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Proportionality and omissions

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In response to the exclusion argument against mental causation, Yablo (1992, 1997) proposes a proportionality constraint on what can count as a cause: where distinct, simultaneous putative causes involve properties that stand in the determinable/determinate relation, only the property that is proportional to the effect counts as the cause. The having of property C is proportional to effect E if and only if (i) for any determinable C^* of C, had C^* obtained without C, E would not have obtained, and (ii) for any determinate C' of C, had C obtained without C', E would still have obtained. In Yablo's terminology, where (i) holds we say C^* does not screen off C from E, and where (ii) holds we say C screens off C' from E. So C is proportional to E iff none of its determinables screen it off, and it screens off all its determinates (Yablo 1997: 267). Proportionality is itself an exclusion principle: only one in a set of properties related by the determinate/determinable relation can be proportional to a specific effect.

Sophie, the pigeon, is trained to peck at red objects. When presented with a scarlet object, she pecks. Scarlet is a determinate of red, while red is a determinate of coloured. Being presented with a scarlet object does not cause the pecking, since had she been presented with a red object that is not scarlet she would still have pecked; whereas being presented with a red object does cause the pecking, since had she been presented with a coloured object that is not red she would not have pecked. Being coloured doesn't screen off being red from pecking, but being red screens off being scarlet. Similarly, had some mental property M obtained without its corresponding determinate brain property B, typically effect E would still have obtained, where E is the kind of physical property normally claimed to be caused by mental events. Hence M but not B causes E.

This use of the determinate/determinable distinction has been roundly criticized (Bontly 2005; Cox 2008; Crane 2008; Gillett and Rives 2005). I will not defend it, but I will use the terminology for convenience, C^* being a determinable of its determinate C when something's being C determines its being C^* but not vice versa (for discussion see

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Yablo 1992: 252–53). It's also controversial how exactly properties enter into causal relations (Crane 2008), especially when the cause is an omission (see Lewis 2004 for one account of how this can be). I will not treat these issues in this discussion.

What reason do we have to accept the proportionality principle? One justification comes from the view that mental causation is a 'Moorean' fact; and proportionality is a way to respect that fact (cf. Bontly 2005). A second is the view that philosophy is conceptual analysis, the aim being to give a theory which best captures the concept of causation that we all share, and so evidence for and against a theory should be the intuitions that any competent user of English will have concerning the truth of sentences of the form 'this causes that'. Folk intuitions are that sentences like 'being presented with a red object caused Sophie to peck' and 'my deciding to lift my arm is the cause of my doing so' are true; i.e. ultimately such intuitions are what justify the proportionality principle. As Yablo concludes, 'I believe that this kind of story is enacted virtually wherever common sense finds mental causation' (1992: 279). A third approach which seems to lie somewhere between the first two is to simply say 'it seems plausible that', or 'intuitively', the principle is right – an approach sometimes called an 'intuition pump'. I will focus on the second of these (leaving aside my own concerns about this approach to philosophy).

Many philosophers hold that omissions (absences, negative events, etc) can be causes: the doctor's failure to perform the operation caused the patient's death, the gardener's failure to water the plant caused it to die, etc. Usually this view goes along with some version of a counterfactual theory of causation: the gardener's failure to water the plant caused it to die because had the gardener watered the plant it wouldn't have died (e.g. Lewis 2004: 100). Again, a major justification for the position that omissions can be causes comes from the view that philosophy is conceptual analysis, and theory needs to respect folk intuitions.

One problem with the view that omissions can be causes is the fact that it would seem there are far too many of them (Beebee 2004; Dowe 2004; Kim 2007), a problem Peter Menzies calls 'profligate causation' (Menzies 2004). If the gardener's failure to water the plant caused it to die on account of the truth of the counterfactual 'had the gardener watered the plant it would not have died', then I also caused its death, so too did the Queen of England, etc. But

> [c]ommonsense draws a distinction among these negative occurrences, ranking some of them as causes … [I]t distinguishes the gardener's omission from the other omissions, making it a cause. In contrast, Lewis' theory [of causation as counterfactual dependence] treats all these non-occurrences equally as causes. (Menzies 2004: 145)

In this article, I consider how the proportionality principle might apply to omissions. On the positive side, I will show that this may provide a nice solution to the problem of profligate causation, but on the negative side, there are worries about where this leaves a conceptual analysis justification of proportionality and omissions as causes.

Can we apply the determinable/determinate distinction to negations of properties? Suppose we can, since they do exhibit appropriate determination relations. Take, for example, the 'properties' of the plant:

not watered by the gardener while humming,
not watered by the gardener,
not watered by anyone.

Something's not being watered by anyone determines its not being watered by the gardener, which in turn determines its not being watered by the gardener while humming, but the converse determinations don't hold. So let's say 'not watered by anyone' is the determinate of the determinable 'not watered by the gardener', and 'not watered by the gardener' is the determinate of the determinable 'not watered by the gardener while humming'.

How does proportionality apply? 'Not watered by the gardener while humming' does not screen off 'not watered by the gardener' since had the gardener watered, but not while humming, the plant would not have died. Nor does 'not watered by the gardener' screen off 'not watered by anyone' since had the gardener not watered but someone did, the plant would not have died. We need to look further to find the cause proportional to the plant's dying. Take, then, the 'properties' of the plant:

not watered by anyone,
not receiving any water,
not receiving an influx of any substance.

'Not watered by anyone' does not screen off 'not receiving any water' since had the plant received water, although not from any person (perhaps it rained or the fire sprinklers came on accidentally), the plant would not have died. However, 'not receiving any water' does screen off 'not receiving an influx of any substance' since had the plant received fertilizer but no water, it still would have died. So it looks like 'not receiving any water' is the proportional cause of the plant's dying. The gardener's not watering the plant is excluded from counting as the cause.

To confirm this result, consider how proportionality applies to the claim that the gardener's watering the plant prevented the plant's dying (i.e. caused the plant to not die). Take the 'properties' of the plant to be:

received an influx of some substance,
received water,

watered by someone,
watered by the gardener.

These stand in a more recognizable form of the determinate/determinable relation. Determination runs in the direction from 'watered by the gardener' to 'watered by someone' etc, but the converse doesn't hold. In this case, 'received water' screens off its determinate 'watered by someone', but is not screened off by its determinable 'received an influx of some substance'. So the plant's receiving water is the proportional cause, and 'watered by the gardener' is not the cause.

Returning to the first case, we have the result that the gardener's not watering the plant is excluded from counting as the cause of the plant's dying. Similarly, none of the determinables of 'not receiving any water' are proportional. My not watering the plant, the Queen's not watering the plant, etc. are all excluded as causes. So there is no problem of profligate omissions. None of these are causes, the proportional cause is the determinate of them all: the plant's not receiving water. Thus proportionality solves the problem of profligate omissions. At least, it does so for that class of cases where a failure to perform an action on the part of an agent is blamed for some effect and yet any number of agents' not performing that action similarly look like counting as the cause; because any specific agent's not performing the action will fail to be the proportional cause. And this is the kind of case that concerns those who worry about profligate omissions (the gardener not watering the plant, the doctor not performing the operation, etc).

A problem with this result is that it seems to deny what many believers in absence causation are adamant about. It denies that the gardener's not watering the plant causing it to die is as good a case of causation as anything. According to the conceptual analysis approach to causation, the ultimate evidence that omissions are causes is that folk would assent to claims such as 'the gardener's not watering the plant caused it to die'. It is sometimes pointed out that it cannot be denied that we are interested specifically in the gardener's being the cause because we take the gardener to be responsible, so we take the gardener's omission to be the cause. Thus proportionality solves the problem of profligate omissions at the cost of denying what the conceptual analysis approach takes to be hard data for a theory of causation. One could, of course, reject the conceptual analysis approach and still claim that proportionality solves the problem of profligate omissions. But if the rationale for believing proportionality is that it allows mental causation and the reason for wanting mental causation is to respect folk intuitions, then this outcome might not be so welcome. Other rationales for proportionality may fare better. I suppose one may plausibly assert that mental causation is a Moorean fact, but deny the same status to the relevant cases of causation by omission.

Finally, let's apply the argument to mental causes. Briefly, call not remembering, not wanting, not feeling, etc 'mental omissions'. Suppose we take the view that mental omissions such as the gardener's not remembering to water the plant cause 'omission-actions' such as the gardener's not watering the plant. It could be argued that such cases of causation by (mental) omission do not lead to the problem of profligate omissions. The Queen's not remembering to water the plant is not the cause of the gardener's not watering the plant, since the Queen's watering the plant and the gardener's watering the plant are distinct events (typically) with distinct causes. So the problem of profligate omissions doesn't arise in this example. However, mental omissions may be taken to be the causes of much more than just actions. Suppose folk take the gardener's not remembering to water the plant to be the cause of the plant's dying. However, again, 'the gardener's not remembering to water the plant' is not proportional since it doesn't screen off 'no-one's remembering to water the plant' from the plant's dying. Neither is the Queen's not remembering to water the plant. Generalizing wildly, it looks like mental omissions can only be causes of action-omissions, a result which, if true, might not be welcome to defenders of mental causation. Nevertheless, proportionality solves the problem of profligate omissions.

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Erik-Jon Gaizka, the magician of infinity

Jon Pérez Laraudogoitia

1.

A favourite trick for any magician is to come out on stage wearing a top hat, remove it and show it to the audience to persuade everyone there's nothing inside. Then he places the hat on a table, in full view of the audience, but just far enough away so that no one can see inside it. All that's left is for him to pronounce the magic words and . . . hey presto! the magician walks up to the hat, from which, with no apparent effort, he then pulls a sleek white rabbit before the breathless spectators. Of course, there's a trick to it: in a world like ours such a thing is not physically possible. What I would like to show in this article is that, in a world that only differs essentially from ours in the fact that in it we can take advantage of the peculiarities of infinity, it is really possible to make a rabbit appear from a top hat, with no trick whatsoever.

Parsons (2004, 2006) argued that, in a world that likewise only differs essentially from ours in the fact that in it we can take advantage of the peculiarities of infinity, it is possible to drink any amount of alcohol without getting a hangover. Baker (2007: 321) questioned his conclusion, adducing that, issues of infinity apart, the type of world of which Parsons was thinking was 'physiologically implausible'. In contrast to all this, the argument I present here has two essential characteristics: (i) Issues of infinity apart, the world I'm thinking of is not implausible in any relevant sense of the term. (ii) The result obtained is philosophically relevant in the sense that it suggests a new and plausible formulation of the necessary and sufficient conditions for the persistence in time of material objects.

I know an extraordinarily deft and subtle magician (from Bilbao, of course) called Erik-Jon Gaizka, so I will make him the main character in my story. Erik-Jon Gaizka steps out into the limelight, top hat in hand, and a white rabbit, *B*, already in his arms. After showing everyone in the

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