

Comment

NATURAL DIVINE CAUSATION, CAUSAL EXCLUSION, AND OVERDETERMINATION: COMMENT ON MIKAEL LEIDENHAG

by *Daniel Lim*

Abstract. In his article “The Blurred Line between Theistic Evolution and Intelligent Design” and his response “The Problem of Natural Divine Causation and the Benefits of Partial Causation”, Mikael Leidenhag uses Jaegwon Kim’s work on causal exclusion to critique what he calls “Natural Divine Causation” (NDC). Although I agree with Leidenhag that questions about divine action can fruitfully be posed in terms of Kim’s so-called Causal Exclusion Argument, I take issue with the way he attempts to carry out this task and the reasons he offers against the overdetermination response to the Causal Exclusion Argument.

Keywords: causal exclusion; divine action; natural divine causation; overdetermination

Mikael Leidenhag (2019, 2020) has argued that Jaegwon Kim’s work on causal exclusion (1993, 2000, 2005) can be used to advance debates over divine action. In particular, he is interested in critiquing what he calls “Natural Divine Causation” (NDC). NDC is an idea he attributes to some proponents of Theistic Evolution, including Philip Clayton (2004) and Arthur Peacocke (2006). NDC construes divine action in a way that is consistent with naturalism and sequesters the divine to scientifically respectable noninterventionist action by ensuring that God “only works through natural processes and events.” Although I wholeheartedly agree with Leidenhag that questions about divine action can fruitfully be posed in terms of Kim’s so-called Causal Exclusion Argument (2005), I take issue with the way he attempts to carry out this task. Moreover, I find his reservations against overdetermination to be unconvincing. Nevertheless, I believe the project of juxtaposing the work done regarding causal exclusion (within philosophy of mind) with debates regarding divine action (within

Daniel Lim is an Associate Professor of Philosophy at Duke Kunshan University, Kunshan, Jiangsu Province, China; e-mail: daniel.lim672@dukekunshan.edu.cn.

the philosophy of religion) can yield fruitful interactions and should be pursued.

CAUSAL EXCLUSION

Let us begin by reviewing Jaegwon Kim's Causal Exclusion Argument. The target of his argument is nonreductive physicalism (NRP). NRP can be characterized with the following core claims:

Supervenience: Mental properties supervene on physical properties.

Irreducibility: Mental properties are not reducible to, and are not identical with, physical properties.

Efficacy: Mental properties have causal efficacy.

Supervenience ensures that NRP remains a physicalist doctrine. It firmly tethers the mental domain to the physical domain. Irreducibility ensures that NRP remains a nonreductive position. It clearly demarcates the mental as being distinct from and irreducible with respect to the physical. Efficacy ensures that NRP remains consistent with a view about the mind rooted in common sense—that the mind makes a causal difference in the world.

To relinquish Supervenience would be to give up on physicalism. To relinquish Irreducibility would signal a return to a reductive version of physicalism. To relinquish Efficacy would be to give in to epiphenomenalism. All of these are unwelcome prospects for the card-carrying nonreductive physicalist.

In a recent version of the Causal Exclusion Argument, Kim develops the argument in two distinct stages. Stage 1 begins with the assumption that there are cases of mental-to-mental causation. *M* causes *M** (where *M* and *M** are mental properties and “*M* causes *M**” is short for “an instance of *M* causes an instance of *M**”). But because of Supervenience, *M** must have a supervenience base, *P**. We might ask, why was *M** instantiated on this occasion? It seems *P** trumps *M* since, regardless of what happened prior to *M**'s being instantiated, if *P** is present, then *M** *must* be present. So, if *M* is to count as a cause of *M**, it seems *M* must cause *M** by causing its supervenience base, *P**. So, an important result of Stage 1 is that mental-to-mental causation entails mental-to-physical causation. More generally, causation occurring at the “same level” entails “downward” (or “top-down” or “higher-to-lower-level”) causation.

Stage 2 begins with the observation that, according to Supervenience, *M* must also have a supervenience base, *P*. Because of the tight relationship between *M* and *P*, it seems that *P* would appear to qualify as a cause of *P** as well. So, we have two causal relations involved in the instantiation of *P**. Figure 1 captures where we are so far in Kim's argument. The arrows

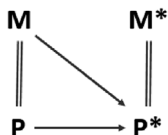


Figure 1. The putative causal exclusionary tension between mental events (M) and physical events (P).

signify putative causal relations and the double lines signify supervenience relations.

Kim then introduces the “Exclusion” principle:

Exclusion: No single event can have more than one sufficient cause occurring at any given time—unless it is a genuine case of overdetermination.

Assuming that the instantiation of P* should not involve a case of overdetermination, we are forced to choose between M and P. But which one? Kim invokes the Closure principle to cast the deciding vote:

Closure: If a physical event has a cause that occurs at *t*, it has a physical cause that occurs at *t*.

Since Closure guarantees that P* will always have a physical cause, Kim argues that we ought to choose P over M. Here is his rationale:

If we were to choose M over P as P*'s cause, *Closure* would kick in again, leading us to posit a physical cause of P*, call it P₁, and this would again call for the application of Exclusion, forcing us to choose between M and P₁. Unless P is chosen and M excluded, we would be off to an unending repetition of the same choice situation. (Kim 2005, 43)

The upshot of this argument, then, is that NRP is an unstable position. Some commitment must be relinquished, but which one? Being a reductive physicalist, Kim urges nonreductive physicalists to give up on Irreducibility. Though this is Kim's favored way of relieving the tension generated by NRP, other commitments may also be given up. For example, one might simply bite the bullet by giving up on Efficacy and embracing epiphenomenalism.

So much for Kim's Causal Exclusion Argument. Though not explicitly regimented in premise-conclusion form, Leidenhag adapts Kim's reasoning to pose a problem for NDC. It seems, however, that Leidenhag skips Stage 1 of Kim's argument. Moreover, he does not utilize all of Stage 2 in the debate over NDC.¹ What matters for Leidenhag is setting up causal competition between divine action and natural causation as depicted in Figure 2. It might go something like this. Let G be God's intention to bring about a certain state of affairs in the world, E. Let N be the natural cause of E. *Prima facie*, it seems we have two causes of E. According to

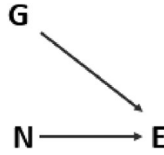


Figure 2. The putative causal exclusionary tension between divine action (G) and natural causation (N).

Exclusion, and assuming this is not a case of overdetermination, one of the two putative causes, G or N, must be eliminated.

How are we to decide which putative cause to reject? Here is where a proponent of NDC's commitment to the "completeness of Darwinian evolution and the full sufficiency of natural selection" (Leidenhag 2019, 916) might be used to generate a slightly modified Closure principle that tips the scale in favor of N:

Closure_N: If a natural event has a cause that occurs at t , it has a natural cause that occurs at t .

This fits nicely with Leidenhag's own understanding of NDC. He writes:

The compatibilist picture of NDC entails that for any event *in* the natural order, this event can be given an entirely natural explanation in terms of the categories of the sciences. There are no gaps in nature, as the theistic naturalists often want to remind us of. (Leidenhag 2020, 71)

Now we can argue, using *Closure_N*, that we ought to reject G as a cause of E lest we be met with an "unending repetition" of choice scenarios involving replacements of N.

LEIDENHAG'S USAGE

Leidenhag uses Kim's work to critique NDC but there are several issues with his usage. The first issue is with his presentation of Kim's work as a *novel* contribution to the dialogue over NDC. He writes:

If Peacocke, Clayton, Haarsma, Griffin, and Johnston argue that divine causation and natural processes are both sufficient causes for, in this case, the creation of humanity then this form of theological compatibilism seems to invite the problem of overdetermination. Thus, the problems that Kim has explored within philosophy of mind through the causal exclusion principle seem to be equally present within the theological area of divine action. (Leidenhag 2019, 917)

To keep this discussion manageable, I will focus only on Philip Clayton and Arthur Peacocke's positions regarding NDC. Both are well aware of Kim's work and make explicit reference to it in their writings. Here is a sampling:

Kim is right that emergentists—in any meaningful sense of the term—must give up the principle of [Closure]. (Clayton 2004, 56)

Hence, Kim argues, there is a conflict between the postulate of downward causation (derived from [Irreducibility] and [Efficacy]) and the physicalist's assumption that a complete physical theory can in principle account for all phenomena ([Closure]). . . I suggest that what Kim is illicitly assuming is that, when a physical microstructure 'physically realizes' a higher-level property (in this case, putatively, a mental one), then a sufficient account of the determinative relations can be given in terms of microphysical events at the realizing level, an account entirely (if only eventually) explicated by the laws and theories of physics. However, I have argued that, in the wider range of physical, biological, and other systems previously discussed, the determining effects of the higher levels on the lower ones are real but different in kind from the effects the parts have on each other operating separately at the lower level. The patterns and structures of the higher levels make a real difference in the way the constituents behave. (Peacocke 2006, 268–69)

It might be argued, based on these short excerpts, that Clayton and Peacocke, in embracing some form of emergence, are responding to the Causal Exclusion Argument by rejecting Closure. Of course, this may or may not be what Clayton and Peacocke ultimately espouse. The point is that Clayton and Peacocke engage with Kim's work and have already addressed (to their satisfaction) the worries Kim raises. It would have been more useful for Leidenhag to interact with a Kim-inspired critique of Clayton and Peacocke's responses to the Causal Exclusion Argument to move the debate over NDC forward. Instead, it seems Leidenhag only spends time rehashing well-trodden issues.

The second issue is with Leidenhag's introduction and use of supervenience. He "roughly" introduces the concept as follows:

The theory of supervenience suggests that higher-level property P supervenes on physical base B, in the sense that any event at P must correspond to an event at B. (Leidenhag 2019, 917)

I think the idea is more or less communicated, but there is a bit of imprecision in the language that does not follow Kim's property-exemplification view of events where an event is composed of three unique constituents: a substance, a property it exemplifies, and a time (Kim 1993, 35). There may be some conflation in the use of the terms "property" and "event." Consequently, it is not clear what is meant by an "event at P" or an "event at B."

Be that as it may, the more serious issue is with his suggestion that supervenience be used as a way of understanding the ontic relation between G and N for proponents of NDC. He writes:

NDC pictures a strong ontic relation between divine action, G, and natural causation, N. How should we more precisely understand this relationship?

One way to understand NDC is through the philosophical theory of “supervenience.” (Leidenhag 2019, 917)

Although it is true that the relation between G and N *can* be understood in terms of supervenience, it is far from clear that there is any unanimity among proponents of NDC regarding the application of supervenience to the God-world relation. If Clayton and Peacocke are any indication of where proponents of NDC stand with respect to the God-world relation, then it would be a mistake to lump proponents of NDC into a single position. Although they both take supervenience on board when discussing the mind-body relation they seem split on how far the mind-body relation can be taken as an analogy for understanding the God-world relation. Although Clayton is pretty clear that he will not follow the likes of Samuel Alexander in endorsing the emergentist picture all the way up to the God-world relation, Peacocke is less cautious. Here are some representative quotes:

The resources of emergence theory can help her introduce and defend divine action, but only if she construes the divine as the next emergent level in the cosmic evolutionary process... obviously, this sort of theory, although it may offer a naturalized framework for speaking of the influence of deity, will not yield divine action in anything like its traditional form. Most forms of theism are (rightly) highly reticent to construe God as merely an emergent feature of the world. (Clayton 2004, 189–90)

So we have to say that, though God is ineffable and ultimately unknowable in essence, yet God ‘is at least personal’, and personal language attributed to God is less misleading than saying nothing! That being so, we can now legitimately turn to the exemplification of whole–part influence in the mind–brain–body relation as a resource for modelling God’s interaction with the world. (Peacocke 2006, 276)

Clayton refuses to take the emergentist construal of the mind-body relation to the God-world relation. In fact, the final chapters of his book are dedicated to fleshing out his worries over this. Peacocke on the other hand, seems to embrace the mind-body relation and uses it to model the God-world relation.

The third issue is with Leidenhag’s “partial causation” solution to worries over causal exclusion. Here is how he introduces the idea:

As a response to the problem of overdetermination within philosophy of mind, this strategy urges us to think of physical explanations and mental explanations as separate and autonomous causal lines that explain different properties of the same effect. Applied on the issue of NDC, we can imagine divine activity, G, and natural causation, N, being causally relevant to different aspects, properties, or features of the explanandum; hence, there is no epistemic competition. Although certainly more coherent, the idea of partial causation, or dual explanandum, is too dualistic for the NDC

proponent, since partial causation posits two distinct and irreducible causes. (Leidenhag 2019, 919)

This is a straightforward way of responding to Kim's Causal Exclusion Argument (which involves a rejection of Closure) and its clarity should be counted as one of its virtues. The main problem is that this is not an original response with respect to the literature on NDC. Peacocke suggests something very similar here:

However, I have argued that, in the wider range of physical, biological, and other systems previously discussed, the determining effects of the higher levels on the lower ones are real but different in kind from the effects the parts have on each other operating separately at the lower level. The patterns and structures of the higher levels make a real difference in the way the constituents behave. Hence what happens in these systems at the lower level is the result of the *joint operation* of both higher and lower-level influences. The higher and lower levels could be said to be *jointly sufficient determinants* of the lower-level events, a proposition which has also been developed philosophically in terms of higher- and lower-level properties by Carl Gillett. (Peacocke 2006, 269)

Here Peacocke explicitly discusses the possibility of treating divine action and natural causation as partners in a "joint operation" of bringing about things in the world. Moreover, this directly contradicts the final sentence in Leidenhag's quote above:

Although certainly more coherent, the idea of partial causation, or dual explanandum, is too dualistic for the NDC proponent, since partial causation posits two distinct and irreducible causes. (Leidenhag 2019, 919)

Leidenhag clearly frames Peacocke as an "NDC proponent," so it is difficult to understand why Leidenhag simply disregards Peacocke's claims. Clearly, the idea of "partial causation" is *not* too dualistic for Peacocke. The bulk of Peacocke's research, after all, is to make sense of "top-down causation" in a nondualistic fashion. Of course, Leidenhag could try to undermine the reasons Peacocke has for maintaining such a position. This, however, would require engagement with the scientific arguments and evidences Peacocke has marshaled in his explication and defense of "top-down causation." But there is no such engagement in Leidenhag's work.

IS OVERDETERMINATION SO BAD?

For the Causal Exclusion Argument to work, a lot hangs on the assumption that mental causation is *not* a case of causal overdetermination. But, why assume this? Why think overdetermination is a problem?² Leidenhag seems to have two main concerns. First, is a concern about causal containment. He writes:

NDC based on either weak or strong supervenience undermines the causal efficacy of divine influence as, given the theory of supervenience, whatever happens on a higher level is already contained at the base level. That is, the causal contributions of God [(G)] are already present at the physical level [(N)], but this means... that supervenience invites epiphenomenalism. (Leidenhag 2019, 918)

But what exactly does “contain” mean? Leidenhag does not provide many details. Perhaps it means that G’s causal powers are of the *same type* as N’s causal powers? This is in line with his comment that it is unclear that divine influence “adds anything causally to our understanding of the natural order.” Moreover, in a more recent explication of the import of Kim’s reasoning, Leidenhag writes:

Kim’s work on causality and explanation [shows] that the NDC account of theistic evolution makes divine action causally redundant. (Leidenhag 2020, 71)

So, perhaps “contain” is simply meant to show that G would be causally redundant given N. But, then it is puzzling why these interpretations would be problematic. After all, causal redundancy is precisely what overdetermination entails. And, if divine action is indeed a case of overdetermination, would not Leidenhag’s critique cut both ways? Given the symmetry of overdetermining causes, could not we equally say that N is causally redundant given G?

Second, following the work of Martin Bunzl (1979), Leidenhag argues that cases of overdetermination simply do not exist. Bunzl writes:

Any case of causal overdetermination will resolve into either a case of causal preemption or a case of causal determination in which all causal factors played a partial role. (Bunzl 1979, 138)

Inspired by Bunzl’s account, Leidenhag suggests that causes must be (counterfactually) necessary for their effects. Consider a straightforward case of causation. An assassin shoots a victim and the victim dies. The assassin’s shooting is the cause of the victim’s death because had the assassin’s shooting failed to obtain then the victim’s death would also have failed to obtain (based on a “standard” way of evaluating the closest possible worlds where the assassin’s shooting failed to obtain). But consider a case where two assassins, Assassin 1 and Assassin 2, both shoot the victim at the exact same time. In this case, because of the causal symmetry, both assassins become causally redundant. If Assassin 1’s shooting failed to obtain then the victim’s death would still have obtained because of Assassin 2’s shooting. And the same holds for Assassin 2’s shooting. It seems, then, we would have to say that neither assassin was a cause of the victim’s death—but this is absurd!

One might take this as a reason for rejecting overdetermination. The problem with this move is that, we get the same result if we apply this framework to preemption. This time Assassin 1 shoots a split second before Assassin 2, so that Assassin 1's bullet kills the victim and Assassin 2's bullet misses the victim. It is clear that Assassin 1's shooting is the cause of the victim's death, but it fails the counterfactual test for necessity. If Assassin 1's shooting failed to obtain then the victim's death would still have obtained because of Assassin 2's shooting. It seems, then, we would have to say that neither assassin was a cause of the victim's death—but this is also absurd! Is Leidenhag ready to reject cases of preemption as well?

Some nuancing is in order, but none is given by Leidenhag. One popular way of nuancing this framework is introduce the notion of a *fragile* event. According to David Lewis (1986, 250), an event is fragile if “it could not have occurred at a different time, or in a different manner.” An implication of this move would be to make every case of overdetermination a case of joint causation. The victim's death via both assassins' shootings would be a different death from the victim's death that would have occurred had only one assassin's shooting occurred.

But this move has well-known drawbacks. Stathis Psillos nicely summarizes one such drawback:

If singular causal statements are such that the effect is taken to be as it really occurred (in its “fullest concrete individuality”), then it turns out that the effect is also necessary-in-the-circumstances for its (temporally prior) cause... this suggests that “x caused y” means that in all possible worlds that are like the actual in law and fact, if x hadn't happened, then y would not have happened... so a reliance on “fragile” events allows for backtracking counterfactuals and hence for the dependence of the cause on the effect. (Psillos 2002, 86)

In effect, what this means is that causes might depend on their effects in a way that is symmetrical with the way that those effects depend on their causes. Bunzl is aware of this possibility as well:

According to this doctrine, any event will be necessary in the circumstances for its effects, for, if it had not happened, the circumstances would have been different. I am not sure that the necessity isn't purchased here at the price of packing an account of the causes of events into the description of those events. (Bunzl 1979, 137)

Drawbacks aside, a more direct way of challenging Leidenhag's rejection of overdetermination is to consider some compelling examples of overdetermination that bypass Bunzl-type worries. Sara Bernstein, for example, offers the following case:

(Window Alarm) A window is rigged to an alarm. The alarm sounds if the window is shattered. Billy and Suzy throw their rocks; each hits the window at precisely the same time. The alarm sounds. (Bernstein 2014, 4)

Here, it seems we have a genuine case of overdetermination. The sounding of the alarm will not differ whether or not one or two rocks shatter the window. Although the kind of window shattering that occurs may be *sensitive* to the amount of force generated by the rocks that are thrown, the alarm is *insensitive* with respect to the amount of force generated by the rocks. Bernstein writes: “the sounding is precisely the same no matter how many rocks shatter the window” (Bernstein 2014, 5). Of course, more can be said here (and should be said), but the point is that claiming overdetermination does not exist is highly controversial and requires substantial work to maintain.

Third, following Dwayne Moore (2012), Leidenhag makes a distinction between independent and dependent overdetermination. In “standard” cases of overdetermination, there are “two independent causes that are individually sufficient.” In the case of mental causation, it seems we do not have two independent causes since mental properties supervene on physical properties. To then use a model of mental causation that relies on *dependent* overdetermination as a way of understanding divine action, according to Leidenhag, would constrain divine action in objectionable ways. God’s actions in the world are necessarily mediated by natural mechanisms on this account. But surely, Leidenhag objects, God can accomplish his purposes within the natural order without having to rely on any natural mechanisms within that order.

This is a puzzling indictment since proponents of NDC do not make such strong claims. In effect, Leidenhag seems to be attacking a straw man. Here, again, is Clayton:

Of course miracles in the strong sense—suspensions of natural law by God, who directly brings about some outcome without the mediation of finite causes—remain metaphysically possible: an infinitely powerful being (if one exists) could do anything it wanted in and with the world it created. (Clayton 2004, 188)

It is difficult to see how this can act as a critique when Clayton himself acknowledges and factors this worry into his position. Of course, it is open to Leidenhag to show why Clayton cannot help himself to such claims, but no arguments have been given. Moreover, I do not see how Leidenhag could legitimately level such an attack because Clayton does not endorse the straightforward application of nonreductive physicalist solutions to the Causal Exclusion Argument as a means of vindicating divine action.

Nevertheless, following Leidenhag’s lead, perhaps the distinction between independent and dependent overdetermination can help us make progress in this debate. The logic behind this distinction might be captured in a set of counterfactual conditionals. Karen Bennett (2003) offers us the following necessary condition on cases of independent overdetermination:

e is independently overdetermined by c_1 and c_2 only if the following are nonvacuously true:

(O1) If c_1 had happened without c_2 , e would still have happened: $(c_1 \ \& \ \sim c_2) \ \square \rightarrow e$.

(O2) If c_2 had happened without c_1 , e would still have happened: $(c_2 \ \& \ \sim c_1) \ \square \rightarrow e$.

A given conditional is nonvacuously true only if its antecedent is true. A conditional is vacuously true if its antecedent is necessarily false.

It is also important to note that this counterfactual test is *not* meant to be a sufficient condition for independent overdetermination. All we need, is a way of distinguishing cases of independent and dependent overdetermination. We can see why the assassins case satisfies the counterfactual test. If Assassin 1's shooting occurred without Assassin 2's shooting the victim would still have died. Moreover, if Assassin 2's shooting occurred without Assassin 1's shooting the victim would still have died.

The same, however, cannot be said of the mental causation case for nonreductive physicalist solutions to the Causal Exclusion Argument. Because of the NRP commitment to Supervenience, if we replace c_1 , c_2 , and e with M , P , and P^* , respectively, we can see that (O1) cannot be nonvacuously true:

(O1) If M had happened without P , P^* would still have happened.

The problem with this conditional is that the antecedent could never obtain! Because of supervenience, it is impossible for M to occur without P .

But all is not lost for the nonreductive physicalist because supervenience is not a symmetrical relation. Supervenience is consistent with the *same* mental property supervening on different supervenience bases. Given the nonreductive physicalist commitment to multiple realization it is standard practice to countenance different physical supervenience bases for any given mental property. So, it seems there is a way to salvage (O1). There are, after all, possible worlds that preserve Supervenience where M occurs without P —worlds where M is accompanied by a *different* supervenience base, say, P_1 ; and it is reasonable to think that, in this world, P_1 would remain a cause of P^* . There is indeed a way for (O1) to come out nonvacuously true.

The same, however, cannot be said for the other conditional (O2):

(O2) If P had happened without M , P^* would still have happened.

Because of Supervenience, P must always be accompanied by M . Consequently, the antecedent of (O2) can never come out true and (O2) has no chance of being nonvacuously true.

So, while there is some wiggle room with (O1) there is no corresponding room regarding (O2). What does this suggest? Well it seems there is more autonomy regarding M's relationship with P* than P's relationship with P*. Although there are worlds where M and P* occur *without* P (because M supervenes on P₁), there are no worlds where P and P* occur without M. In this sense we might think M serves as a better candidate for being the cause of P* than P.

There is, of course, much more that might be said. The point here is simply to introduce one of the many possibilities explored in debates over mental causation. Bottom line: there is a wealth of literature on nonreductive physicalist responses to the Causal Exclusion Argument that can be explored and, perhaps, fruitfully adapted to the debates over divine action.

To wrap up, I wholeheartedly support Leidenhag's engagement with Kim's Causal Exclusion Argument (and the broader literature on NRP and mental causation) in discussing divine action. There are, however, some missteps and missed opportunities. Not only does it seem that Leidenhag misrepresents some proponents of NDC, he fails to explore the causal exclusion literature in a way that respects the richness of the debates that have occurred and continue to occur. I hope this response to Leidenhag encourages others to exploit the causal exclusion literature in ways that provide insights into the debates over divine action.

NOTES

1. For discussions on adapting Kim's reasoning in both Stages 1 and 2 to issues regarding divine action, see Lim (2014, 2015).
2. Kim (2000, 2005) offers several different reasons for rejecting overdetermination but none of these are discussed by Leidenhag. For some explicit responses to Kim's reasons, see Lim (2013).

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