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Powers, Double Prevention and Mental Causation

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Q1 In recent papers (Gibb 2013, 2014) S.C. Gibb aims to provide an anti-physicalist solution to the problem of mental causation through a “Double Prevention” theory founded on a powers theory of causation. The aim of this paper is not to engage with causal powers metaphysic or the concept of double prevention themselves, both of which have significant merits, but to question the plausibility of the solution thereby provided to the mental causation issue. The initial problem is set out in familiar terms (Gibb 2013, 193):

Each of the following four claims seems individually plausible and yet they appear to form an inconsistent set:

- (1) *Relevance*: Mental events are causally relevant in the physical domain.
- (2) *Closure*: Every physical event contains only other physical events in its transitive causal closure.
- (3) *Exclusion*: As a general rule, events are not causally overdetermined.
- (4) *Distinctness*: Mental events are not physical events.

Gibb’s aim is to show that all four claims can be reconciled, providing space for a dualist model of psychophysical causation which gives mental events a specific causal role in the physical domain, whilst denying that this causal role is that of “initiating any single physical event or set of physical events in the chains of neurophysiological causation that terminate in bodily movement” (2013, 194).¹ In considering this account let us accept for the sake of argument the powers theory of causation, “according to which an effect is the manifestation of a causal power” (2014, 334), together with some of its consequences, namely that absences cannot be causes, and that powers or dispositions (Gibb uses the terms interchangeably) are real and so can exist unmanifested. Gibb’s proposal now is that “the causal role of mental events in the physical domain is to serve as ‘double

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¹ It is for this reason that Gibb uses *Relevance* rather than the more usual formulations of psychophysical causation such as “mental properties can produce physical effects”.

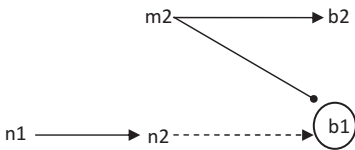
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preventers' – mental events are, in other words, enabling events which permit 1 physical events to be caused" (2014, 334). Let us consider this in detail.

To show how her proposal works Gibb provides the following example: n1 5 (the event that is the firing of neuron N1) causes n2 (the event that is the firing of neuron N2) and n2, via a disposition to make muscles contract, causes b1 (the event that is Fred's hand moving). Now add that n2's causing b1 is prevented by the presence of mental event m2, where m2 is Fred's desire to keep his body still. Fred's hand is therefore still (event b2), and the situation can be diagrammatically represented as follows:

(In Figures 1–3 a solid line ending in an arrow depicts a causal relation. A 10 solid line ending in a dot depicts an inhibitory connection. A broken line ending in an arrow depicts a causal connection that failed to occur. A broken line ending in a dot depicts an inhibitory connection that failed to occur. A circle around a letter signifies the non-existence of the relevant event.)



Q2 **Figure 1:**

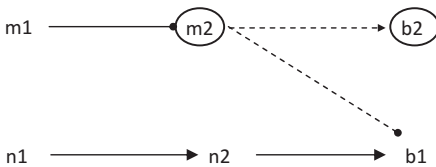


Figure 2:

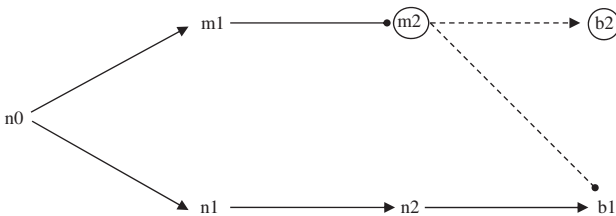


Figure 3:

As Gibb says, this clearly violates *Closure* since b2, a physical event, is 1
caused by the mental event m2. But consider an identical situation with the
following variation: in addition to m2 Fred has m1, the conflicting stronger
desire to move his hand, whose presence prevents the manifestation of his
desire to keep his body still. m1 is therefore a double preventer. It does not 5
cause, but permits b1 to occur. Diagrammatically we now have:

Here, Gibb argues, there is no violation of *Closure*, as on the powers theory
of causation double preventers are not causes of the event that they prevent
from being prevented, and if we accept this then both b1 and n2 contain only
other physical events in their transitive causal closure. Even so, Gibb recognises 10
that *Closure* would be violated in any situation where n1 causes n2, but m1 isn't
there to prevent m2 from preventing n2 from causing b1. Her conclusion is that
“for *Closure* to be true, in any case where there is n2 and m2, m1 *must* be there to
prevent m2 from preventing n2 from causing b1” (2013, 204).

Gibb now considers an objection, namely that “even though m2 does not 15
actually have any physical effect, the claim that m2 would prevent b1 and that it
would bring about b2 if it weren't for the presence of m1 is still in conflict with
the causal closure of the physical domain. More specifically, there must be
irreducibly psychophysical laws relating m2 and b1 and relating m2 and b2,
even though these laws are never implemented because of the presence of m1” 20
(2013, 206). Gibb denies that the existence of such psychophysical laws violates
the causal closure principle, claiming that such violation would require a
stronger closure principle for which there is neither metaphysical nor empirical
support: “one must basically provide a reason to rule out the claim that a mental
entity could be disposed to bring about or prevent a physical entity” (2013, 206). 25
In fact “the mental never actually does prevent the physical even though it is
disposed to do so” (2013, 207).

We are thus in a situation that can be summarized as follows:

1. Some mental events (to simplify, let us restrict this class to desires) are dis-
posed, or have the power, to intervene in the physical realm.² These disposi- 30
tions are however never manifested, as they are always either countermanded
by a double preventer desire or are in accord with what would anyway be
the physical causal train of events (more on this latter possibility later).
2. These interventions, were they actually to take place, are governed by irre-
ducibly psychophysical laws. These laws however are never implemented, 35
as the interventions never do take place.

² It is clear that any example of a mental event preventing a physical event taking place is a
case of the mental event causally intervening in the physical domain.

3. The existence of such desires, and of their countermanding double preventing desires, provides for the causal relevance of the mental which is crucial to this anti-physicalist approach to mental causation. Specifically, the double-preventers permit a neurological event to cause a bodily movement “by preventing a mental event that would have prevented the causal relation” (2013, 213). 1 5

We are now in a position to raise some key issues with the Double Prevention model. First, the model depends on an acceptance of mental causal intervention in the physical realm as a real possibility, ontologically grounded in the powers or dispositions of mental events, but never realised in this actual world. This seems then to present us with a remarkable universal coincidence, namely that “pre-venter” desires, which would otherwise intervene in the physical chain of events, are always accompanied by the countermanding double preventers. The real power of the would-be interventionist desire is therefore never manifested, and it is therefore “naturally impossible for Fred’s desire to manifest all that it is disposed for... to prevent n2 from causing Fred’s hand’s moving” (2013, 207). How can this coincidence and accompanying “natural” impossibility be made plausible? Gibb aims here to maintain *Closure* (while preserving *Distinctness*) by proposing that whatever causes n1 also causes m1. This is represented as follows, where n0 is some further neurological event. 10 15 20

So each neurological causal chain brings along a double preventer desire m1 to ride shotgun as it were, and defend the physical causal chain against any potential hold-ups perpetrated by would-be intervening maverick desires m2. Also, given the indefinite number of desires that could perform the preventing role of m2, there must either be a corresponding number of desires like m1 or a smaller set of very powerful desires in the m1 double preventing role capable of seeing off all comers. While such a picture may not in itself seem very plausible, it behoves us to consider what evidence there may be for the Double Prevention model, and here a second issue arises. 25 30

As noted earlier, Gibb sees that it is a requirement of the model that m1 *must* (Gibb’s italics) be there to prevent m2 from preventing n2 from causing b1. Without the necessary presence of m1 the model violates *Closure*, but what independent support can be provided for the ever-present double preventers? Gibb herself rules out any empirical neuroscientific evidence: the role of preventer and double preventer desires “is completely invisible to the scientist who studies only the physical events and their causal relationship” (2013, 207). Gibb then, with reference to William James account of conflicting desires, asserts that the account fits with the phenomenology of agency. But while in some cases one 35 40

of our desires is overcome by another stronger desire, in many if not most cases 1
it seems that we act on our desires with no sign of an accompanying “double
prevention”. The phenomenological evidence is at best ambivalent, and therefore
insufficient to justify the claim that our otherwise meddling desires are
always countermanded by double preventers. 5

Thirdly, the account is clearly committed to the existence of real but unma-
nifested causal powers of desires to intervene in the physical realm. Gibb
defends this idea by reference to the notion of a world without water in which
salt would retain its unmanifested disposition to dissolve in water. Let us accept
the notion of unmanifested causal powers. Even so, the difficulty with this 10
defensive strategy is twofold. To begin with, we possess empirical evidence of
the disposition of salt to so dissolve, but do not (and cannot, according to Gibb)
possess such evidence of the disposition of desires to causally intervene in the
physical world. Furthermore, we have well-confirmed scientific theories which
explain the salt’s disposition and its manifestation. However in the case of 15
desires, considered as distinct mental events, we have no such theories explain-
ing their disposition to affect physical events. We have instead the assertion of
the existence of brute unexplained powers of mental events to causally affect the
physical realm: an assertion which is required to maintain *Distinctness* within
the Double Prevention theory, but for which there is no evidence. One of the 20
central problems of mental/physical dualism thus returns in a new guise.

A fourth issue concerns *Exclusion*. For consider the case where a desire does
not conflict with the physical causal chain but accords with it: for example my
physiological state (lacking liquid) leads me to drink from a fountain, as does 25
my desire to quench my thirst, and there is no conflicting desire. In such
situations, argues Gibb, “there is nothing my desire must do to permit the causal
relation between the relevant physical events to take place” (2013, 212). This
surely will not do. As an agent I can choose whether or not to act on my desire,
but a desire, considered as a mental entity with real causal powers, cannot
choose whether or not to exercise those powers. In the absence of a counter- 30
manding double-preventing mental event the dispositions of the desire will be
manifested, and the thirst quenched. It seems clear then that my drinking from
the fountain is overdetermined by events in the physical causal chain and by my
desire. Furthermore this is a form of systematic overdetermination: *whenever* a
desire is in accordance with what the physical causal chain delivers, and is not 35
countermanded by other double-preventing desires, it will manifest its disposi-
tion to cause that same physical outcome. The Double Prevention model, far
from ruling out systematic overdetermination, presupposes it in all those happy
cases where the desired outcome is that delivered by the causal chain of events.

The conclusion of this paper then is that the Double Prevention model as it stands cannot plausibly reconcile the four claims at the heart of the problem of mental causation. *Closure* is maintained only on the assumption of a pre-ordained harmony between preventing and double-preventing mental events which stretches plausibility to its outer limits and for which there is no independent support. *Distinctness* is preserved only at the cost of positing brute unexplained powers of mental and physical events to causally interact with each other. *Exclusion* is systematically violated in a substantial number of everyday cases. The case for *Relevance* made by the Double Prevention model is accordingly too weak to sustain a dualist approach to mental causation. More generally, we might conclude that while establishing a workable ontology (such as I take the powers theory of causation to be) is important, it will not of itself provide an anti-physicalist solution to the problem of mental causation. For that task to be accomplished a different kind of approach will be required.³

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References

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³ For example, that outlined in Author 2014 (publication details withheld).

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