

On the Metaphysics of Mental Causation

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Abstract

In a series of recent papers, Cynthia MacDonald and Graham MacDonald offer a resolution to the twin problems of mental causation and mental causal relevance. They argue that the problem of mental causation is soluble via token monism – mental events are causally efficacious physical events. At the same time, the problem of mental causal relevance is solved by combining this causally efficacious mental property instance with the systematic co-variation between distinct mental properties of the cause and the action-theoretic properties of the effect in question. In this paper we argue that the solution offered by MacDonald and MacDonald faces significant difficulties in resolving both of the twin problems of mental causation and mental causal relevance.

In a series of recent papers (1986; 1989; 2006; 2007; 2007; 2010), Cynthia MacDonald and Graham MacDonald offer a resolution to the twin problems of mental causation and mental causal relevance. They argue that the problem of mental causation is soluble via token monism – mental events are causally efficacious physical events. At the same time, the problem of mental causal relevance is solved by combining this causally efficacious mental property instance with the systematic co-variation between distinct mental properties of the cause and the action-theoretic properties of the effect in question. In other words, their model is an instance of the familiar strategy of yoking token monism with property dualism. MacDonald and MacDonald, however, endorse this nonreductive monism from within a property exemplification account of events. In this paper we argue that nonreductive monism, when yoked with the property exemplification account, faces significant difficulties in resolving the twin problems of mental causation and mental causal relevance.

This paper is divided into four sections. First, we outline the position of MacDonald and MacDonald in some detail (§1). We then point to a number of difficulties that their model of mental causation faces, all of which resolve around their attempt to combine the property exemplification account of events with a co-instantiation thesis of property exemplification (§2). Next, we show that MacDonald and MacDonald also have problems securing mental causal relevance of mental property instances (§3), each of which arise from difficulties associated with the co-instantiation thesis implying either the simplicity or complexity of events. More specifically, if events are complex, as many take them to be, there is too little causal relevance, and mental causal relevance fails. But, if events are simple, which is difficult to establish, there is too much causal relevance, and every property instantiated as the event is causally relevant. Finally, we show the difficulties that MacDonald and MacDonald have in establishing the causal

relevance of mental properties (§4). Namely, MacDonald and MacDonald preserve the causal relevance of mental properties by employing a dubious formulation of the exclusion principle, while a more appropriate exclusion principle falsifies their solution.

1.

The problem of mental causation states that every mental event lacks causal efficacy in generating its effects if a physical event is causally sufficient for that effect. MacDonald and MacDonald solve this problem by endorsing token monism – the view that mental events are causally potent physical events: “We can take it that the putatively two events are really the same event” (G. MacDonald, 2007, 242). As Graham MacDonald notes, this is “essentially the Davidsonian solution” (G. MacDonald, 2007, 242), whereby mental causation is secured via token monism.

There are, however, important differences between Davidson’s approach and the one proposed by MacDonald and MacDonald, which have their origins in their differing views of events. Whereas Davidson endorses token monism within a coarse-grained model of events, MacDonald and MacDonald advocate for token monism within the fine-grained property exemplification model of events. Davidson takes events to be entities with numerous properties, or capable of supporting multiple true descriptions. However, given his nominalism about properties he did not think of events as literally constituted by clusters of properties (or their instances). Property exemplification accounts, by contrast, involve a far more robust ontology that treats properties as more than ways of describing events; they are metaphysically constitutive of events. Such views typically construe an event as the instantiation of a property in an object at a time (Kim, 1993, 33-52; Lombard, 1986). Since these three parts constitute or make up the event, they are called the “constitutive object,” “constitutive property” and “constitutive time” of the given event, respectively.

According to the property exemplification theory, although an event is the exemplification by an *object* of a property at a time, *events* themselves can also exemplify properties. MacDonald and MacDonald call these further properties “characterizing” properties (MacDonald and MacDonald, 2006, 560), while Jaegwon Kim, another proponent of the property exemplification account, prefers to say that events have intrinsic descriptions that highlight the constitutive property exemplified by the constitutive *object*, and extrinsic descriptions, that pick out the event by properties the *event* exemplifies (Kim, 1993, 42-43). On the Davidsonian view there is no meaningful contrast between so-called “characterizing” and “constitutive properties” since all properties that can be truly ascribed to an event are a matter of description rather than the metaphysics of the event itself.

MacDonald and MacDonald’s property exemplification model delivers token monism as follows. According to the property exemplification account, properties are universals which are instantiated as the thing (i. e., object/event) that has it:

On the universalist conception presumed by the PEA [property exemplification account], things exemplify properties, and a thing just is (i. e. is identical with) an instance of each property that it has. Thus, an event exemplifies its properties, and it is (= is identical with) an instance of each property it has. (MacDonald and MacDonald, 2007, 14; see also MacDonald and MacDonald, 2006, 562; MacDonald, 2005, 197)

In the same way that a four-legged, yellow, ferocious, . . . , male, furry lion is one particular object which is the compresent instantiation of all of these properties, so the determined, bare-footed, lengthy, . . . , winding, six mile per hour running is a single event, where this event just is an instance of all of these properties. This suggests that one instance, or event, can

be an instantiation of many distinct properties. MacDonald and MacDonald call this the co-instantiation thesis:

Co-Instantiation Thesis: Two or more properties of an event can be co-instantiated in a single instance, that is, there can be just one instance of distinct properties (MacDonald and MacDonald, 2006, 562).

As the property of being a running and the property of being a movement are both instantiated as one event, which is John's running at noon, so a mental property and a distinct physical property can be co-instantiated as one causally efficacious event, thereby securing mental causation while also preserving property dualism.

This may solve the problem of mental causation, but a number of authors suggest that token monistic solutions of this sort gives rise to the related problem of mental causal relevance (Honderich, 1984, 86; Honderich, 1988, 15; Horgan, 1989; Kim, 1993b, 21; McLaughlin, 1993; Sosa, 1984, 277-278). MacDonald and MacDonald articulate the problem of mental causal relevance by first of all introducing the following four theses:

1. *The Principle of the Causal Relevance of Physical Properties:* Physical properties of physical events are causally relevant to the physical effects those events bring about (MacDonald and Macdonald, 2006, 544).
2. *The Principle of the Causal Relevance of Mental Properties:* Mental properties of physical events are causally relevant to some of the mental and physical effects those events bring about (MacDonald and Macdonald, 2006, 544).
3. *Exclusion:* If a property, *P*, of a cause, *c*, is causally sufficient for an effect, *e*, then no other property, *Q*, distinct from and independent of *P*, is causally relevant for *e* (MacDonald and Macdonald, 2006, 544).
4. *Closure:* If a physical event or phenomenon has any cause, it has a sufficient physical cause, whose physical properties are causally sufficient for its effect (MacDonald and Macdonald, 2006, 546).

Assuming that mental properties are distinct from physical properties, it seems that theses (1), (3) and (4) imply the falsity of (2). Suppose my being in pain causes me to utter a colourful metaphor. It seems, in accordance with the causal relevance of mental properties, as though the mental property (pain) is causally relevant to my utterance. However, since my utterance is a physical event, according to the causal relevance of physical properties and closure, there is a physical property that is sufficient for its occurrence. Exclusion tells us that no other distinct and independent property can be causally relevant to my utterance, in which case it seems as though the mental property is excluded from being causally relevant to my utterance.

MacDonald and MacDonald's solution to the problem of mental causal relevance has two components. It has a causal component pertaining to property instances, and a nomological/explanatory component pertaining to the abstract, universal properties themselves. With respect to the causal component, MacDonald and MacDonald argue the mental property instance of the event is identical to the physical property instance of the event, in virtue of the fact that the mental property instance is the event that is the physical property instance. Thus, mental property instances are causally efficacious, as they are causally efficacious events:

“ [...] exemplifications of mental properties of mental events are identical with exemplifications of physical properties of physical events (since each mental event is identical with a physical event). So, to say that a mental property of a physical event is causally relevant (that is, that a mental event is causally efficacious *qua* mental) is to say *at least* that an exemplification of that

property, that is, that event, is causally efficacious in bringing about an effect of that event.” (MacDonald and MacDonald, 2006, 562, see also MacDonald and MacDonald, 2006, 566; and MacDonald and MacDonald, 2006, 541)

In other words, since an instance of a mental property simply is the mental/physical event that has it (in accordance with their universalist understanding documented above), and an instance of the physical property simply is that same mental/physical event which also has it, the instance of the mental property *is* the instance of the physical property. Thus, the mental property instance is (i. e., the mental event) is causally efficacious, and this efficacy of the mental property instance is a necessary but insufficient condition for mental causal relevance.

While the causal efficacy of the mental instance is necessary, mental causal relevance also requires, “systematical property dependence or co-variation” (MacDonald and MacDonald, 2006, 574) between the mental properties of the cause and the properties of the effect as well. If mental properties systematically co-vary with the occurrence of the action-theoretic properties of the effect, then it is reasonable to suppose that these mental properties are relevant to the occurrence of the action-theoretic properties of the effect. This systematic co-variation arises because mental properties strongly supervene on physical properties (MacDonald and MacDonald, 2006, 565), so the mental properties of the cause necessarily precede the action-theoretic properties of the effect. The systematic covariance between the mental properties of the cause and the action-theoretic properties of the effect, combined with the causal efficacy of the mental property instance (i. e., the event), generates mental causal relevance.

It may be objected that this model of mental causal relevance fails on account of the fact that the physical property is causally sufficient for the effect, so the distinct mental property cannot be causally relevant for the effect. MacDonald and MacDonald solve this problem by pointing out that exclusion pressures only arise if the mental properties are, “distinct from and independent of” (MacDonald and MacDonald, 2006, 544) physical properties. Given strong supervenience, mental properties are, “distinct from but not independent of physical ones” (MacDonald and MacDonald, 2006, 566), so there is no exclusionary tension between the causally relevant physical properties and the causally relevant mental properties.

In these ways, MacDonald and MacDonald claim to secure (1) the causal efficacy of mental events via event identity; (2) the causal relevance of mental properties of mental events via the efficacy of the mental instance (which is implied by the event identity) combined with the systematic co-variation of mental properties of the cause with the action-theoretic properties of the effect. Unfortunately, there are problems with these solutions, which we will now discuss in turn.

2.

As outlined above, Cynthia MacDonald and Graham MacDonald secure the causal efficacy of mental *events* by advocating a form of the token-identity thesis. While this kind of approach is generally regarded as successful, and few have objected to it – even in its original Davidsonian form – we suspect that there is a tension between adopting this approach while simultaneously advocating the property exemplification account of events. This is because the criterion for event identity on the property exemplification model suggests one event cannot be the instantiation of two different properties. Here is the condition governing event identity on the MacDonalidian (and Kimian) model:

Identity Condition: Event $[x, P, t]$ is identical with event $[y, Q, t']$ if and only if the object x is identical with the object y , the property P is identical with

the property Q , and the time t is identical with the time t' (MacDonald and MacDonald, 2006, 557; see also Kim, 1993, 9).

According to this condition, mental events cannot be physical events ($m \neq p$) if, among other things, mental properties are not physical properties ($M \neq P$). Kim uses this identity condition to argue that if mental properties are not physical properties, mental instances cannot be physical instances (Kim, 2005, 42; see also, Marras and Yli-Vakkuri, 2008, 117). Call this “the single-instantiation thesis” (in contrast to the MacDonaldian co-instantiation thesis). According to the single-instantiation thesis the instantiation relation is exceedingly tight, so two different properties, when instantiated, must yield two different property instances. Thus, where events are indicated by lower-case variables and properties by upper-case variables, if p is an instance of P , m is an instance of M , and h is an instance of H , it will not be the case that p is an instance of P and M and H , as the co-instantiation thesis allows unless the properties P , M , and H are really the same property. If Kim’s single-instantiation thesis is true, then the MacDonaldian co-instantiation thesis fails, and the mental/physical event identity cannot go through (at least, not without the accompanying property-identity). For their own part, a number of authors agree with Kim’s single-instantiation thesis (Ehring, 1996, 462-463; Gibb, 2004, 469; Lowe, 1989, 113; Menzies and List, 2010, 110; Whittle, 2007, 64-65). The single-instantiation thesis that is plausibly derived from the property exemplification account undermines MacDonald and MacDonald’s solution to the mental causation problem.

Graham MacDonald, however, argues that Kim’s single-instantiation thesis is “blocked by compelling reasons” (G. MacDonald, 2007, 243). According to him, the most plausible interpretation of the familiar determinable/determinate relation is to posit a co-instantiation thesis:

The colour-property [red] is a different property from the property [light red], given that it can be present when [light red] is not. But when [light red] is instanced, it is clear that [red] is instanced as well, and it is natural to assume that these are not two separate instances (G. MacDonald, 2007, 243).

To switch the illustration somewhat, a dark red token may be a red token as well. The alternative to this natural assumption is to countenance the, “multiplication of many instances whenever a determinate property is instanced” (G. MacDonald, 2007, 243). In other words, if a dark red token is distinct from a red token, then both a dark red token and a red token are instantiated in an object at a time, which involves an excessive proliferation of events.

Unfortunately, it is not natural to assume the MacDonaldian co-instantiation thesis provides the best interpretation of this situation. Consider, for example, some of the other properties that are co-instantiated with the dark red token. This dark red token is also an instance of being coloured, being visible, being the colour of Mars, being the colour of Mars and ketchup, being the colour of Mars and ketchup or grass, *et cetera*. This token will be the instance of an endless number of properties that stand in some sort of dependency relation. Imagine that a woman walks into a store and buys a dark red shirt. In addition, imagine that this woman hates the look of ketchup and has never seen the planet Mars. According to the co-instantiation thesis, the instance of the property of ‘being the colour of Mars and Ketchup’ will be as causally efficacious in producing her purchase as the instance of the property of ‘being dark red’. In contrast, the single-instantiation thesis, simply asserts that the dark red token is an instance of dark red, period. Therefore, the dark red shirt is purchased because of the dark redness of the shirt alone.

The MacDonaldian co-instantiation thesis suffers from a further complication, which is similar to an objection Sophie Gibb levels against tropist versions of the co-instantiation thesis (Gibb, 2004, 470ff). Namely, every instance m , or exemplification m of a property M , if it genuinely is an example of property M , will bear a strong affinity to property M . We can syntactically represent this affinity between an instance and the property through the use of the lower case and upper case versions of the same letter. Thus, instance $m1$ will strictly resemble M , and $m2$ will strictly resemble M , thereby ensuring that $m1$ strictly resembles $m2$. Coupling the co-instantiation thesis with multiple realizability, however, it is clear that $m1$ can be a physical token $px1$ of Px , while $m2$ can be a physical token $pz1$ of type Pz . The property Px is not identical to the property Pz , and therefore they do not share a close essential affinity. This being the case, the token $px1$ of Px and $pz1$ of Pz need not resemble one another. The result is that the token $m1/px1$ both must and must not resemble the token $m2/pz1$. Something is amiss. This problem arises in large part because of the co-instantiation thesis. After all, if the $m1$ token is not the $px1$ token, then the simultaneous resemblance and distinction among instances that is so troublesome does not arise. For example, on the Kimian single-instantiation thesis, the instance $m1$ of M and $m2$ of M resemble, while the distinct instances $px1$ and $pz1$ do not resemble.

Not only does the MacDonaldian co-instantiation thesis lead to these counterintuitive results, but the Kimian single-instantiation thesis provides a more natural interpretation of causal efficacy. To use a different example from Graham MacDonald, Sally, who weighs 115 kilograms, steps on the scale and this causes the arrow to point at the 115 kg mark (G. MacDonald, 2007, 245-246). On the co-instantiation thesis, the 115 kg stepping is also a 'greater than 100kg' stepping, a 'less than 116kg' stepping, a nervous stepping, an afternoon stepping, *et cetera*. On the co-instantiation thesis all of these properties are instanced as one event, so they all have the same amount of causal efficacy. This includes the seemingly irrelevant properties instanced in the event, such as the nervousness of the stepping, and it also includes the instantiations in the event that stand in dependency relations but seem to be unlikely causes of the effect, such as the stepping 'being less than 424 kilograms' (or, 'having weight' in general), being the cause of this scale reading 115kg.

In contrast, the single-instantiation thesis suggests that the constitutive property of an event reveals the fundamental essence of it, while characterizing properties are accidental, extrinsic and/or derivative properties of the event. For example, the constitutive property of the causal event is a 115 kilogram stepping, which causes the 115kg reading on the scale. This event has various characterizing properties as well, such as the event's being a nervous stepping, the event's being a 'greater than 100kg' stepping, and the event's 'being of the same weight as Frank's' stepping. The 115kg stepping is constitutive in the sense that it bears a nomological and explanatory relation to the 115kg scale reading. No such law exists between 'greater than 100kg' steps and 115kg readings, so the event is not as fundamentally a 'greater than 100kg stepping' as it is a 115kg stepping. The 'greater than 100kg' stepping is also an extrinsic property of the event since, if the event is taken in isolation it is not related to other steppings or weights, so it may not have the properties of being 'greater than 100kg' or of 'being the same weight as Frank's'. These characterizing properties are also derivative properties of the cause in the sense that the event is only a 'greater than 100kg' stepping because it is actually a 115kg stepping. The converse does not hold; the event is not only a 115kg stepping because it is actually a 'greater than 100kg' stepping. This asymmetry suggests the fact that this event is more fundamentally a 115kg stepping, as the single-instantiation thesis suggests.

This discussion hints at a resolution to the second objection lodged against the single-instantiation thesis. Recall that Graham MacDonald argued that a rejection of the co-instantiation thesis results in a proliferation of events. It is possible to reject the co-instantiation thesis without a resulting proliferation of events in a number of ways. First, one could simply argue that determinable properties such as those mentioned above do not exist, resulting in no proliferation of instances (Gillett and Rives, 2005). Or, less radically, according to the single-instantiation version of the property exemplification model discussed above, an event is the instantiation of one constitutive property, while this event has a number of other characterizing properties. This does not imply that there is a distinct event for every instantiation; rather, it implies that there is one event, and this event has a number of characterizing properties. For example, Brutus' stabbing is one event that has the characterizing property of being a killing. On this model, there is no proliferation of events, for there remains only one event. There are, however, numerous characterizing properties of the one event. MacDonald and MacDonald, however, agree that events have a number of characterizing properties, so it is not clear how this single-instantiation thesis is excessive. The single instantiation thesis, therefore, stands clear of objection, and, for a number of reasons, is the preferable interpretation of the property exemplification model of events. But, if the single-instantiation thesis is true, it is not possible for the distinct mental property to be instantiated as the same event as the instantiation of the causally efficacious physical property, which results in the loss of mental causation.

3.

In the preceding section we argued that the problem of mental causation cannot be solved by appealing to MacDonald and MacDonald's version of the co-instantiation thesis. In the next two sections we argue that the further problem of mental causal relevance cannot be solved using the tactics suggested by MacDonald and MacDonald either. Recall that the problem of mental causal relevance states that despite the mental/physical event identity, it is plausible that the event causes in virtue of its physical properties, thereby excluding the causal relevance of the mental properties. MacDonald and MacDonald solve this problem by suggesting both that (1) the mental property instantiated as the event is causally efficacious, and that (2) the mental property systematically co-varies with the action-theoretic properties of the behavioural effect, so the mental property is causally relevant to the effect.

In this section, we establish a number of problems with the first criterion of this solution to the problem of mental causal relevance. Notice, first of all, that this criterion can be interpreted as saying either that events are ontologically simple or that events are ontologically complex. Serious difficulties arise on both interpretations, and we will begin with the former. According to this interpretation, MacDonald and MacDonald can be read as stating that an event is (identical with) an instance of many properties, which means that there is only one instance (i. e., the event) and this event cannot be broken into components. Thus, it makes no sense to suggest that there is a mental property instantiated in the event and a distinct physical property instantiated as another component or constituent of the event. Rather, there is only a simple event that cannot be divided in these ways.

There are a number of difficulties with this model. First of all, many, if not all, of the critics mentioned above who delineate the problem of mental causal relevance reject the simplicity of events. Therefore, the solution offered by MacDonald and MacDonald fails to solve the problem formulated by these critics. To see this problem in detail, consider Ted Honderich's charge that mental properties of causes are excluded by the physical properties of causes. When Honderich argues that mental properties of events lack causal relevance, he is not considering

events as ontologically simple. Rather, Honderich argues that events are ontologically complex entities in the sense that they have a number of components or aspects that can be thought of as particularized properties, concretized properties, or property instances. Examples of particularized properties include ‘this hardness of this brick’, ‘this height of this building’, and ‘this redness of this brick’. The last example indicates that the same object or event (i. e., this brick), can instantiate two different particularized properties (i. e., this hardness of this brick and this brick redness of this brick). Although these two particularized properties are instantiated in the same brick, this hardness of this brick is a distinct component, aspect, or particularized property, of this brick from this redness of this brick. As Honderich explains:

It is not the age or the sheen of the teapot that is flattening the napkin, but its weight. It is not the weight of the door but its colour that makes it reflect the light. The most natural answer to the question of what caused something, then is a property of an ordinary thing. What needs to be resisted immediately, however, is that what is in question is a general property, a universal. It is not the general property of weighing a pound, which is other or more than this teapot weighing a pound, which is flattening the napkin. That general property will exist if the weight of the teapot is changed and the napkin isn’t flattened We come to the idea, then, that what is flattening the napkin is *this teapot’s weight*, an individual property of this teapot It is not *all* of the teapot, or any individual property of it other than its weighing a pound, that is an instance of the general property of weighing a pound . . . causes strictly speaking are individual properties. (Honderich, 1982, 292; see also Honderich, 1984, 86 and Honderich, 1988, 15; Horgan, 1989; McLaughlin, 1993)

With this metaphysical backdrop in mind, it is clear that when Honderich suggests that a brick has the property of being heavy and a distinct property of being red, he is suggesting that this redness of this brick is a distinct component of the brick from this hardness of this brick. And so, it is perfectly coherent to wonder whether this brick broke this glass in virtue of this redness of this brick or in virtue of this hardness of this brick. With regards to the case of mental causation, this model indicates that the mental/physical event has a particular mental property instance and a distinct physical property instance. Thus, it is reasonable to ask which aspect of the complex event caused the effect. Since the physical component of the complex event is sufficient to cause the effect, the mental component of this complex event is irrelevant and hence excludable.

MacDonald and MacDonald reject the formulation of the causal relevance problem that Honderich suggests (Macdonald and Macdonald, 1991, 25-29). Although events are the competent instantiation of many properties for MacDonald and MacDonald, events are still simple in the sense that events lack distinct components by which to raise questions about which particular aspect of the event is causally responsible for the effect. But, this move evades rather than addresses the problems raised by Honderich and others. That is, MacDonald and MacDonald suggest that events are simple, but the critics continue to argue that events cause in virtue of one aspect of the event.

Not only do a number of critics argue that the problem of causal relevance is a problem pertaining to which aspect of a complex event is causally relevant, but there is reason to prefer the view that events are complex. First of all, it is intuitively plausible that objects/events are complex in the sense that they have differing components as ontological constituents. While

it is true that the earth is the compresent instantiation of many properties, it also appears to be the case the earth has a variety of components to it. In other words, this wetness of this earth is not identical to this weight of this earth.¹ While walking around the earth, it appears clear that the earth has these distinct components to it. Or, to borrow an example from Honderich, it is perfectly reasonable to suspect that this weight of this pear is a distinct component of this pear from this greenness of this pear. If objects/events can be analyzed in this manner, then the question about which component of the complex event is causally relevant remains poignant.

Secondly, there are a number of reasons to think that simple events cannot be accommodated within the property exemplification model that MacDonald and MacDonald deploy. According to the property exemplification model, events are complex in the sense that they are constituted by, at least, a constitutive object, constitutive property and constitutive time (cp. Ehring, 1996; Robb, 1997). It may be possible to object to the view that these three constituents imply that events are complex on the grounds that an event is the specific structure of an object's having a property at a time, it is not an object, a property and a time (MacDonald and MacDonald, 2006, 559). Even if this response is viable, the property exemplification account implies that events have components in another way as well. Namely, every event consists of a constitutive property and many characterizing properties. For example, John's run is a run, and it is winding, determined, long and occurred outside of Boston. It is natural to suppose that this run has a number of components, whereby this run's windingness is not identical to this run's length, which is not identical to this run's location. This is especially so if constitutive properties are instantiated in objects while characterizing properties are instantiated in events. After all, clearly instances can only be identical if, among other things, they are co-located in the same entity. The constitutive property is instantiated in an object, which is distinct from the event, so these instances cannot be identical. Since these instances are not identical, it is not viable to suppose that they are co-instantiated as a simple event.

Beyond these general concerns related to the property exemplification account, the MacDonaldian model of simple events also renders every property instanced as the event causal. To borrow another example from Ted Honderich, John's slipper just is the instantiation of many properties, such that John's fleecy, mauvish, comfortable ... light, stinky, slipper is on his foot. On MacDonald and MacDonald's model, we attain causation in virtue of a certain property due to the fact that the property just is instantiated as the slipper. Thus, the slipper warms in virtue of its fleecyness because the fleecyness just is instantiated as this object. At the same time, however, the slipper can be said to warm in virtue of the mauvishness because the mauvishness just is instantiated as this object. Similarly, the slipper can be said to warm in virtue of the foot-like odor of the slippers, for the foot-like odor just is instantiated as this object. One hopes that causation in virtue of the mental instance is not equivalent to the causation in virtue of the mauvish instance found in this example; surely mental instance causation is not secured because every property instantiated as the event is efficacious! A number of critics have leveled this 'too much efficacy' charge against MacDonald and MacDonald (Wyss, 2010, 174).²

¹MacDonald and MacDonald object to this model which, in their words, invokes "property instances that mediate between particular and ... universal" (MacDonald and MacDonald, 2006, 562; see also MacDonald, 2005, 212), as problematically tropist. If, however, it is intuitively plausible that objects have components (i. e., this wetness of this earth is distinct from this rockiness of this earth, which is distinct from this weight of this earth), then it is difficult to see why this model is problematic.

²MacDonald and MacDonald accept this result as an "inevitable consequence" of their theory (MacDonald and MacDonald, 2006, 563) since, "on our account all properties 'sharing' an instance that is causally efficacious are causally efficacious properties" (G. MacDonald, 2007, 245).

MacDonald and MacDonald face a final troublesome consequence. As hinted at with the slipper, when applying the MacDonalidian model to objects we see that an instance of the property, red, “just is the red bird” (MacDonald and MacDonald, 2006, 562), so an instance of the property of being alive just is the alive bird, and an instance of the property of being winged just is the winged bird. And so the bird that is red just is the bird that is alive. It is natural to wonder whether this also means that this life of this bird, is identical to this redness of this bird. Or in other words, is this example of red that this bird has identical to this example of life that this bird has? According to the model of simple events (or, in this example, simple objects), the answer seems to be that yes, this life of this bird is identical to this redness of this bird. After all, this bird is simple, it lacks distinct instances of properties. Since the property of being alive is instantiated as the bird and the property of being red is instantiated as the bird, so this life of this bird is this redness of this bird, at least in the sense that the live bird is the red bird. The problem here is that identity is transitive. Thus, if the bird is red (r is b) and the bird is winged (w is b) and the bird is alive (a is b), the implication is that the bird’s redness is the bird’s wingedness, which in turn is the bird’s life (r is w is a) – which is absurd. Or, with respect to the crucial case of events, Susan’s run is six kilometers long ($6l$ is Sr) and Susan’s run is barefooted (b is Sr), so this example of six kilometer length that Susan’s run exemplifies is this example of barefootedness that Susan’s run exemplifies – which is absurd. This consideration, combined with the others listed above, indicates that events ought to be construed as having distinct aspects, or, in other words, that events ought to be construed as being complex.

Given these difficulties, it is worth considering whether MacDonald and MacDonald endorse the view that events are ontologically complex. MacDonald and MacDonald appear to appeal to a constitution relation rather than an identity relation at times. For example, they state, “This redness, this shape, this size, and this position, related to one another by compressence relations, together ‘constitute’ or comprise the cardinal sitting on the branch of the tree” (MacDonald and MacDonald, 2006, 548).³ And, at least one critic has interpreted MacDonald and MacDonald as endorsing the view that although many properties are instantiated as the same event, this event continues to have components (Crane, 1995, 222). While complex events would avoid the aforementioned problems with simple events, it gives rise to different problems. In a recent paper, Graham MacDonald considers the possibility that a physical property P and a mental property M can have two distinct instances m_{it} and p_{it} within the same event. He rejects this possibility because it re-introduces the problem of mental causal exclusion at the level of instances:

If we accept the move from [mental property \neq physical property] to [mental property instance \neq physical property instance], that will commit us to saying that a single event can exemplify two different properties by possessing two instances, one for each property. If we grant this, then we will have saved physicalism, and avoided overdetermination in the form of event-overdetermination. But that should not satisfy anybody, because what we will be left with is instance-overdetermination (G. MacDonald, 2007, 243).

³To be fair, they state this in the context of the trope theory, which they later reject. On other occasions, however, when discussing the relationship between substances and their properties, Cynthia MacDonald appears to endorse a constitution relation between substances and their properties as well (MacDonald, 2005, 121). She argues that a cat has the constitutive property of being a cat, and this cat is constituted by a variety of characterizing properties as well, such as the cat’s blackness, and the cat’s weight. She does not, however, argue that events exemplify a constitutive property in an object, while this event is constituted by its characterizing properties.

In other words, the mental/physical event will be causally efficacious, so mental causation will be preserved. However, the mental instance that is instantiated in the mental/physical event is distinct from the physical instance that is instantiated in the mental/physical event. Thus, since closure and physical causal relevance suggests that the event will cause in virtue of the physical property instance, the event will not cause in virtue of the mental property instance, and we will fail to secure this criterion for mental causal relevance. To avoid this consequence MacDonald and MacDonald need to appeal to the identity relation, stating that this mental property instance of this event is this physical property instance of this event. But, this identity relation returns them to the difficulties listed above.

4.

Even if MacDonald and MacDonald can somehow circumvent these difficulties associated with criterion (1) of causal relevance, there are still certain problems that criterion (2) of their model of mental causal relevance faces as well. MacDonald and MacDonald suggest that mental properties supervene on physical properties, and this dependency relation ensures that mental properties consistently co-vary with the action-theoretic properties of their effects. It is possible to object along exclusionary lines: the physical properties are sufficient for the effect, so the mental properties are not causally relevant after all. MacDonald and MacDonald reply that mental properties are not independent of physical properties, so it is possible for the physical properties to be sufficient for the effect, while also including the dependent mental properties. There are, however, several problems with this line of reasoning.

First, as previously noted, MacDonald and MacDonald recognize that the concern that too many properties seem to be causally relevant on their model. Seemingly, the greenness of the pear is causally relevant to the scale's pointing at the two-pound mark since the green pear causes the scale to point at the two-pound mark. Or again, the loudness of the shot is causally relevant to the victim's death since the loud shot causes the death, *et cetera*. MacDonald and MacDonald respond by pointing out that causal relevance also requires properties to systematically co-vary with the properties of the effect. Instances of greenness do not systematically co-vary with instances of two-pound readings, so there is no reason to think this instance of greenness would be causally relevant to the two-pound reading. Instances of two-poundness, however, do co-vary with instances of two-pound readings, so this property is causally relevant. While this test may exclude a number of obviously irrelevant properties, there still remains an excess of dependent, systematically co-varying, and hence relevant, properties that withstand this test. The scale breaks when someone weighing more than 115kg steps on it. Johnson, being 170kg breaks the scale, so the property of being 170kg is relevant, but so is the property of being more than 169kg, the property of being more than 168kg, the property of being a weight more than 168kg or less than 5kg, *et cetera*. These properties are dependent upon the property of weighing 115kg, so they are causally relevant on the MacDonalidian model. Therefore, there still appears to be an excess of causally relevant properties.

Not only is this excess of causally relevant properties unwelcome, but notice as well that the strategy that MacDonald and MacDonald deploy only works if exclusion allows distinct but dependent properties to be included. While MacDonald and MacDonald contend that exclusion allows properties that are distinct from but dependent upon sufficient physical properties to be included, there is reason to think that distinct but dependent properties should be excluded once there is already one sufficient physical property relevant to the effect. As it turns out, MacDonald and MacDonald are quite forthright about the origins of their principle of Exclusion. They claim it is a variation of Kim's well-known principle of explanatory exclusion,

which states, “there can be no more than a single *complete* and *independent* explanation of any one event” (Kim, 1988, 233). Obviously, MacDonald and MacDonald have followed Kim in assuming that there is no problem of exclusion if there is a relation of dependence between the items competing for relevance. Notice, however, that Kim’s exclusion principle involves relations between explanations rather than properties. MacDonald and MacDonald are concerned with properties, and it is not clear that Kim’s principle can be applied to properties as well. Moreover, MacDonald and MacDonald are concerned with issues pertaining to causal relevance. Not only is this a slightly different issue from Kim’s concern about explanation, but it indicates that Kim’s principle of causal exclusion may be more appropriately used on this occasion. Kim’s principle of causal exclusion, however, intentionally excludes distinct but dependent events/properties: “No single event can have more than one sufficient cause occurring at any given time” (Kim, 2005, 42).⁴ If the problem concerns causal relevance, and causal exclusion suggests that distinct but dependent causes are excluded, then MacDonald and MacDonald’s suggestion that mental causal relevance is preserved due to the fact that mental properties are dependent upon sufficient physical properties is false. It seems, therefore, that MacDonald and MacDonald employ a dubious formulation of the exclusion principle that stacks the deck in their favour while a more appropriate exclusion principle would falsify their solution.

Fortunately, this is not merely a matter of personal preference over one’s preferred articulation of the exclusion principle. Rather, there is reason to think that distinct but dependent properties ought to be excluded. It is worth noting that Jaegwon Kim introduced the principle of explanatory exclusion at a time when he also argued that distinct but dependent causes of the same event were not to be excluded either (Kim, 1993, 106-107). At this time, Kim argued that even though there is a sufficient physical cause for fear, pain can still be included as a cause for the fear by virtue of the fact that pain strongly supervenes upon, and is dependent upon, the physical cause of the fear. More recently, however, Kim argues that these distinct but dependent mental causes of the effect ought to be excluded. His reasoning is that the physical cause is sufficient on its own, so these mental causes are like shadows which, though dependent, still only come along for the ride (Kim, 1998, 37; Kim 2005, 62; Kim). According to Kim’s intellectual progression, distinct but dependent entities may seem includable, but on closer analysis they ought to be excluded as they are not, ultimately, necessary. Thus, if Johnson breaks the scale in virtue of his 170kg stepping, and this is the sufficient cause of the scale breaking, the additional dependent property of ‘being more than 169kg stepping’ is in principle unnecessary, so it can be excluded. Or, more to the point, the physical property is sufficient, so the mental property, though dependent, is not necessary or relevant.

In summary, MacDonald and MacDonald’s attempt at combining token monism, property dualism and the property exemplification model of events is fraught with difficulties. The lesson seems to be that we can retain token monism and property dualism while rejecting the property exemplification account, as Davidson suggests. Or, we can retain the property exemplification account while rejecting either property dualism or token monism, as Kim suggests. The combination of all three simply cannot succeed.

⁴The causal exclusion principle states that no event can have more than a sufficient cause, where this cause is taken to be an event. As discussed above, Kim endorses the condition on event identity outlined in the property exemplification account. Thus, if event *a* has a different constitutive property than event *b*, event *a* ≠ event *b*. As a consequence, if only one causal event is allowed, only one property instance is allowed. Thus, although the principle of causal exclusion is framed in terms of events, it is also true that mental properties are excluded if the physical property instance is sufficient.

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