

Insuring the Mind Against Causal Exclusion

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“Where we trace the principles of the human mind through a few steps, we may be very well satisfied with our progress; considering how soon nature throws a bar to all our enquiries concerning causes, and reduces us to an acknowledgment of our ignorance.”

- David Hume, *An Enquiry Concerning Human Understanding*, Sect. VII (60)

The problem of causal explanatory exclusion has taken a central place in matters of mind, and its implications bear upon a host of theses which remain desirous of an arbiter. It incorporates in its discussion, for example, the functionalisation of mental properties, what would work as an acceptable system of reduction, the efficacy of semantics and syntax, the role of purposive explanations, and what is to become of qualia. This paper will take Jaegwon Kim’s extensive work on the exclusion problem to be the standard account. I will explicate his thesis, and indicate the setting in which the problem of mental causal exclusion arises. Consequently, I will suggest he is mistaken in at least one respect – namely the nature of supervenience – and I will examine some metaphysical considerations which work further to understand and thus undermine the exclusory threat.

Let me start by separating the issue of causal explanatory exclusion from two related issues, those of anomalous monism and syntacticalism. The first, anomalous monism, argues that the mental is anomalous in the sense that it does not conform to strict causal laws. According to Davidson,¹ since physical events flow from mental causes, the mental causes must themselves be physically realised (hence monism). This leads us to conclude, however, that mental events are causally efficacious *only insofar* as they are physical events. This conflicts with our sense that it is the *mental* component that is causally relevant to our actions, and this sense might seem to gain no traction in Davidson’s picture. There are, of course, significant rejoinders to this attack though I will not discuss them here.

The problem of syntacticalism (sometimes ‘syntactitude’) raises further problems. If we characterise anomalous monism as failing to get the syntax into

¹ Davidson, D. (2001). *Mental Events*. In *Essays on Actions and Events* (2nd ed.). Oxford: Clarendon Press - Oxford.

the picture – my belief *qua belief* needs to do the work – then the problem of syntacticalism shows that *syntax without semantics* is similarly insufficient for a cogent theory of mind. We need to get meaning, not just form into the picture. If I take a glass to my lips when thirsty, it is because my belief is that it is water, and not acid, that is in the glass, and that the water will satisfy my thirst. If physically realised, we need some way for the mental meaning to be causally relevant.

The Problem

For this discussion, I will not focus on the two preceding issues, but rather of the problem of causal exclusion. So let us take our cue from Kim.² Suppose that there is a mental event *M* at time *t* which causes a physical event *E*. The question which poses the difficulty is this: does *E* also have a *physical* cause at time *t*? It is generally accepted that we cannot answer the question negatively – asserting that the mental event had no physical grounding – as this would undermine the materialism and causal closure to which we are committed. However, answering affirmatively raises a live problem: if *E* has a physical cause at time *t* (call it *P*), then what work does the mental cause *M* do? The physical cause, it is argued, is *wholly and independently sufficient* to bring about the effect, thus rendering the mental component epiphenomenal. This is the problem of mental causal exclusion – “the mechanistic displaces the purposive.”³ That is to say, if presented with two competing causal explanations – one mechanical and one mental – we always favour the mechanical: “where the one reigns the other is excluded.”⁴

What are we trying to preserve? In other words, what philosophical and pre-theoretic intuitions about mind will inform our thinking about the exclusion problem? Most saliently, we have deeply-held intuitions that our beliefs and desires – our intentional states – really do make a difference. We offer them not as incidental explanations of our behaviour, but as the *causally relevant explanations that do the work*. It is difficult for us to imagine how it could be otherwise, because it would be to unseat our fundamental sense that we are autonomous agents whose internal mental states cause our actions. Fodor puts

² Kim. (1998). *Mind in a Physical World: An Essay on the Mind-Body Problem and Mental Causation*. Cambridge, Mass.: MIT Press, p37

³ Dennett, D. C. (1973). Mechanism and responsibility. In T. Honderich (Ed.), *Essays on freedom of action*. London: Routledge, p160

⁴ Leon, M. (1990). The mechanics of rationality. *Southern Journal of Philosophy*, 28 (3), p343

it well in his paper which attempts to mitigate the outbreak of epiphobia – “the fear that one is turning into an epiphenomenalist.” He says, “if it isn't literally true that my wanting is causally responsible for my reaching, and my itching is causally responsible for my scratching, and my believing is causally responsible for my saying..., if none of that is literally true, then practically everything I believe about anything is false and it's the end of the world.”⁵ The point is, mental causation *qua* mental is not something we are going to give up without a determined fight.

A ‘determined fight’ makes it sound like we’ve really got something to worry about. Tyler Burge says that “what interests me more is the very existence of the worries. I think that they are symptomatic of a mistaken set of philosophical priorities. Materialist metaphysics has been given more weight than it deserves. Reflection on explanatory practice has been given too little. The metaphysical grounds that support the worries are vastly less strong than the more ordinary grounds we already have for rejecting them.”⁶

Kim recognises and to some extent agrees with Burge that “the epiphenomenalist ‘worries’ are overstated.”⁷ But Kim goes on to distinguish his project in a way that keeps the issue of mental causation live. That is, “it is the problem of showing *how* mental causation is possible, not *whether* it is possible.”⁸ This is a significant point: a satisfactory account of mind would not be one which leaves the mental excluded from causal efficacy. However, the charge is that our best theories of mind seem to lead us to such causal exclusion. Burge’s point is that this is an absurd and untenable result, which should lead us to reject the thesis which got us here in the first place. I take Kim to be in agreement with the essence of this suggestion, but to be concerned that we should not throw the theoretical baby out with the exclusory bathwater. In this regard, we are permitted to proceed from the assumption that the mind is causally efficacious, but it is an issue of no small philosophical significance that we show precisely how. The link between metaphysics and mind is important,

⁵ Fodor, J. (2006). Making Mind Matter More. In B. Beakley, & P. Ludlow (Eds.), *The Philosophy of Mind: Classical Problems/Contemporary Issues* (2nd ed.). Cambridge, Mass.: MIT Press, p164

⁶ Burge, T. (1993). Mind-Body Causation and Explanatory Practice. In J. Heil, & A. Mele (Eds.), *Mental Causation*. Oxford: Clarendon Press, p97

⁷ Kim, J. (1995). Mental Causation: What? Me Worry? *Philosophical Issues*, 6, p128

⁸ Kim, J. (1995), p128, my emphasis

however, and forms the basis of a response to causal exclusion – the generalisation argument, which I will consider later. For the time being, I wish to shelve Burge’s criticism, and proceed from the position that the exclusion argument raises a prima facie genuine problem which warrants a cogent response. To interrogate what this response might be, let’s consider what options are available to us in thinking about mental causation.

A Rubric for Causation

The “general principle of explanatory exclusion states that two or more complete and independent explanations of the same event or phenomenon cannot coexist.”⁹ How can mental phenomena affect what happens physically? In considering this question, Kim presents several options that appear to be suitable options, though he endorses really only one of them – the reductive model. While I think his conclusion is somewhat hasty, his rubric and criticisms offer an instructive way of assessing the problem. I will spell out his thoughts then, before turning to why they might be mistaken.

“When we are faced with two purported causes, or causal explanations, of a single event, the following alternative accounts of the situation are initially available: (a) each is a sufficient cause and the effect is causally overdetermined; (b) they are each necessary and jointly help make up a sufficient cause (that is, each is only a ‘partial cause’); (c) one is part of the other; (d) the causes are in fact one and the same; (e) one (presumably the mental cause in the present case) is in some appropriate sense reducible to the other; (f) one (again the mental cause) is a derivative cause; its causal status is dependent, or supervenient, on the neural cause, N.”¹⁰

a) Overdetermination. Overdetermination is just what it sounds like: it is the idea that an event has been determined more than is necessary to bring it about. In other words, more than one independent and complete cause is proffered as causally sufficient to bring about a particular event. Prima facie, several difficult questions emerge. *Is this a real option for mental causation, that the mental event and the physical event are each independently capable of bringing about a particular event? In what sense are the mental and physical causes related? Our*

⁹ Kim, J. (1989). Mechanism, Purpose, and Explanatory Exclusion. *Philosophical Perspectives*, 3, p89

¹⁰ Kim, J. (1995), pp130-131

evaluation will be much satisfied by considering whether the causes are in fact independent and complete. To assess this we might best inquire: Would event *E* have occurred if physical cause *P* had not occurred? Would *E* have occurred if mental cause *M* had not occurred?

Answering these questions negatively would lead us to conclude, I think, that the two events are not really independent because they do not meet that criterion for overdetermination: they are not individually sufficient to cause the event.¹¹ However, to answer the question affirmatively places us in one of two unpalatable positions. (1) If we think that event *E* would have occurred if *M* occurred without physical event *P*, then we commit to a strong kind of dualism. As Stueber points out, “it would imply that if the ‘physical cause hadn’t occurred, the mental cause by itself would have caused the effect.’ This however would violate physical closure, besides endowing the mental with mystical powers.”¹² (2) If we think that event *E* would have occurred if *P* occurred without mental event *M*, then we run headfirst into the problem of causal exclusion, as this would be to accept that the mental has nothing causal to contribute.

This exhaustive set of interpretations should lead us to conclude that “causal overdetermination cannot be accepted as providing us with a general picture of the relationship between mental and physical causation.”¹³

(b) Partial Causes. If taken separately, *P* and *M* are only partial causes; they explain *E* more fully if taken together. In that case neither *P* nor *M* can be taken to offer a full causal explanation of *E*.¹⁴ Perhaps the mental cause is thought in some sense to be partial as it must have a physical base, and in this sense cannot do the work on its own. However, the causal exclusion argument assumes that the preceding physical cause is wholly sufficient for causing the event. This assumption is at the heart of the exclusion problem. It takes for granted that the preceding physical state of affairs is really *independent and complete*, thus leaving the mental component with nothing left to contribute. I will suggest reasons later

¹¹ To say something like ‘*C* and *C** are both sufficient causes, but they necessarily occur together’ is to conceal some sophistry; that is, it ought to be clear that on such a description, *P* and *M* are not *really* independent.

¹² Stueber, K. R. (2005). Mental Causation and the Paradoxes of Explanation. *Philosophical Studies*, 122 (3), p246

¹³ Stueber, K. R. (2005), p246

¹⁴ Cf. Fuhmann, A. (2002). Causal Exclusion Without Explanatory Exclusion. *Proceedings of the Third International Colloquium in Philosophy of Mind*, p179

for thinking this critical assumption is mistaken, and will offer some metaphysically intuitive views to support my contention.

Sticking with Kim's rubric for now, we might ask, 'could the causes be partial in the sense of operating in sequence, the mental 'following' the physical (or vice versa)?' For a start, this doesn't sound right, largely because we take the mental to be synchronous with the physical – the mental event happens *when and only when* the physical base event happens. This conflicts specifically with our conception of supervenience: "the instantiations of the related [supervenient] properties are wholly synchronous, whereas causes are standardly thought to precede their effects."¹⁵ Furthermore, it is clear that if we were to set up a non-synchronous model where a physical event caused a mental event which caused a physical event, we would naturally ask, 'how was the mental event causally efficacious?' And it is clear that we would likely respond by suggesting that the mental event must have had a physical base, which leads us neatly back to the problem of causal exclusion.

(c) One cause is part of the other. Kim in his set of options is looking at causation more generally, rather than mental causation specifically. It is intuitive that we might say that "my cat caused the scratches on the furniture," and say later "my cat's claws caused the scratches on the furniture" and not be asserting competing or contradictory causal explanations. This is because one explanation is thought to be logically part of the other. However, this is not analogous to mental causation, at least not for any model which takes the mental not to be *logically* reducible to the physical. We will need a different account.

It will do here to note that Kim thinks that these first three options are none of them plausible accounts. He gestures towards why these theses might be floundering: "the presence of two causal stories, each claiming to offer a full cause for a given event, creates an unstable situation requiring us to find an account of how the two purported causes are related to each other."¹⁶ As such, Kim now turns to more intimately connected relations between the causes to see if they fare better.

(d) The causes are in fact one and the same. This is the first live option we have considered, as far as Kim is concerned. Recall JJC Smart's example championing

¹⁵ Kim, J. (1997). Does the Problem of Mental Causation Generalize? *Proceedings of the Aristotelian Society, New Series*, 97, p286

¹⁶ Kim, J. (1995), p131

Central-State Materialism: “in so far as ‘after-image’ or ‘ache’ is a report of a process, it is a report of a process that happens to be a brain process.”¹⁷ It seems permissible to replace the ‘ache’ terms with such purposive terms as ‘belief,’ ‘desire’ etc. and retain Smart’s point. If we endorsed mind-brain identity (in type-type mode), we would have our answer to the question of how the mental can be causally efficacious: the mental cause is identical with the physical cause, and it has all the causal powers of the physical cause. The problem of exclusion evaporates for the identity thesis, because there is most accurately just *one* cause of *E*, not two whose relationship warrants concern. Regarding explanation, there is similarly one explanation here, and not two: it appears that there are two since they differ in the linguistic apparatus used in specifying the conditions and events that do the explaining, but they are only descriptive variants of one another. In this sense they give causal information about *E* only in different ways, each appropriate in a particular explanatory context; but they both point to one objective causal connection, and are grounded in this single causal fact.¹⁸ There are, however, strong theoretic reasons not to adopt type materialism, most pressing among them the objection from the multiple realisation of the mental.

(e) The mental is in some appropriate sense reducible to the physical. As mentioned above, type materialism offers one suitable option for someone wishing to retain the causal efficacy of the mental while not running afoul of the problem of explanatory exclusion. However, it should be noted that not just any materialism will do. Specifically, non-reductive token-materialism will not fit the bill, because, as the exclusion argument shows, the causally efficacious properties of events are ultimately physical properties. Joseph Levine makes this clear: On the token identity thesis, “it’s supposed to be the case that the pain trope derives its causal efficacy from the fact that it is identical to a *B* [neurological] trope. But it still seems as if the original question remains. By virtue of being a trope of which property does it cause the hand to move? The causal exclusion argument seems to force us to say it’s by virtue of being a trope of property *B*.”¹⁹ The problem here, presumably, is that I wish to say that when I recoil from touching a hot stove, I do so because it is a particular kind of *sensation, namely, a pain sensation*. Levine’s point (and Kim too) is that this intuitive move is disallowed by any non-reductive thesis, as the exclusion

¹⁷ Smart, J. (1959). Sensations and Brain Processes. *The Philosophical Review*, 68 (2), p144

¹⁸ Kim, J. (1989), p87

¹⁹ Levine, J. (2001). *Purple Haze, The Puzzle of Consciousness*. Oxford: Oxford University Press, p28

argument will locate causal efficacy in the physical rather than the mental properties.

Reduction of some sort, according to Kim, is the price we must pay to secure mental causal efficacy. To posit irreducible mental properties is to posit properties whose efficacy will be excluded by their causally efficacious physical correlates. This is a stronger contention than some might realise, as Raymont notes: “Kim aims to show that nonreductive physicalism does not simply render mental features superfluous, but actually *puts them off limits*, in the sense that an ascription of causal relevance to them would violate an important principle (namely, the denial of overdetermination).”²⁰ Consequently, mental properties can be efficacious *only insofar as they are ultimately physical properties*. As Kim points out, “the difficulties will disappear if we accept standard reductionism – that is, type physicalism like the classic psychoneural identity theory – according to which every mental property is to be reductively identified with some underlying physical property.”²¹ Anything short of this type of reduction, according to Kim, will posit entities whose causal relevance will be doubtful.

(f) The mental is supervenient on the physical. Supervenience has figured as a major theme in the more-recent theories of mind, and has attracted very broad philosophical support,²² because it argues for a relationship of dependence between the mental and physical properties without necessarily identifying the mental with the physical. As such, it has been at the core of the Functionalist thesis of multiple realisation: mental states supervene on their physical ‘realising’ hosts, and in principle can emerge in any suitable host. But what does this mean for causation? And what about the exclusion argument?

Kim insists, contrary to his earlier views which held supervenience to be the best way to make sense of mental causation,²³ that in fact supervenience falls squarely within the clutches of exclusory arguments. Let’s consider an uncontroversial

²⁰ Raymont, P. (2003). Kim on Overdetermination, Exclusion and Nonreductive Physicalism. In Walter, & Heckmann (Eds.), *Physicalism and Mental Causation*. Exeter, UK: Imprint Academic, p229, emphasis mine

²¹ Kim, J. (1993). Mental Causation in a Physical World. *Philosophical Issues (Science and Knowledge)*, 3, p171

²² Jerry Fodor (1989) notes: “if mind/body supervenience goes, the intelligibility of mental causation goes with it” (p42)

²³ Cf. Kim, J. (1995), pp134-135

example of mental supervenience which Kim provides.²⁴ Suppose a sharp pain in my chest causes me to have an anxiety attack (I am terrified that I might be having a heart attack). The pain event has a neural base on which it depends or supervenes, say *N1*, and the anxiety attack also has a neural base on which it supervenes, say *N2*. The question which elicits the problem of causal exclusion is this: what brought the effect (the anxiety attack) about? According to Kim, we would say that in order to cause the anxiety attack, the pain must cause the anxiety attack's realising physical property *N2*. But the pain is itself physically realised by *N1*. Moreover *N1* is wholly sufficient for bringing about *N2* (and thus the anxiety attack). Thus *N1* threatens to preempt the mental cause, leaving no work for the pain (*qua* pain) to do. In such examples of supervenience, "every physical outcome is causally assured already by preexisting physical circumstances; its mental antecedents are therefore left with nothing further to contribute."²⁵

It should be clear that, if correct, this presents a genuinely unpalatable picture. Our previous philosophical advances incline us to endorse supervenience as the best way to capture multiple realisation and the causal role of the mental in a physical world without committing to reduction. However, the exclusion argument would have us believe that positing distinct causal properties is *exactly* the fuel on which the exclusory fire thrives: "Here the mystery is how mental events, desires for example, can be making a causal difference when their unsupplemented neurophysiological underpinnings are already sufficient to the task at hand."²⁶ On Kim's view, supervenient relations are not strong enough to secure mental causation. He argues that it's not enough to show that the supervenient properties follow their bases in a law-like way. "The moving car represents a genuine causal process, but the series of shadows it casts, no matter how regular and lawlike, does not constitute a causal process."²⁷ According to the supervenience problem, the mental is deemed epiphenomenal: it is like the shadow of the car in that it is merely parasitic upon a real causal process with nothing causally significant to contribute. If we are to extract mental properties from this tenebrous position, Kim argues that we must construct the dependence relationship in stronger terms, specifically terms of reduction.

²⁴ Kim, J. (1995), p134

²⁵ Yablo, S. (1992). Mental Causation. *The Philosophical Review*, 101 (2), pp246-248

²⁶ Yablo, S. (1992), p248

²⁷ Kim, J. (1997), p286

The Generalisation Response

Can it be that we can endorse supervenience only insofar as the supervenient properties are reductively defined? Is this really what mental causation requires? Many think that a good place to start would be to examine successful models of causation from the sciences, and model mental causation on such exemplars. But in taking a look over the fence to the causal pastures of the 'special' sciences, it appears at first glance that they too would have their causal powers vaporised by the problem of supervenience and causal exclusion.

But if this is the case, if the same argument that makes mental properties epiphenomenal would make, say, geological, biological, and chemical properties just as epiphenomenal, then that argument must surely be mistaken. The generalisation response works according to a straightforward modus tollens reductio as follows: *if the causal exclusion argument is correct, then many properties in the special sciences are not causally efficacious. However, these properties really are causally efficacious. Thus the causal exclusion argument must be mistaken.*

This argument, if correct, would be compelling. It rests partly on the idea that in our talk of mental causation, we have overstated the requirement of physical causal closure, presenting it in a way which even the most stable sciences reject. As Van Gulick ventures, "reserving causal status for strictly physical properties in this way would make not only intentional properties epiphenomenal, it would also make the properties of chemistry, biology, neurophysiology and every theory outside microphysics epiphenomenal."²⁸ Why would we be concerned about our model of mental causation if the only serious objection figures as an objection for the special sciences too? However, it is precisely this conditional relationship that Kim successfully repudiates, as we will see. That is, there is good reason to think that the supervenience problem might be a problem specific *to the mental*, even though supervenience itself occurs in other fields.

To elicit how mental supervenience might fall into the exclusory pitfalls which special science avoids, Kim provides a few examples of second-order scientific properties which might figure in supervenient relations. Kim²⁹ points out that sedative medications have the property of 'dormitivity,' that of having an active

²⁸ Van Gulick, R. (1992). Three Bad Arguments for Intentional Property Epiphenomenalism. *Erkenntnis: Special Issue on Mental Causation*, 36 (3), p325

²⁹ He attributes the example to Block, N. (1990). Can the Mind Change the World? In G. Boolos (Ed.), *Meaning and Method*. Cambridge: Cambridge University Press.

ingredient which induces sleep in the swallower once ingested. Dormitivity in this sense can be multiply realised – by secobarbital in Seconal, by diazepam in Valium. So, in the case of Valium, dormitivity supervenes on diazepam. The question is, if someone ingests the Valium pill and falls asleep, may we say that the dormitivity did the work? Or are we forced to say that the specific ingredient, diazepam, *alone* did the work? According to the exclusion argument, the subvening physical base – the diazepam – pre-empts the supervenient dormitive property in the contest for causality.

It is important to clarify one related issue. Diazepam is a chemical compound, made up of several elements (it is $C_{16}H_{13}ClN_2O$). Are we still permitted to say that diazepam *qua* diazepam does the work, or do we have to say that its microphysical properties do? This line of thought has causal power regressively located in the lower, and lower, and lower orders of the pill's structure. But this seems mistaken. A helpful point is to recognise that we do have a sense in which a whole can be greater than the sum of its parts. For example, water can do things that individual hydrogen and oxygen atoms (or differently configured atomic clusters) cannot: water thus has *distinct macrophysical causal powers*.

So what would we say about dormitivity? Importantly, we don't think that dormitivity independent of any of its realisers (e.g. diazepam) can cause anything. In some sense dormitivity inherits the powers of its subvenient base, but importantly has no powers in excess of this base. I think that this is a prime candidate for an instance of property shorthand. It seems quite right to me that we use the term dormitivity as shorthand for 'possessing whatever ingredient induces sleep'; and because there are many ingredients which fit the bill, dormitivity *really is* shorthand. Furthermore, because we take it as shorthand, we don't think for a moment that dormitivity has powers beyond its key ingredient's powers, or has them in virtue of anything other than the ingredient's having the powers. And this doesn't worry us. Clearly this instance is reductive, and Kim evinces this in terms of how we typically conceive of properties: "only causally relevant properties should count as individuating properties, and it is in any case highly implausible to say that events that are indiscernible in respect of causal properties can yet be distinct events."³⁰

³⁰ Kim. (1998), p56

The consequence of this interrogation reveals that mental properties really might be worse off than other macroproperties in the special sciences. Worley³¹ provides instructive analysis here. Temperature causes mercury in a thermometer to rise in virtue of supervening on the microphysical properties which cause the mercury to rise. From the exclusion argument, this may make temperature epiphenomenal in a sense, since it's the microphysical (constitutive) properties which are causally relevant. However, there is no property of temperature over and above the associated microphysical properties whose causal relevance might be excluded. On evaluation, there really is nothing left out in this case, no distinct property which could be epiphenomenal. Yet for mental properties, on the other hand, *we do worry about the causal relevance of the properties over and above the microphysical properties*. According to Worley, our concerns are that it does not seem that mental properties can have any causal role, given that the causal role of the mental is entirely exhausted by the causal role of the microphysical properties on which mental properties supervene.

This, Kim suggests, suffices to deflate the force of the generalisation response. The generalisation response required that the causal exclusion problem (couched in terms of supervenience) occurs not just for the mind but in many other scientific domains, and we should thus reject it as a real problem. However, if we investigate the supervenient relations that obtain in the special sciences, we see that they avoid the exclusory mire because they endorse reduction of one kind or another. This leads us to conclude that the supervenience problem obtains only in those cases where we resist a reductive thesis. Kim thinks that this result should urge us to take seriously the position of mental-physical reduction.

Saving Supervenience

We are sufficiently acquainted with the problem of causal exclusion, and I have shown how some standard responses via the generalisation response are unsuccessful. I wish now to consider reasons for thinking that Kim is mistaken in his initial assumptions, the correct modification of which work to avoid the problem of causal exclusion. I will first examine reasons for thinking that Kim has incorrectly conceived of supervenience. This is no small claim: as McIntyre points out, "for over a decade Jaegwon Kim's work on supervenience has stood as a model of clarity and analytical rigor for those interested in metaphysics and

³¹ Worley, S. (1993). Mental Causation and Explanatory Exclusion. *Erkenntnis*, 39 (3), p339

the philosophy of mind.”³² Nevertheless, there is support for the contention that “there is an inconsistency between Jaegwon Kim’s earlier work on supervenience and his more recent work on explanatory exclusion.”³³ Furthermore, critics like Horgan,³⁴ McIntyre,³⁵ Kallestrup,³⁶ Loewer³⁷ and Raymont³⁸ explicitly contend that non-reductive versions of supervenience do not fall into the hands of Kim’s exclusion arguments.

To review, Kim thinks that supervenience is inadequate to the task of securing mental causation, because it runs afoul of the causal exclusion argument. As Kim notes, “two explanations can be rival explanations even though their explanantia are mutually consistent and true, if they purport to explain (in particular, causally explain) a single explanandum. It makes no difference that the two explanations arise from different areas of inquiry, involving distinct vocabularies, or that they are responses to two different epistemic or pragmatic concerns.”³⁹ This general sentiment is echoed by Worley: “supervenience of one set of properties on another is not enough to establish that the supervenient property is relevant to the effect, if the causal role is monopolized by the base properties.”⁴⁰ There are several reasons, however to suggest that this response relies on a metaphysically faulty view of supervenience.

Supervenience, accurately construed, specifies a dependence relationship between determinates and determinables. There are two critical facilities which we desire

³² McIntyre, L. (2002). Supervenience and Explanatory Exclusion. *Critica*, 34 (100), p87. Also, Shoemaker (2002), though he disagrees with Kim, notes that Kim’s work on these matters is indispensable: “Those interested in the metaphysics of mind already owe a considerable debt to Jaegwon Kim for the work he has done over the last couple of decades in clarifying issues concerning the supervenience of the mental on the physical... Some of what I say here will disagree with Kim’s views; but if it were not for his illumination of the topic I would have no views about these matters at all.” (p53)

³³ McIntyre, L. (2002), p87

³⁴ Horgan, T. (1997). Kim on Mental Causation and Causal Exclusion. *Noûs: Supplement: Philosophical Perspectives: Mind, Causation, and World*, 31 (11), 165-184.

³⁵ McIntyre, L. (2002)

³⁶ Kallestrup, J. (2006). The Causal Exclusion Argument. *Philosophical Studies*, 131, 459-485.

³⁷ Loewer, B. (2001). Review of 'Mind in a Physical World: An Essay on the Mind-Body Problem' and 'Mental Causation' by Jaegwon Kim. *The Journal of Philosophy*, 98 (6), 315-324.

³⁸ Raymont, P. (2003)

³⁹ Kim, J. (1995), p131

⁴⁰ Worley, S. (1993), p339

from a theory of supervenience, namely “(i) the dependence of the supervening properties on the subvenient, or base, properties and (ii) the irreducibility of the supervening properties (and hence of the sciences that study them).”⁴¹ This relationship can be spelled out using slogans like “fixing the base properties of an object fixes its supervenient properties”⁴² or “no difference without a physical difference.”⁴³

I contend that Kim, in his earlier discussions of supervenience, set up the very criteria which insure mental causation against causal exclusion. That is, when Kim ventures the well-made point that “the presence of two causal stories, each claiming to offer a full cause for a given event, creates an unstable situation requiring us to find an account of how the two purported causes are related to each other,”⁴⁴ he need not look far for a satisfactory response. Kim is right to note that “two or more complete and independent explanations of the same event or phenomenon cannot coexist,”⁴⁵ but fails somehow to recognise that supervenience evades those criteria that issue in exclusory reasoning. Supervenience does not fall into exclusory traps precisely because it *does not suppose the mental and physical causes to be complete or independent at all*. Supervenience asserts precisely the opposite: it asserts that the properties must be intimately related through strict and synchronous determining laws.

Part of my contention is that Kim is mistaken in his conception of causal relations. Most naturally conceived, it is *events, broadly described* which figure as causes in our model of causation. In some instances, properties of the events are genuinely superfluous to the effect: when a blue stone is thrown at a mirror, the mirror shatters because a stone of that mass and moving at that velocity struck it, not because the stone that struck it is blue. The stone’s mass and velocity are causally relevant features of the cause, while its colour is not.⁴⁶ However, *when properties exist under relations of supervenience*, it is incorrect to

⁴¹ Paull, R., & Sider, T. (1992). In Defense of Global Supervenience. *Philosophy and Phenomenological Research*, 52 (4), p833

⁴² Kim, J. (1984). Concepts of Supervenience. *Philosophy and Phenomenological Research*, 45 (2), p160

⁴³ Miller, R. (1990). Supervenience Is a Two-Way Street. *The Journal of Philosophy*, 87 (12), p695

⁴⁴ Kim, J. (1995), p131

⁴⁵ Kim, J. (1989), p89

⁴⁶ Cf. Raymont, P. (2001). Are Mental Properties Causally Relevant? *Dialogue*, XL, 509-528.

suggest that they can be rent at the seams, somehow pulling apart the physical base from the realised mental property. It is incorrect because it violates our well-developed sense of counterfactual dependence, namely, that (i) had the cause not occurred, *ceteris paribus*, the effect would not have occurred; (ii) if the mental component of the cause had been different – if I had, for example, desired *X* rather than *Y* – then, because of the supervenient nature of the mental, the physical host would have to be somehow different.

Kim's position, according to Loewer and Raymont, goes a long way to eliciting those reasons for denying *causal* overdetermination. Causal overdetermination is problematic because it endorses the notion that several entities are present and duplicating each other's causal work. However, there is no such profligacy with merely explanatory overdetermination, and we do not face any vexing question about what causal work is done by the items to which our explanations refer, for these explanatory items are all properties *of the same single cause*.⁴⁷ Van Gulick helpfully notes that "the strictly physical causal story and the intentional causal story need not be in competition; they can be two stories of the same process told at different levels of abstraction and from within alternative conceptual frameworks, which cannot be put in exact correspondence."⁴⁸ The point here is to endorse some of the spirit of causal exclusory reasoning, in acknowledging that a strict relationship must obtain between the mental and physical causal components to avoid positing an abundance of sufficient causes which will be rendered epiphenomenal. Supervenience provides just this sort of strict tethering relationship. Furthermore, it facilitates the intuition that "we seek to pursue explanations at *many different levels* of description, because there are many different ways of describing even one and the same ontological relationship. Explanation is not of the phenomena as such, but as described by a certain theoretical vocabulary."⁴⁹

Conclusion: Metaphysical Considerations

By way of conclusion, I wish to elucidate some metaphysical reasons for suggesting that exclusory reasoning is false. I depend here on an analogy from content or semantic externalism. Externalism holds that the propositions one believes and the meaning of terms are in some sense determined by their

⁴⁷ Raymont, P. (2003), p235

⁴⁸ Van Gulick, R. (1992), p325

⁴⁹ McIntyre, L. (2002), p96

relationship to the environment. Suppose that I enjoy eating toast with honey and cheddar. Furthermore, suppose that a molecule-for-molecule copy of me is created right now, presumably with all my memories and mental content, as it were, duplicated into this fully grown neonate. If someone were to ask him 'do you enjoy eating toast with honey and cheddar?' he would answer affirmatively, as he would have the internal representation of having tasted and enjoyed this particular meal. Though we make the same sounds, and my duplicate is none the wiser about his mental states *from the inside*, we metaphysically distinguish the *propositional content* that I affirm from that which my duplicate affirms. The propositions we affirm are not just functions of the words we say, but in some way depend on our causal ancestry.

I wish not to argue for this kind of externalism, but to use it as an analogy for how it is we might think of mental causes. I borrow from Malcolm's example of a man whose hat has been blown off his head and onto the roof of his house.⁵⁰ He desires it back, and climbs a ladder successfully to retrieve it. The example can be analysed as saying that there was some event mental cause *M* (the man's desire to have his hat back) which supervened on some neurological host *N*. This led to an action *E** (the climbing of the ladder) which supervened on a series of physical movements, *E*. My thesis would say that the scenario admits of (at least) two explanations, one mental and one physical: "since explanations are relativized to contexts and there is not just one such context, one should rather expect a multiplicity of explanations."⁵¹ However, in his argument for causal explanatory exclusion, Kim reasons as follows:

"This explanation shows a certain physiological event... to be nomologically sufficient for the behaviour. If this physiological event is indeed *sufficient* for the climbing, the climbing should occur whether or not any *other* event (such as beliefs and desires) occurred. That is, no other event should be necessary for the occurrence of the climbing, and the physiological explanation in itself should be deemed complete and sufficient as an explanation of the behaviour. Once we know the physiological condition is present, we can be wholly confident that the ladder climbing will occur; it isn't necessary to verify whether other events, such as beliefs and intentions, are also present. That the climbing would have occurred whether or not the rationalizing belief and desire occurred

⁵⁰ Malcolm, N. (1968). The Conceivability of Mechanism. *The Philosophical Review*, 77 (1), p48

⁵¹ Stueber, K. R. (2005, p248

surely demonstrates the causal and explanatory irrelevance of the belief and desire.”⁵²

I wish to suggest that the physiological event is *in fact not sufficient* for bringing about the same climbing. Though my duplicate and I appear identical, and make the same sounds, and even feel the same from the inside, the propositions we affirm are metaphysically distinct because they depend in some critical way on their causal ancestry. Regarding the ladder-climbing, I wish to contend that similar metaphysical priorities should urge us to say that, should the physiological cause occur in the absence of the supervening mental cause, the effect (the climbing) would not occur *in the same way*. If *N* occurred without *M*, it would result in something that might *look* like the same sort of climbing as under an intentional description *but it would nevertheless be metaphysically distinct*.

My suggestions aim to add some body to the “Concluding unscientific postscript” that Malcolm proffers at the end of his paper. After following through on a range of exclusory principles, he remains somehow unconvinced: “it is true that for me (and for others, too) a sequence of sounds tends to lose the aspect of speech (language) when we conceive of those sounds as being caused neurophysiologically (especially if we imagine a technician to be controlling the production of the sounds). Likewise, a sequence of movements loses the aspect of action.”⁵³ I suspect that his sentiment here goes to that argument which I have just outlined, namely that there are salient metaphysical considerations – about the dependence of action on purposive states, and the problems in attempting to rent supervenient states from their bases – which are instructive in dissipating the force of exclusory arguments.

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⁵² Kim, J. (1989), p82

⁵³ Malcolm, N. (1968), p72

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