showing that mental causation is disanalogous to firing squad-type cases can *undermine* an argument according to which mental causation *is* problematic on nonreductive physicalism,

though the value of this might be somewhat limited.¹⁸ But undermining an argument for a thesis is not at all the same as showing that the conclusion of that argument is false, and the plausible (B) should not be confused with the less plausible (A).

I am not sure that (A) has been confused with (B), though those who have offered disanalogy-style responses have not bothered to distinguish theses along these lines. But quite apart from any specific confusion between (A) and (B), I suspect that the attractiveness of disanalogy-style responses has stemmed in part from ambiguity in the sense of “overdetermination”. Certainly, the expression has been used in different senses throughout the literature. In developing the exclusion problem, Kim is not consistent in his use of “overdetermine” and its cognates. Thus while he often identifies overdetermination with cases that involve independent causal chains, and in which the counterfactual criterion is met,¹⁹ elsewhere he uses “overdetermination” in a more general sense to cover any case that appears to involve distinct sufficient causes for the same event. For example, he claims (1998, 45) that holding that mental causes overdetermine their physical effects would make “mental causes dispensable in any case”. This would fit poorly with the suggestion (1989b, 91) that in textbook cases, an explanation of why the “overdetermined” event occurs is not complete if mention of one of the causes is omitted, if “overdetermine” were being used in a narrow sense that requires independence of the causes. Likewise, Kim sometimes qualifies “overdetermination” with “standard” (1998, 53), which would be superfluous if “overdetermination” was being used narrowly; and if the remarks above are on track, his claim (2005a, 51) that the exclusion principle is “virtually an analytic truth” is hardly plausible if “overdetermination” is used in such a way that the exclusion principle is refined as either (E_C) and (E_I). This is complicated by the fact that Kim sometimes moves almost immediately from the lack of *independent causes* to the conclusion that there is but a *single cause*,²⁰ a move that the nonreductive physicalist will reject. This inconsistency, moreover, is not confined to Kim’s development of the problem. As Bennett notes (2003, 473–74), some use “overdetermination” to cover any case that seems to have more than one sufficient cause while others want to say that mental causes do not overdetermine their physical effects on nonreductive physicalism, which evidently involves a narrower understanding of “overdetermination”. Finally, and as Bennett also recognizes, “overdetermination” is sometimes simply used in a pejorative sense, as denoting any overabundance of causes that is problematic and cannot be accepted.

Now, Bennett presents her project as aimed at *resolving* this apparent ambiguity concerning the meaning of “overdetermination”. Thus she introduces the “compatibilist’s task” as follows (2003, 473):

The place to start is by pointing out that in order to get anywhere with the question of whether overdetermination can be avoided while preserving both the

¹⁸ It may be limited because, no exclusionist has, I believe, claimed that nonreductive physicalism has a problem with mental causation on the grounds that accepting mental causes, on nonreductive physicalism, would populate the world with coincidences. Nor, do I believe, has anyone ever pressed exclusionist worries by emphasizing the independence of mental and physical causes. In this sense, the only arguments that would be undermined would be ones that nobody has ever offered.

¹⁹ See, for example, Kim 2005b, 196; 1989a, 44; 1989b, 91; and 2005a, 48.

²⁰ See, for example, Kim 1989b, 80 and 2005a, 47–49.

genuine causal efficacy of the mental and its distinctness from the physical, we have to get a much better grip on what overdetermination *is*. On the whole, this has been rather inadequately addressed in the literature. Those who think compatibilism is a nonstarter—call them ‘exclusionists’—tend to simply say that *of course* there would be overdetermination. After all, the compatibilist just said that mental causation always involves two distinct sufficient causes; discussion over. And their unrepentant compatibilist opponents tend to simply say that this is crazy, that these cases do not involve overdetermination at all.

Given this state of play, the compatibilist (2003, 474)

...needs to *argue* that the effects of mental causes are not overdetermined, and to explain *why* they are not [...] If compatibilism is to stand a chance, then, its proponents need to give us some genuine reason to think that the effects of mental causes do not count as overdetermined. They need to provide us with some sort of test, some way of deciding whether or not an effect is overdetermined... it matters not at all whether we call this a test for overdetermination, or a test for the *bad* kind of overdetermination... however we choose to put it, what the compatibilist needs to say is that the mental/physical case is importantly different from the standard textbook examples of firing squads... The compatibilist needs to *break the analogy* between the two types of case.

From here, she develops the counterfactual test for overdetermination, which is intended to be a necessary condition on overdetermination. To have overdetermination, at least two sufficient causes are needed; however, the nonvacuous truth of the relevant counterfactuals is needed as well. Since this is not the case for mental and physical causes on the metaphysics of nonreductive physicalism, it follows that on nonreductive physicalism, mental causes do not overdetermine their physical effects.

It would be foolish to object to using “overdetermination” in this way. But what should not be conceded is that, insofar as the meaning of “overdetermination” *is* fixed in this way, the counterfactual test for overdetermination is thereby a test for overdetermination in the pejorative sense, a test for a sort of metaphysically problematic overabundance of causes for the same event. What would be needed is an argument for why, if mental events do not “overdetermine” their effects in Bennett’s sense, they thereby do not overdetermine their effects in the pejorative sense. This would amount to an argument for the thesis (A). But, again, such an argument cannot be found in Bennett’s work or, so far as I know, the work of any other defender of a disanalogy-style response to the exclusion problem.

Bennett says that it does not matter whether the issue is framed in terms of whether mental causes overdetermine their physical effects, but do so *in a bad way*, or whether mental causes overdetermine their physical effects, given a more restrictive use of “overdetermine”. That is (2003, 474):

Let me emphasize that it matters not at all whether we call this a test for overdetermination, or a test for the *bad* kind of overdetermination. The compatibilist could in principle accept that the effects of mental causes *are* always overdetermined, just not in a bad way—the overdetermination is perfectly

acceptable, unsurprising, and unproblematic. This is just a terminological issue. For the sake of convenience, I shall speak as though the compatibilist wants to deny overdetermination altogether. But however we choose to put it, what the compatibilist needs to say is that the mental/physical case is importantly different from the standard textbook examples of firing squads, houses that are struck by lightning at the same moment that someone tosses a lit cigarette into the draperies, and so forth.

There is a sense in which Bennett is right: if “overdetermination” is being used pejoratively, the task for the nonreductive physicalist will be to show that the physical effects of mental causes are not overdetermined; if “overdetermination” is being used more generally, the nonreductive physicalist may accept that the physical effects of mental causes are overdetermined, but will then want to show that the sense in which this is the case is unproblematic. The difference between *these* tasks is terminological. But what is *not* a terminological issue is the difference between claiming that there is a textbook case only if the counterfactual criterion is satisfied and claiming that there is overdetermination in the pejorative sense only if the counterfactual criterion is satisfied. And despite Bennett’s pronounced aim of sorting out the meaning of “overdetermination”, it is not implausible that the ambiguity in the use of “overdetermination” functions, in part, to mask the difference between (A) and (B) and, likewise, the slide from the innocuous claim that there is a textbook case of overdetermination only if the counterfactual criterion is met to the nonobvious, though crucial, claim that mental causes overdetermine their physical effects in a pejorative sense only if the counterfactual criterion is met.

It is notable that a point along these lines was offered by Kim in response to Ned Block’s early discussion of exclusionist issues. Thus Block (1990) considers the *provocativeness* of a bullfighter’s cape which, he supposes, depends on the cape’s being red. On some occasion, a bull is presented with the cape, and becomes angry. What is the cause of the bull’s being angry? The mere abundance of causes, Block claims, is *not* a problem, since there is nothing *coincidental* about the redness and the provocativeness both causing the bull to become angry, given that the cape’s being provocative depends on its being red. Kim’s response (1998, 52–53; some emphasis added) is telling:

We can agree with Block that, unlike in the paradigmatic cases of causal overdetermination... the cape’s having two properties, redness and provocativeness, is not a case of coincidence... Perhaps, Block’s reasoning is that in cases of standard overdetermination, the overdetermining causes are independent events... In contrast, in the case of the cape’s color and its provocativeness, we do not evidently have two independent causes... What isn’t clear, however, is why this removes the difficulty... As long as they are recognized as distinct events, each claiming to be a full cause of a single event, the problem remains. *Describing the case as a case of overdetermination perhaps has clouded the issues for Block; perhaps this has led him to think that to dissolve the problem it suffices to show that the present case is not a standard case of causal overdetermination.* However, our problem is *not* that of causal overdetermination, although both have to do with an abundance of causes.

The lack of a consistent use of “overdetermination”, and the plausible contention that mental causation would be problematic if it shared some of the features of cases to which “overdetermination” has traditionally been applied, makes it easy to fall into thinking that a nonreductive solution can consist in showing, for example, that mental causes depend on, and so are not wholly independent from, physical causes. This, it seems, is Kim’s claim against Block, and it is difficult to see why the same charge should not be lodged against more recent attempts to address the exclusion problem by emphasizing the differences between mental causation and cases to which “overdetermination” has traditionally been applied.

After presenting her response to the exclusion problem, Bennett considers a “diehard exclusionist” who might reject the counterfactual test for overdetermination (2003, 492):

He could argue, in short, that the proper moral to draw... is not that effects can have more than one sufficient cause without being overdetermined, but rather that the nonvacuous truth of the counterfactuals is not in fact necessary for overdetermination. The compatibilist, then, has not managed to show that the physical effects of mental causes are not overdetermined. She has instead shown that the test she is wielding is not a very good test.

Bennett interprets this line of response as concerning the use of “overdetermination”. She thus interprets the exclusionist (2003, 492) as “simply digging in his heels and insisting on the good old-fashioned definition of overdetermination”—the broad characterization according to which any case in which there is more than one sufficient cause for the same event is a case of overdetermination. Bennett offers a plausible rejoinder. The exclusionist is free to adopt the “old-fashioned” use of “overdetermination”. What is important, though, is that the initial task was to break the analogy between the mental causation and firing squad-type cases. But this, Bennett contends, has been accomplished. What is important is that mental causes do not overdetermine their physical effects in *that sense* (ibid.).

While I agree that this would be a poor reply by the exclusionist, the line of thought that I have advanced does not concern the use of “overdetermination”. My objection is *not* that “overdetermination” *means* any case in which an effect seems to have more than one sufficient cause at a time. I have no objection to taking the meaning of “overdetermination” to be fixed by the counterfactual criterion. Indeed, as the previous discussions may suggest, I doubt that there is a substantive issue about what overdetermination *is*, and in part because of this I doubt that the exclusion problem is profitably couched in terms of whether nonreductive physicalism has the consequence that mental causes *overdetermine* their physical effects. My objection, rather, is that Bennett has offered a test for one thing, whether a case is to be regarded as a textbook case of overdetermination, but has then illicitly and without argument taken this to be a test for something else.

Conclusion

I have argued that Bennett slides from offering a counterfactual test for having a textbook case of overdetermination to offering a counterfactual test for something

metaphysically problematic, and that the attractiveness of disanalogy-style solutions may, in part, be due to confusion between (A) and (B). My hypothesis is that these issues have not been recognized, at least in part, because of lack of clarity in the use of “overdetermination”. Of course, the claim that Bennett illicitly slides from offering a counterfactual test for having a textbook case to offering a counterfactual test for something metaphysically problematic may be true even if my hypothesis about the source of this illicit move, and why it has not been readily recognized, is rejected.

Insofar as disanalogy-style responses are inadequate, however, and insofar as the failure of this to be immediately evident can be traced to ambiguity in the use of “overdetermination”, one of my suggestions is that discussions of the exclusion problem should simply focus on what mental causation is like on nonreductive physicalism, quite apart from whether it may be described as involving “overdetermination”. In this sense, responses like those offered by Stephen Yablo (1992) and Sydney Shoemaker (2007) are preferable to disanalogy-style responses. In particular, both Yablo and Shoemaker argue that on nonreductive physicalism, the way in which the effects of mental causes also have sufficient physical causes is unproblematic on the grounds that it is similar, in important respects, to some presumptively unproblematic way in which an event may have more than one sufficient cause. Whereas Yablo appeals to the way in which both a determinate and a determinable may both be causally sufficient for some occurrence, Shoemaker appeals to part/whole cases like those sketched above. Important for my purposes here is that they recognize the need to establish that on nonreductive physicalism, mental causation is indeed akin to such cases. Whether or not the responses that they offer succeed,²¹ the point here is that in offering the responses that they do, they implicitly recognize the need for a nonreductive physicalist to do more than note disanalogies between mental causation and textbook cases. Rather, they recognize, at least implicitly, that an adequate response requires offering an account of how mental causes are related to physical ones such that it is not problematic to suppose that the effects of mental causes also have sufficient physical causes. This issue can be discussed without using “overdetermination”, and without investigating the extent to which mental causation on nonreductive physicalism does and does not resemble cases to which “overdetermination” has traditionally been applied.

I will conclude by noting that the position defended in this paper is a humble one, and it would be a mistake to think that I have attempted an exhaustive and comprehensive defense of the exclusion problem. For example, while rejecting the formulation of the problem in terms of (N) and (E), more needs to be said about just how the problem should be formulated.²² Likewise, my concern has been with a well-known response to the exclusion problem, and I have not offered substantive reasons in favor of the seriousness of the problem, or any principles that might replace (N) and (E) in its proper formulation. Finally, while I argued that defenders of disanalogy-style responses have not adequately addressed the thesis (A), I have not claimed that this thesis is false

²¹ For critical discussion of Shoemaker’s approach, see Audi 2012; Kim 2010, McLaughlin 2007, and Morris 2011 and 2013; for critical discussion relevant to Yablo’s approach, see Bontly 2005; Gillett and Rives 2005, McLaughlin 2007, and Funkhouser 2006.

²² See fn. 17.

or that there are no possible considerations that might be offered in favor of it. Nonetheless, if my arguments are on track, it is fair to say that nonreductive responses that aim to dispense with the exclusion problem by appealing to disanalogies between mental causation and textbook overdetermination are presently underdeveloped, and have been too quick in moving from such disanalogies to the rejection of the exclusion problem.

Acknowledgments I would like to thank John Heil, Chris Richards, Kevin Sharpe, and Chiwook Won for helpful comments on related work, and Alex Gelb for assistance in preparing the manuscript. I would also like to thank audiences at 2014 meetings of the Alabama Philosophical Society, the Central States Philosophy Association, and the Southwestern Philosophical Society, as well as participants in John Heil's 2013 NEH Metaphysics and Mind seminar, for helpful discussion and criticism. Work on this paper was supported, in part, by the National Endowment for the Humanities, although the views expressed here do not necessarily represent those of the Endowment.

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