

Dualistic Mental Causation: Counterfactuals, Coincidence, and Intelligent Design*

Assuming that mental causation obtains and that causation is closed under the physical domain (if a physical event has a sufficient cause, it has a sufficient physical cause), the only option available for the property (as well as substance) dualist regarding mental causation is the thesis that every instance of mental causation involves causal overdetermination.¹ Recently there has been a growing interest in the mental-physical overdetermination thesis.² Is it at all plausible? Well, it at least has to overcome the objection that it has trouble with counterfactuals and the objection that it would obtain by virtue of either a cosmic coincidence or intelligent design.³ In this paper I spell out the mental-physical overdetermination thesis and respond to these objections.

1 The mental-physical overdetermination thesis

The mental-physical overdetermination thesis (henceforth MPO), roughly speaking, is the thesis according to which mental causation obtains and if a mental event causes another event, a physical event simultaneously and independently causes the same event. Taking this rough characterization as a point of departure, I define MPO as follows. (Note that upper case letters stand for types and lower case letters stand for tokens.)

- (i) Mental property instances cause properties (both mental and physical) to be instantiated; and
- (ii) If an instance of a mental property M , m , causes an instance of a property Q (where Q is either mental or physical), q , then an instance of some physical property P , p , simultaneously causes q and the m -to- q causal relation is logically independent of the p -to- q causal relation and vice versa.

There is a lot packed into this characterization of MPO, so let me make clarificatory remarks and perhaps head off some potential confusion. First, note that the overdetermination posited by MPO is *trans-level* overdetermination – overdetermination in which the causes are from different ontological levels – rather

than the more familiar *intra-level* overdetermination such as two rocks smashing through a window at the same time.⁴

Second, I assume that events are property instances⁵ and I use sentences like ‘*m* causes a property *Q* to be instantiated’ and ‘*m* causes an instance of a property *Q*, *q*’ interchangeably.

Third, when I say that one property instance causes another property to be instantiated, I mean that the former is causally *sufficient* for the instantiation of the latter. Here I of course don’t use ‘sufficient’ in a strict sense. Suppose, for example, that my being in pain causes me to wince. When I claim that my being in pain is sufficient for my wincing, I don’t mean that it’s sufficient *period*, for certain background conditions must obtain in order for my being in pain to necessitate that I wince like having a properly functioning nervous system, undergoing C-fiber firing, etc.⁶ Hence the sufficiency at work here is sufficiency *in the circumstances* rather than sufficiency *tout court*.

Fourth, when I say that one causal relation is logically independent of another I mean that there is a logically possible world in which the former relation obtains but the latter one doesn’t. I don’t draw a distinction between logical possibility and so-called metaphysical possibility – if you do, then think of the second part of our definition of MPO as saying that the *m*-to-*q* causal relation is logically, as well as metaphysically, independent of the *p*-to-*q* causal relation and vice versa.

Fifth, MPO is available to the property dualist because the advocate of MPO claims neither that instances of mental causation are logically dependent on and determined by instances of physical causation nor that mental properties logically supervene on physical properties.⁷ It’s worth noting that Eric Marcus (2001) and Brian Jonathan Garrett (1998, 2000) have recently defended another overdetermination thesis according to which the mental is distinct from but logically (or merely ‘metaphysically’) dependent on and determined by the physical. We can think of this thesis as being just like MPO except that it requires that the *m*-to-*q* causal relation is distinct from but logically dependent on and determined by the *p*-to-*q* causal relation. Hence this thesis is available to the physicalist but not the property dualist.

Sixth, notice that the advocate of MPO is free to claim that the mental *nomologically* depends on the physical. If this dependence obtains, there is a key difference between the trans-level overdetermination invoked by MPO and our familiar cases of apparent intra-level overdetermination, for suppose that (i) rocks *a* and *b* smash through a window at the same time and (ii) my being in pain and my undergoing C-fiber firing each cause me to wince. Here *a*'s breaking of the window is nomologically *independent* of *b*'s breaking of the window and vice versa, but my being in pain's causing of my wincing is nomologically *dependent* on my C-fiber firing's causing of my wincing. Hence there can be a dependence element even for MPO, albeit this dependence is much weaker than the dependence involved in the overdetermination thesis advocated by Marcus and Garrett.⁸

2 Counterfactuals

When you think of potential problems for MPO, problems with counterfactuals probably aren't on the top of your list. Nevertheless, Jaegwon Kim has recently argued that counterfactuals do pose a special problem for MPO. In this section we will consider Kim's objection, modifications of Kim's objection, and an objection regarding our common sense counterfactual commitments.

In *Mind in a Physical World*, Kim writes:

...[T]he approach [MPO] may come into conflict with the physical causal closure. For consider a world in which the physical cause does not occur and which in other respects is as much like the actual world as possible. The overdetermination approach says that in such a world, the mental cause causes a physical event – namely that the principle of causal closure of the physical domain no longer holds. I do not think that we can accept this consequence: that a minimal counterfactual supposition like that can lead to a major change in the world (1998: 45).

We can interpret Kim's objection as follows. Suppose that in the actual world an instance of a mental property *M*, *m*, causes an instance of a physical property *P**, *p**, and an instance of a physical property *P*, *p*, simultaneously causes *p**. Kim claims that MPO is committed to the truth of the following counterfactual:

(C1) If *p* hadn't occurred, *m* still would have caused *p**.

Let w be among the nearest possible worlds to the actual world in which p doesn't occur. I take it that Kim reasons that since m causes p^* in the actual world and, according to MPO, the m -to- p^* causal relation is logically independent from the p -to- p^* causal relation, MPO says that m causes p^* in w . Kim claims that w doesn't adhere to the causal closure of the physical (henceforth CCP), for, according to Kim, m causes p^* in w but *no physical event simultaneously causes p^* in w* . Surely, Kim reasons, it is implausible to think that a minimal counterfactual supposition like p not occurring leads to such a major change in the world.

What should we make of this objection? One might question whether MPO is committed to (C1) in the first place because it isn't immediately clear that MPO requires that M is instantiated in the nearest worlds to the actual world in which p doesn't occur. Assuming that M nomologically supervenes on P , the nearest worlds to the actual world in which p doesn't occur are worlds in which M isn't instantiated, assuming that it isn't the case that some instance of P , $p^\#$, distinct from p , occurs in them or that an instance of some property P' distinct from P on which M also supervenes, p' , occurs in them. (If either $p^\#$ or p' turns out to occur in these worlds, presumably it causes p^* in them.) If M isn't instantiated in these worlds, then of course no instance of M causes p^* in them and hence MPO isn't committed to (C1).

Now the question is: Does $p^\#$ or p' occur in the nearest worlds to the actual world in which p doesn't occur? Well, if a world, w_1 , in which either $p^\#$ or p' occurs instead of p and causes p^* (that is otherwise as similar to the actual world as possible) is closer to the actual world than a world, w_2 , in which neither p , $p^\#$, nor p' occurs (that is otherwise as similar to the actual world as possible), then it seems that the answer is 'yes'. Often we don't have clear intuitions about the comparative proximity of possible worlds to the actual world, but in this case it seems that w_1 – in which $p^\#$ occurs and causes p^* – is closer to the actual world than w_2 – after all, the actual world wouldn't have been different in any noticeable way if a different instance of P had caused p^* , but the world would have been noticeably different had neither P nor P' been instantiated at all because, in this case, it seems that M wouldn't have been instantiated either and p^* wouldn't have occurred.

Since we have concluded that $p^\#$ occurs in the nearest worlds to the actual world in which p isn't instantiated, M is instantiated in them. (I assume that m , as well as other instances of M , occurs in these worlds.) Hence MPO is, after all, committed to (C1). Since $p^\#$ causes p^* in these worlds, however, we have no reason to believe that they don't adhere to CCP. Thus it isn't the case that, according to MPO, the minimal antecedent of (C1) leads to worlds that don't adhere to CCP.⁹

So much for Kim's objection as I have interpreted it. But perhaps Kim has something different in mind – perhaps he instead wishes to claim that MPO's commitment to this counterfactual leads to trouble:

(C2) If P hadn't been instantiated at all (if neither p nor any other instance of P had occurred), m still would have caused p^* .

Kim could claim that the minimal antecedent of (C2) leads to worlds that don't adhere to CCP, for in these worlds m causes p^* but no physical event simultaneously causes p^* .

MPO is committed to (C2) only if MPO requires that M is instantiated in the nearest worlds to the actual world in which P isn't instantiated. If M nomologically supervenes on P , the nearest worlds to the actual world in which P isn't instantiated are worlds in which M isn't instantiated either, assuming that it isn't the case that some instance of a property P' distinct from P on which M also supervenes, p' , occurs in them. (If p' turns out to occur in these worlds, presumably it causes p^* in them.)

Does p' occur in these worlds? Well, is a world, w_1 , in which p' occurs instead of p and causes p^* (that is otherwise as similar to the actual world as possible) closer to the actual world than a world, w_2 , in which neither P nor P' is instantiated (that is otherwise as similar to the actual world as possible)? I don't think so. Since in w_1 I instantiate a physical base type for M , P' , *distinct* from the physical base type for M , P , that I actually instantiate, presumably my body, in particular my brain, is quite different in w_1 than it is in the actual world. In w_2 I don't instantiate a physical base type for M and hence I don't instantiate M and presumably p^* doesn't occur, but my brain, generally speaking, is the same as it is in the actual world. Having a different sort of brain than I actually have seems to be more of a departure from reality than not being in certain mental states and brain states that I actually undergo, so I conclude that w_2 is closer to the actual world than w_1 . Since p' doesn't occur in the nearest worlds to the actual

world in which P isn't instantiated, M isn't instantiated in them either. Since m doesn't cause p^* in these worlds, MPO isn't committed to (C2).

Perhaps Kim still yet has another counterfactual in mind – maybe he thinks that MPO's commitment to this counterfactual causes trouble:

(C3) If no physical event had caused p^* , m still would have caused p^* .

Again, the idea is that, according to MPO, the minimal antecedent of (C3) leads to worlds that don't adhere to CCP.

There are at least two ways that we might interpret the antecedent of (C3) – we might take it at face value or interpret it as saying that no physical event causes p^* but p^* still occurs. Either way, MPO isn't committed to (C3). Let w_1 be among the nearest worlds to the actual world in which no physical event causes p^* and let w_2 be among the nearest worlds to the actual world in which p^* occurs but no physical event causes p^* . Assuming that mental causation is nomologically dependent on and determined by physical causation, it's nomologically necessary that a mental event causes another event only if a physical event simultaneously causes the same event. Hence, MPO isn't committed to the claim that that m , or any other mental event, causes p^* in w_1 or w_2 . Moreover, notice that if we interpret the antecedent of (C3) as saying that no physical event causes p^* but p^* still occurs, then the nearest worlds to the actual world in which the antecedent holds are *trivially* worlds that don't adhere to CCP!

There is another objection to MPO involving counterfactuals that is worth considering. One might argue that, based on our previous discussion, MPO is committed to counterfactuals that conflict with counterfactuals implied by our explanatory practice.¹⁰ Suppose that in the actual world my being in pain and my undergoing C-fiber firing each cause me to wince. Let's call this pain token 'pain*', this C-fiber firing token 'C-fiber*', and this wincing token 'wince*'. Since MPO is committed to (C1), MPO is committed to the following counterfactual:

(C4) If C-fiber* hadn't occurred, pain* still would have caused wince*.

Since MPO is committed to (C4), we might also expect MPO to be committed to this counterfactual:

(C5) If pain* hadn't occurred, C-fiber* still would have caused wince*.

I take it that the advocate of MPO would want to endorse (C5). Furthermore, I think that (C5) is true, for C-fiber* (as well as token-distinct C-fiber firings) causes wince* in the nearest worlds to the actual world in which pain* doesn't occur. We can see that this is so by noting that a world, w_1 , in which pain* doesn't occur and C-fiber* (or a token-distinct C-fiber firing) causes wince* (that is otherwise as similar to the actual world as possible) is closer to the actual world than a world, w_2 , in which pain* doesn't occur and I don't undergo C-fiber firing, for, since C-fiber* (or a token-distinct C-fiber firing) occurs in w_1 , presumably I'm in pain token-distinct from pain* in w_1 that also causes me to wince and, since in w_2 I don't undergo C-fiber firing, presumably I'm not in pain and I don't wince in w_2 .

One might argue that (C4) and (C5) are problematic in that they conflict with counterfactuals suggested by our explanatory practice. We can explain why I winced by pointing out that I just underwent C-fiber firing; we say that I winced because I underwent C-fiber firing and we are inclined to think that C-fiber firing, in the case at hand, was in some sense necessary for wincing. Thus we claim that the following counterfactual is true:

(C6) If I hadn't undergone C-fiber firing, I wouldn't have winced.

For the same sorts of reasons we claim that this counterfactual is also true:

(C7) If I hadn't been in pain, I wouldn't have winced.

One might claim that (C4) and (C5) are inconsistent with (C6) and (C7) and we should therefore conclude that (C4) and (C5) are false. If (C4) and (C5) are false, then we must reject MPO.

I claim that once we properly understand what we are claiming when we endorse (C6) and (C7), we will realize that (C4) and (C5) are consistent with (C6) and (C7) after all. Our intuition about C-fiber firing in the case at hand being necessary for wincing isn't about a *particular* C-fiber firing; rather, it's about C-fiber firing as a type. Our intuition is that, in the case at hand, I must undergo *some C-fiber firing or other* in order to wince. The same considerations apply to being in pain and wincing. Hence, it turns out that (C6) and (C7) are abbreviated versions of the following counterfactuals:

(C8) If I hadn't undergone C-fiber firing at all, I wouldn't have winced.

(C9) If I hadn't been in pain at all, I wouldn't have winced.

Clearly (C4) and (C5) are consistent with (C8) and (C9). The following counterfactuals, however, are inconsistent with (C8) and (C9):

(C10) If I hadn't undergone C-fiber firing at all, my being in pain still would have caused me to wince.

(C11) If I hadn't been in pain at all, my C-fiber firing still would have caused me to wince.

Happily MPO is committed to neither (C10) nor (C11) – MPO isn't committed to (C10) for the same reasons that it isn't committed to (C2) and it isn't committed to (C11) because, assuming that the mental nomologically supervenes on the physical, the nearest worlds to the actual world in which I'm not in pain at all are worlds in which I don't undergo C-fiber firing and so, in these worlds, I don't wince.

3 Coincidence and intelligent design

In my experience, those who reject MPO (virtually everyone I've talked to about it!¹¹) do so because they think that it would require coincidence on a grand scale or some sort of intelligent design. How is this objection(s) supposed to work? As far as I can tell, there are two main arguments in the literature to this effect.

Kim (1989a, 1998) proposes the first argument. He claims that (i) instances of intra-level overdetermination such as two rocks hitting a window at once are improbable because they obtain by virtue of either coincidence or design and (ii) since such overdetermination is improbable, overdetermination is a poor model for trans-level cases, for macro-causation is of course too widespread to obtain by virtue of coincidence or design.¹²

There are at least two problems with this objection. First, assuming that all intra-level overdetermination obtains by virtue of coincidence or design, it nonetheless seems that instances of mental-physical overdetermination (as well as any instance of trans-level overdetermination) wouldn't obtain in this manner. As Alvin Goldman (1969), Tim Crane (1995), and Jon Schaffer (forthcoming) point out, the advocate of MPO can explain why it is that whenever a mental event causes another event,

a logically independent physical event simultaneously causes the same event by simply pointing out that the instantiation of mental and physical properties are, in Schaffer's words, 'lawfully yoked'.¹³ So the advocate of MPO is free to claim that mental-physical overdetermination obtains not by virtue of coincidence or design but rather because the mental is nomologically dependent on the physical. Mental-physical overdetermination is lawfully correlated overdetermination.

Second, J.L. Mackie (1974: 43) and Schaffer (forthcoming) argue that instances of intra-level overdetermination are themselves rampant. While it's improbable for two rocks to smash a window at the same time (because such an event would be either a coincidence or the result of a perfectly timed conspiracy), they point out that it certainly isn't improbable for *one big rock* to hit a window flying northwards, where the rock's eastern and western hemispheres overdetermine the shattering of the window.¹⁴

David Chalmers (forthcoming) proposes the second coincidence/design objection to MPO. Chalmers argues that since the advocate of MPO denies that the mental is logically dependent on and determined by the physical, according to MPO there are nearby possible worlds in which mental causes and their paradigmatic effects are *mismatched*. For example, suppose that in the actual world (i) a physical property *P* underlies the mental property *wanting some coffee and believing that there is coffee in the cup* and (ii) my instantiation of this mental property and this physical property each cause me to reach for the cup. Since the advocate of MPO claims that the mental is something over and above the physical, she's committed to the claim that there's a nearby world, *w*, in which *P* underlies some mental property other than the coffee property, say the property *wanting to run in place*. Since my exemplifying *P* causes me to reach for the coffee cup in *w* and *P* underlies the property *wanting to run in place* in *w*, it's natural to suppose that my wanting to run in place in *w* also causes me to reach for the cup in *w*. So the troubling question that Chalmers poses for the advocate of MPO is this: Why is it that the synchronic mental-physical laws in the actual world always line up mental causes with their paradigmatic effects? To borrow Chalmers' term, it looks like the actual synchronic mental-physical laws on MPO are 'lucky laws' – they're lucky in that apparently they just happen to connect mental causes with their appropriate effects.

If the advocate of MPO denies that it's a cosmic coincidence that the actual synchronic mental-physical laws are as they are, she faces the objection that these laws appear designed. Coincidence and design again!

How should the advocate of MPO respond to this objection? I propose the following. If we assume that causal facts are reducible to non-causal facts, it seems that this objection has a strong bite. If we deny this assumption, however, it's not surprising in the least that synchronic mental-physical laws never fail to connect mental causes with their appropriate effects, for there are *independent* causal laws that ensure that they do so. In other words, if we deny that fixing the synchronic mental-physical laws and other non-causal facts fixes what mental causation laws there are, the fact that there are nearby worlds with different synchronic mental-physical laws (and presumably different mental causation laws) *prima facie* isn't a problem for MPO.¹⁵

Chalmers (personal communication) agrees that independent mental-physical causal laws could explain why mental causes line up with their appropriate physical effects in the actual world. He claims, however, that appealing to causal realism leads to something else 'lucky' for the advocate of MPO to explain: Since mental causation laws are independent of synchronic mental-physical laws and thus there are nearby worlds with the same synchronic mental-physical laws as the actual world in which the actual mental-physical causal laws and their corresponding physical-physical causal laws come apart, why do the mental-physical and physical-physical causation laws in the actual world always line up? Chalmers claims that the advocate of MPO is forced to say that their lining up as they do in the actual world is a cosmic coincidence (or the product of divine design). The problem of luck, then, according to Chalmers, has just been pushed back from the particular causal relations to their covering laws.

Let's get clearer on how this objection is supposed to work. Suppose that in the actual world (i) a physical property P underlies a mental property M and (ii) P -instances as well as M -instances cause instances of a physical property P^* . Assuming that instances of causation are subsumable by causal laws, there's a M -to- P^* law and a P -to- P^* law in the actual world. In relation to this example, I take it that

Chalmers would say that there are three relevant ways in which the *M-to-P** and the *P-to-P** laws can come apart on MPO plus the assumption of casual realism:

- (i) There's a nearby world, w_1 , in which *P* underlies *M*, *M-to-P** obtains, and *P-to- P[#]* obtains where *P[#]* and *P** are distinct;
- (ii) There's a nearby world, w_2 , in which *P* underlies *M*, *M-to- P[#]* obtains where *P[#]* and *P** are distinct, and *P-to-P** obtains; and
- (iii) There's a nearby world, w_3 , in which *P* underlies *M*, *M-to- P[#]* obtains, and *P-to-P'* where *P[#]*, *P'* and *P** are distinct.

(Henceforth, take MPO to include the claim that causal realism is true.) We can recast Chalmers' objection to MPO as the charge that on MPO it's a cosmic coincidence that neither w_1 , w_2 , nor w_3 is the actual world. In the event that the advocate of MPO insists that it isn't coincidental that neither w_1 , w_2 , nor w_3 is the actual world, Chalmers can claim that the actual mental-physical and their corresponding physical-physical casual laws on MPO appear designed.

I don't find this objection persuasive either – the proximity of neither w_1 , w_2 , nor w_3 to the actual world shows that on MPO the actual world is lucky or engineered when it comes to mental-physical causal laws and their corresponding physical-physical causal laws. I will consider each world in turn and show that none of them pose a special problem for MPO.

Consider w_1 . In w_1 *P* underlies *M*, *M-to-P** obtains, and *P-to-P[#]* obtains. Chalmers (personal communication) speculates that in w_1 either *M-to-P** trumps *P-to-P[#]* or vice versa, presumably because he hypothesizes that *P** and *P[#]* cannot be simultaneously instantiated by the same particular. So let's see how things play out first if *M-to-P** trumps *P-to-P[#]* in w_1 and second if *P-to-P[#]* trumps *M-to-P** in w_1 .¹⁶

So suppose that *M-to-P** trumps *P-to-P[#]* in w_1 . Notice that since *P* underlies *M* in w_1 , when *M* is instantiated in w_1 , *P* is also instantiated in w_1 (assuming that there are no alternative supervenience bases of *M* available on these occasions). Hence, whenever a *M*-instance occurs and causes a *P**-instance in w_1 , a *P*-instance also occurs in w_1 . Thus it's natural to suppose that *P*-instances also cause *P**-instances in w_1 . If *P*-instances cause *P**-instances in w_1 , then, assuming that particular causal relations are subsumed by

causal laws, P -to- P^* obtains in w_1 . But if P -to- P^* as well as M -to- P^* obtain in w_1 , then Chalmers is wrong in thinking that w_1 is a world in which these laws come apart. Hence, assuming that M -to- P^* trumps P -to- $P^\#$ in w_1 , it's unclear that w_1 's proximity to the actual world causes any trouble for MPO.

Notice, however, that Chalmers does emerge from all of this with a potential objection to MPO – he can claim that on MPO the actual world is lucky because it's distinct from w_1 , not because M -to- P^* and P -to- P^* come apart in w_1 , but because P -to- $P^\#$ obtains in w_1 . In other words, Chalmers can claim that on MPO the actual world is lucky in that P -to- $P^\#$ isn't an actual law.

How should the advocate of MPO respond to this objection? Well, I think that the thing for her to do here is just accept that P -to- $P^\#$ might very well be an actual law! Supposing that M -to- P^* always trumps P -to- $P^\#$ in the actual world, no events ever conform to P -to- $P^\#$, so, from the standpoint of the occurrence of events, it's as if P -to- $P^\#$ doesn't exist. Some may object to P -to- $P^\#$ as an uninstantiated actual law due to methodological considerations involving simplicity and economy, but these considerations, to say the least, are far from decisive in this case. P -to- $P^\#$ being an actual law is not very plausible, but it isn't particularly implausible either.

Now let's move on to consider how things play out when we suppose that P -to- $P^\#$ trumps M -to- P^* (and P -to- P^*) in w_1 . Notice that since P underlies M in w_1 , when P is instantiated in w_1 , M is also instantiated in w_1 . Hence, whenever a P -instance occurs and causes a $P^\#$ -instance in w_1 , a M -instance also occurs and presumably causes the same $P^\#$ -instance in w_1 . If M -instances cause $P^\#$ -instances in w_1 , then M -to- $P^\#$ obtains as well as P -to- $P^\#$ in w_1 . Thus, assuming that P -to- $P^\#$ trumps M -to- P^* in w_1 , although M -to- P^* and P -to- P^* do indeed come apart in w_1 , it's not the case that the *non-trumped* mental-physical and physical-physical causal laws come apart in w_1 , for both M -to- $P^\#$ and P -to- $P^\#$ obtain in w_1 . So, assuming that P -to- $P^\#$ trumps M -to- P^* in w_1 , from the standpoint of the occurrence of events in w_1 , mental-physical causal laws and physical-physical causal laws line up, though certain instantiated mental-physical and physical-physical causal laws in w_1 differ from the mental-physical and physical-physical causal laws that are instantiated in the actual world. Hence, assuming that P -to- $P^\#$ trumps M -to- P^* in w_1 , it's unclear that w_1 's proximity to the actual world causes any trouble for MPO.

Chalmers can counter that if P -to- $P^\#$ trumps M -to- P in w_1 and thus events conform to M -to- $P^\#$ in w_1 , mental causes aren't connected with the paradigmatic effects in w_1 , so we still get the conclusion that on MPO the actual world is lucky in it's being distinct from w_1 .

I agree that since mental causes aren't connected with the paradigmatic effects in w_1 , on MPO it is in some sense lucky that mental causes are matched with the paradigmatic effects in the actual world. I think that the important thing to realize, however, is that this problem isn't unique to MPO; indeed, it seems that on virtually any theory of mental causation it is in some sense a matter of luck that mental causes line up with their paradigmatic effects in the actual world. For example, consider the physicalistic account of mental causation according to which mental causation is derivative from physical causation (e.g. Kim's supervenient causation (1989b, 1993)). On this sort of account of mental causation, there are nearby worlds in which events conform to P -to- $P^\#$ and M -to- $P^\#$ rather than P -to- P^* and M -to- P^* . In this case, we can say that the actual world is lucky in that events conform to P -to- P^* rather than P -to- $P^\#$ so M -instances can cause P^* -instances rather than $P^\#$ -instances.¹⁷

So much for w_1 causing a problem for MPO. Now that we have dealt with w_1 , we can deal with w_2 and w_3 rather quickly. In w_2 P underlies M , M -to- $P^\#$ obtains where $P^\#$ and P^* are distinct, and P -to- P^* obtains. Let's assume, per Chalmers, that either M -to- $P^\#$ trumps P -to- P^* or vice versa in w_2 . Based on our previous discussion, we can conclude that P -to- $P^\#$ as well as M -to- P^* obtain in w_2 . We can deal with the case of M -to- $P^\#$ trumping P -to- P^* in w_2 like we dealt with the case of P -to- $P^\#$ trumping M -to- P^* in w_1 , and the case of P -to- P^* trumping M -to- $P^\#$ in w_2 like we dealt with the case of M -to- P^* trumping P -to- $P^\#$ in w_1 .

Finally, consider w_3 . In w_3 P underlies M , M -to- $P^\#$ obtains, and P -to- P' where $P^\#$, P' and P^* are distinct. Let's assume, per Chalmers, that either M -to- $P^\#$ trumps P -to- P' or vice versa. Based on our discussion of w_1 , we can conclude that P -to- $P^\#$ as well as M -to- P' obtain in w_3 . Hence we can deal with the both case of M -to- $P^\#$ trumping P -to- P' in w_3 and the case of P -to- P' trumping M -to- $P^\#$ in w_3 in the same way that we dealt with the case of P -to- $P^\#$ trumping M -to- P^* in w_1 .

4 Conclusion

I began this paper by claiming that, assuming that mental causation obtains and that causation is closed under the physical domain, the only hope for property dualism is MPO. I then went on to show that (i) counterfactuals pose no special problem for MPO and (ii) MPO isn't plagued with troubles regarding either coincidence or intelligent design. Having dispelled these objections, the physicalist must at least admit that it's no longer permissible to reject property dualism on the grounds that it cannot come to terms with mental causation.

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Notes

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¹ Here property dualism isn't *merely* the denial of type-identity theory – I define property dualism roughly as the denial of the claim that fixing the physical property instances and physical laws fixes the mental property instances.

² See, for example, Bennett forthcoming Block forthcoming, Chalmers 1996: 152 and forthcoming, Garrett 2000 and 1998, Marcus 2001, Mills 1996, Schaffer forthcoming, Sider forthcoming, Sturgeon 1998, and Witmer 2000.

³ Other objections to MPO include (i) that it would render mental causation superfluous (see Schiffer 1987: 147–49), (ii) that all cases of apparent causal overdetermination resolve into either cases of causal preemption or cases in which each causal factor plays only a partial role (see Bunzl 1979), and (iii) that there are no instances of overdetermination because events are maximally fragile (see Lewis 1986). (Note that objection (ii) collapses into objection (iii). See Schaffer forthcoming.) I don't address these objections because it's unclear, at least to my mind, just how mental causes would be superfluous on MPO and our intuitions about event fragility are far from clear.

⁴ The 'levels' that I speak of here can be thought of as a hierarchical structure ordered by the part-whole relation. For more on levels, see Kim 1998: 15.

⁵ For an explication of the property exemplification account of events, see Kim 1976.

⁶ C-fiber firing, of course, isn't thought to actually underlie pain, but for ease of presentation, not to mention my ignorance of neuroscience, I talk as if it does.

⁷ Mental properties logically supervene on physical properties just in case, for all logically possible worlds w_1 and w_2 , if an object a in w_1 and an object b in w_2 are indiscernible with respect to physical properties, a and b are indiscernible with respect to mental properties as well.

⁸ I imagine that one might say that 'real' cases of overdetermination require that the causes be nomologically, as well as logically, independent and hence the sort of overdetermination that the advocate of MPO claims is involved with mental causation isn't 'real' overdetermination, if the advocate of MPO insists that mental causes are

nomologically dependent on physical causes. This isn't a substantive objection to MPO, for the advocate of MPO can of course just call her thesis something else.

⁹ Ned Block (forthcoming) makes a similar point.

¹⁰ Robert Lurz made an objection akin to this one in conversation.

¹¹ In fact, the only folks that I know of that are sympathetic with MPO other than myself are Mills (1996), Schaffer (forthcoming), and Sider (forthcoming).

¹² Martin Bunzl (1979) argues that overdetermination is not only improbable, but it's impossible as well for any apparent case of overdetermination, according to Bunzl, is really either a case of causal preemption or a case in which each causal factor only plays a partial role. Bunzl's argument for this claim, however, has several problems, one of which is that it depends on the dubious assumption that events are maximally fragile. For a detailed criticism of Bunzl's argument, see Schaffer forthcoming and Lewis 1986.

¹³ Crane (2001: 50) however claims that coincidence is a problem for MPO, though he doesn't work out the argument.

¹⁴ Kim (1989a: 247) is aware of the possibility of lawfully correlated overdetermination, but he claims that such correlation would obviate the needed distinctness between the overdetermining causes. As Schaffer (forthcoming) points out, this isn't so – the overdetermining causes may be logically or “metaphysically” distinct, and merely nomologically correlated.

¹⁵ See Tooley (1987) for a defense of causal realism. Chalmers (1996: 152) himself recognizes that realist accounts of causation compliment MPO.

¹⁶ To avoid potential confusion in the foregoing discussion of w_1 , w_2 , and w_3 , I should say that I assume that if a world w is the actual world or a nearby world – where what counts as a nearby world is left open – if a mental-physical causation law L_M in w trumps a physical-physical causation law L_P on one occasion in w , L_M trumps L_P on *all* occasions in w and vice versa.

¹⁷ Chalmers, as an epiphenomenalist, might of course welcome the conclusion that there is an element of luck to any theory of mental causation!