

Convergence on the Problem of Mental Causation: Shoemaker's Strategy for
(Nonreductive?) Physicalists

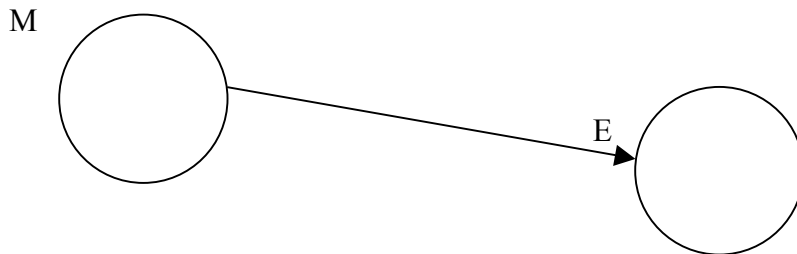
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Philosophical Issues (forthcoming)

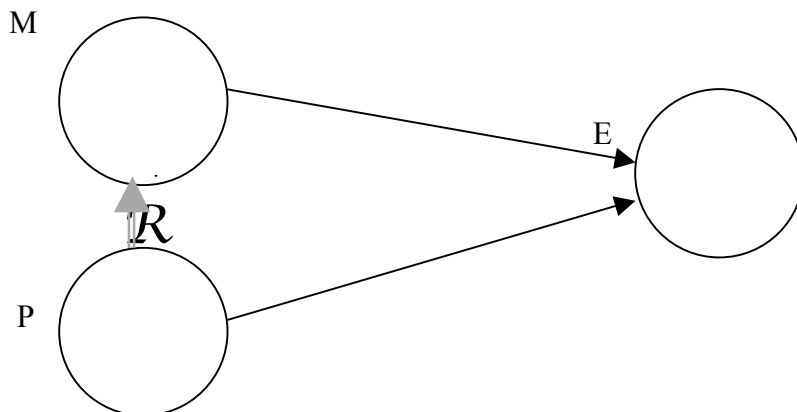
What does a physicalist think is involved in a case of mental causation? First, there must be a mental event token M . For example, this may be my intention to pound the table with my fist. Then, there must be an event caused by M . Call this effect event 'E'. In this case it will be my fist's pounding the table. So far the causal story may be represented in the following way:

Figure 1



But then, if we are physicalists, we must say that there is more to the story. There must also be a physical event token that realizes M : call this event 'P'. In the current example, it is whatever physical event realizes my intention to pound the table, probably my entering some particular brain state. And now we realize that that also has a claim to be the cause of the fist-pounding, E. Hence (where \mathcal{R} indicates the realization relation), we may view the causal situation in the following way:

Figure 2



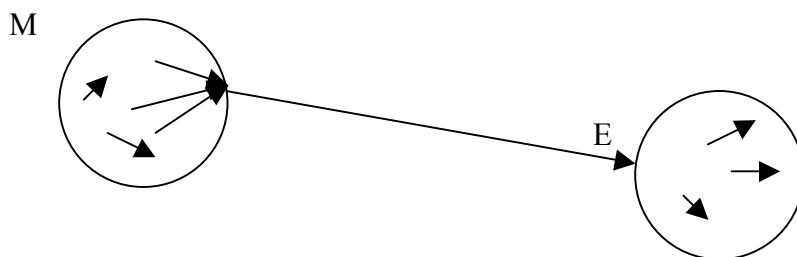
When we think about things in the way suggested by Figure 2, it looks like the physicalist must think that effects of mental causes are systematically overdetermined. In each case,

there are two distinct causes of the relevant effect. That this threat of overdetermination is a significant problem for the nonreductive physicalist (the philosopher who holds that although mental events are all realized by or supervene on physical events, they are not identical to any underlying physical events) has been demonstrated convincingly in the work of Jaegwon Kim over the past twenty years (1989, 1998, 2005, for example).

In recent work culminating in his 2007 book *Physical Realization*¹, Sydney Shoemaker has taken these arguments of Kim's to present not an insurmountable obstacle to a nonreductive, physicalist account of mental causation, but rather a challenge. The challenge is to give an account of the relationship between mental events and physical events that can allow that they are both type- and token-distinct from each other, allow that mental events have genuine causal efficacy, allow that the existence of mental events does not violate physicalism, while simultaneously removing any worries about their overdetermining their effects in any problematic way. The centerpiece of Shoemaker's ingenious yet simple strategy for accomplishing this task is an account of the realization relation that brings the two causes M and P metaphysically closer than is suggested above by Figure 2. As he says, "What we need is a different account of realization" (2001, p. 77).

According to Shoemaker, a better way to visualize what is going on in cases of mental causation than what Figure 2 suggests is something like this. First, for every event token, we can think of it as the instantiation of a property that brings with it certain causal powers.² So, the intention to pound the table brings with it a certain set of causal powers, some of which are involved in causing E and some of which aren't. I'll represent this in the following way:

Figure 3



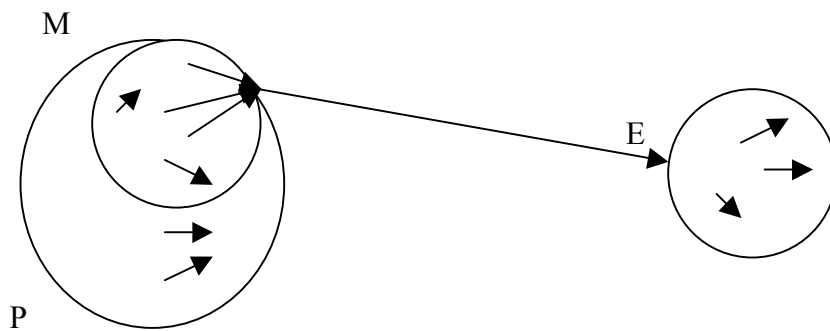
The arrows here represent the causal powers the events bring with them just by virtue of their occurrence. The arrows that are converging on the long arrow representing the

¹ See also his (2001) and (2003).

² Shoemaker used to think these included forward-looking causal powers (i.e. powers the event has to cause other events) and backward-looking causal powers (i.e. powers the event has to be caused by other events). He recently announced (in a presentation at the 2009 Pacific Division meeting of the American Philosophical Association) that he has given up characterizing properties in terms of backward-looking causal features.

causal link between M and E are those causal powers of M that are involved in the bringing about of E. As we can see, not all causal powers of an event will in general be relevant to the bringing about of an event on a particular occasion. And, now, here is the crucial bit. In a case of mental causation, all of the causal powers that are involved in M's causing E are also causal powers of the realizer event, P. M's causal powers are really a subset of the causal powers of the realizer event P. Indeed, on this view, this is just what it means to say that P realizes M. These events are not really distinct in terms of their causal powers as the earlier Figure 2 appeared to indicate. Instead, we ought to view the causal situation in the following way:

Figure 4



In the case we are discussing here, where the mental event is not reducible to the physical event, P has all of the causal powers of event M, plus some more. An event e_1 bears a *nonreductive* realization relation to another event e_2 on this picture just in case the causal powers of e_1 are a *proper* subset of the causal powers of e_2 .³ Moreover, and this is also a crucial bit of the story, those causal powers of P that are relevant to the causing of E are all causal powers of M.

We can now see that this is a story that can account for the four things we needed out of a nonreductive, physicalist account of mental causation; how: (i) mental events can be causally efficacious, how (ii) their existence need not violate physicalism, how (iii) they may not be identical to their physical realizers, and finally how (iv) they need not overdetermine their effects in any problematic way. On this account, mental events are causally efficacious in virtue of bringing with them causal powers that bring about effects. Their existence does not violate physicalism on this picture since they are realized by physical events. We will discuss this issue more below. It is often noted that

³ Shoemaker actually takes the subset account to be an account of the realization relation that holds between two properties or derivatively, two property instantiations (see his 2007, p. 12). I speak in terms of events here because this paper concerns application of his account to solving the problem of mental causation for nonreductive physicalists and causation is a relation between events. Since I am taking events here to be property instantiations, this is merely a difference in terminology between the account in Shoemaker's book and my own formulation.

not just any realization relation will be sufficient to link mental events with physical events tightly enough to satisfy the physicalist. As we will see, the realization relation Shoemaker describes does provide a metaphysical link between the mental and physical that links them tightly enough to do so.

Regarding (iii), it can be shown on this account that first, mental events and their physical realizers are not type-identical. According to Shoemaker, properties are individuated by their causal features.⁴ Since in general, the causal features of a mental property are a *proper* subset of its physical realizer's causal features, mental properties are not in general identical to physical properties. So mental events are not type-identical to physical events. They constitutively involve the instantiation of distinct properties. Mental events are also not token-identical to physical events. The physical realizer event brings with it more causal powers than the mental event, so by Leibniz's Law, the two are not identical (Shoemaker 2007, p. 17). Finally, we can see that mental events and physical events do not overdetermine their effects in any problematic way. True, they are both causes of their effects, but the causal powers involved in a mental event's bringing about an event are always token-identical to the causal powers involved in its realizer physical event's bringing about that effect. This is seen very clearly in Figure 4 by the fact that there is only one set of small arrows converging on the long arrow that represents the (one) causal link here. So, in the sense that matters for overdetermination, there is really only one causing taking place in every case of mental causation.

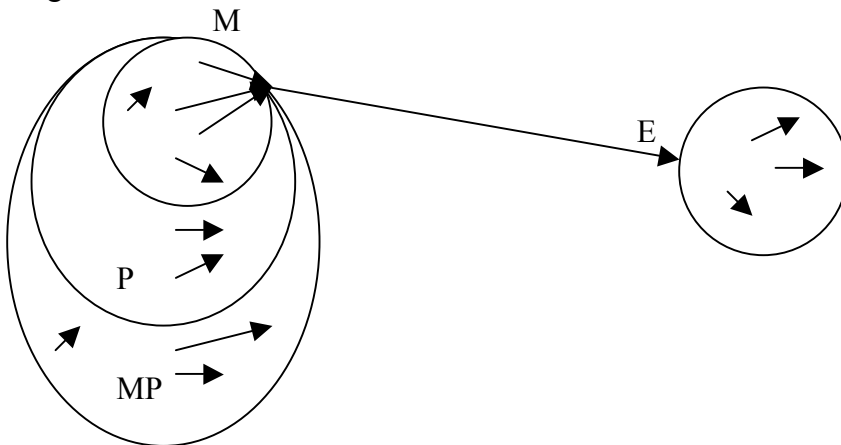
Since the account of nonreductive realization satisfies (i)-(iv), it seems clear that Shoemaker has responded to Kim's worries about nonreductive, physical mental causation. Yet, there is still something somewhat suspicious about this account. To see this, think about what a reductionist, one who holds views on this issue pretty much identical to Kim's (setting aside his 2005 views about qualia), would say about Shoemaker's story. It seems to me that a reductionist shouldn't find Shoemaker's account unsatisfactory at all, and certainly not unsatisfactory for this reason – that she is a reductionist. And that is to say, if someone wants to give a view about mental causation like this, it isn't so clear that there is very much of a dispute between the reductionist and the nonreductive physicalist. Why does this look like a picture that would be satisfactory to the reductionist? First, this much is true: all of the causal powers on this account are causal powers of the physical event. Accepting the existence of mental events on this picture doesn't involve accepting the existence of any additional types of causal powers. And (here is where this approach is different from other nonreductive accounts intended to solve the problem of mental causation, like that of Derk Pereboom (2002)), this account doesn't commit one to accepting the existence of any additional token causal powers beyond those of the physical. Each causal power of every mental event is token-identical to a causal power of a physical realizer.

So, so far this all looks like something with which the reductionist will want to agree.

⁴ The causal features of a property are those causal powers it makes available upon its instantiation.

But doesn't the view in question deny the identity of mental properties with physical properties, of mental events with physical events? And if so, how can the reductionist accept this view? Here's how. The metaphysical picture on which Shoemaker's account relies starts from the existence of concrete, physical states of affairs possessing certain sets of causal powers – powers that are, he says, "microphysical". So far we have left out this part of Shoemaker's account. In *Physical Realization*, Shoemaker does not only give an account of realization as it obtains between properties and property instantiations (events), but also between property instantiations and what he calls 'microphysical states of affairs'. Shoemaker takes it to follow from physicalism that "all property instantiations are realized by a single state of affairs, namely the state of affairs that consists in the existence of all the micro-entities there are ... and these micro-entities having all of the properties they do and standing to one another in all of the relations they stand in" (2007, p. 34). And in general, it is true and in accordance with physicalism that, according to Shoemaker, all mental property instances are realized in more localized microphysical states of affairs. This relationship between property instantiations and microphysical states of affairs, what Shoemaker calls 'microphysical realization' is according to Shoemaker "the most fundamental sort of realization" (p. 4). When a mental event (or property instantiation) is realized by such a microphysical state of affairs, this involves its also being realized (in the first way) by a microphysical event (or property instantiation) (p. 49-50)⁵. So, in the example we have been considering, both M and P will ultimately be realized by another, more fundamental event MP that is the instantiation of a microphysical property. Both the intention and the brain state that realized the intention are ultimately individuated by their bringing with them certain causal powers, all of which are ultimately proper subsets of the causal powers of a microphysical state of affairs.

Figure 5



⁵ Shoemaker calls these ultimate microphysical properties whose instantiation is required by physicalism to realize the instantiation of all other properties 'MSE-properties', for microphysical-state-of-affairs-embedding properties (2007, p. 50).

The reductionist can then think of things in the following way (nothing has been said to rule out this way of thinking): on this view, really the mental event (and realized tokens more generally) are just abstractions from concrete microphysical situations. They are abstractions in the sense that they are what we attend to when we focus only on a proper subset of a microphysical state's causal powers. Such a picture is supported by Shoemaker's helpful discussion of the fact that the properties whose instantiations are related by realization relations form a hierarchy, where "those higher in such a hierarchy will be realized by those further down" (2007, p. 23). He says that the properties whose instantiations lie at the bottom of the hierarchy are "self-constituted" (ibid.). These will be the ultimate realizers – the microphysical (MSE) property instantiations; in the case above, MP. Those other property instantiations higher up in the hierarchy such as intentions and their neural realizers are not self-constituted. Although this terminology is not explained in much detail, the picture Shoemaker appears to have in mind looks compatible if not the same as that of the reductionist I have been considering.

Plausibly, reductionism can tolerate the existence of entities that are not reducible, i.e. identical to, physical entities, so long as these things are mere abstractions. Since realized events can very naturally be seen on Shoemaker's account as mere abstractions from their realizer events, since they are not-self-constituted, I don't see why the reductionist cannot endorse this approach.

But maybe this is too quick. At times⁶ Shoemaker has tended to suggest that in cases of mental causation, it is only the mental event M that is efficacious with respect to the effect. In *Physical Realization*, he makes the slightly weaker but similar suggestion that in cases of mental causation, only the mental event is directly efficacious, with the physical or microphysical realizer events are efficacious only in virtue of containing the causal powers of the mental event as parts (p. 53). My speculation is that the reason Shoemaker makes claims like these is in order to emphasize that he is really providing a nonreductive account of mental causation, not just another version of reductionism, as I suggested above. The goal is to do this by securing some kind of distinctive causal efficacy for the mental, claiming that in cases of mental causation, it is only mental events (not underlying physical or microphysical events) that are efficacious, or that in cases of mental causation, it is only mental events are directly efficacious.

To evaluate this suggestion, it will be useful to contrast Shoemaker's position with the similar proposal, alluded to above, of Derk Pereboom (2002). Although the accounts of Shoemaker and Pereboom share many similarities, the main difference between them is that although Shoemaker identifies the causal powers of mental events and their realizers, Pereboom argues that although mental events and their physical grounds may bring with them the same (or partly the same) types of causal powers, their respective causal powers are nonetheless token distinct.⁷ This is surely enough to allow for the causal

⁶ Most explicitly, at a paper presented at the Mellon Workshop on Mental Causation, December 2007.

⁷ He claims that the causal powers of mental events are constituted by but not identical to the causal powers of physical events.

distinctiveness of mental events, and so a version of nonreductivism. But this is not enough to respond to Kim's worries that the nonreductive physicalist is saddled with genuine and systematic causal overdetermination. For there is no reason why two events may not bring with them type-identical sets of causal powers and yet at the same time overdetermine their effects. Two lightning strikes can bring with them two sets of type-identical causal powers and yet overdetermine a house's burning, for example.⁸ To achieve a solution to the problem of mental causation, one really needs there to be only one token-identical set of causal powers, not merely two sets of type-identical causal powers.

As we've seen, Shoemaker's account avoids this worry precisely by identifying the causal powers at work in cases of mental causation. Once this happens though, the causal powers involved in the mental event's bringing the effect about just are the causal powers involved in its realizers' bringing the effect about. (This is illustrated most clearly in Figures 4 and 5 above.) So it doesn't make sense to say that the realizers are only indirectly efficacious vis-à-vis the efficacy of the mental event. There is only one causal relation here. And this is as it should be. Unless one is antecedently disposed towards emergentism, there is no reason to try to secure any distinctive causal efficacy for mental events. Assuming we are all physicalists, the challenge is to secure nonredundant causal *efficacy* for mental events, not causal distinctiveness. Shoemaker's account does this.

In pointing out that Shoemaker offers little if anything that would worry the reductionist (setting aside these puzzling points about the distinctive causal efficacy of mental events), I want to emphasize that I do not mean to be pointing to any flaw in Shoemaker's account. Sometimes discussions of mental causation play out as a kind of ideological warfare between the reductionists and the nonreductive physicalists. Often, as in most philosophical debates, both sides make it seem like there can only be one winner, and the other side, either the reductionist or the nonreductive physicalist, must be proven wrong. However, what we see in Shoemaker's account is finally something more along the lines of a convergence of views. Shoemaker answers the worries Kim presented by moving closer to Kim's own reductionist understanding of what is involved in mental causation.⁹ Although Shoemaker is still free to call his view a version of nonreductive physicalism because it denies the type- and token-identity of mental events and their physical realizers, taking a step back, one finds that his account views mental events as nothing more than abstractions from the ultimate microphysical realizers, as entities that are less than "self-constituted". The only entities with genuine, (mind-)independent existence here are the microphysical states of affairs. Everything else exists only a result of our

⁸ This was desideratum (iv) above. I discuss this problem of Pereboom's account further in my (2007).

⁹ Kim himself independently came to the conclusion that Shoemaker is in effect defending a version of reductionism – though he takes the stronger position that Shoemaker's view amounts to type physicalism (in a presentation at the 2009 Pacific Division meeting of the American Philosophical Association). I disagree with this characterization - Shoemaker's position isn't a version of type physicalism since it denies the identity of mental properties and neural properties.

ignoring (i.e. abstracting away) certain features of the microphysical situation. This is a nonreductive physicalism with which the reductionist can agree. If we drop the concern with opposing ideologies, reductionism versus nonreductive physicalism, this isn't paradoxical. What we have found instead is convergence: genuine progress on a philosophical issue.¹⁰

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¹⁰ Thanks to Jaegwon Kim for his constant support and encouragement, as well as helpful feedback on an earlier draft, to Sydney Shoemaker for writing such a wonderful book, and to Jessica Wilson, whose paper “Non-reductive Realization and the Powers-Based Subset Strategy” was the cause of my putting these thoughts into print.