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Backwards causation still impossible

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I criticize Roache's attempt (2009), in response to an earlier paper of mine (2007), to defend the possibility of backwards causation.

In my paper 'The Impossibility of Backwards Causation' (2007), I discussed and rejected some arguments, advanced by Dummett (1964) and Tooley (1997), for the possibility of an effect preceding its cause, an alleged possibility often called 'backwards causation' in the literature. Among other things, I discussed there two scenarios described by these philosophers, in which the world is divided into two sets of causal processes that occur in opposite temporal directions. That is, relative to the events of the one set, the effects of the other set precede their causes; and vice-versa.

This last claim presupposes that there is some way in which the temporal relations between events of the different sets are determined. Both Dummett and Tooley correctly realized that these relations cannot be introduced by stipulation alone, but that they require some sort of causal interaction between the events of the two sets (let us call these sets S_1 and S_2). Such an interaction, though, raises the spectre of incoherence: suppose c of S_2 is the alleged later cause, relative to S_1, of e of S_2. Since S_1 contains, according to both philosophers, intelligent agents (and why shouldn't it?), these could wait until e has already occurred, and then act and prevent c from occurring. But if e's occurrence is independent of c's, then c is not e's cause, which contradicts our assumption. So if we introduce an interaction between the two sets that allows agents of the one event-set to interfere freely with events in the other, we end up with a contradiction. This argument became known, following Flew (1954: 57), as the *bilking* argument. Accordingly, *if* such relative

backwards causation is to be made possible, the interaction between the two event-sets should somehow be regulated.

Dummett and Tooley tried of course to regulate it but, I argued in my paper, unsuccessfully (we shall get to details soon). Rebecca Roache, however, insists on having things backwards. In a recent paper (Roache 2009), accepting some of the points I made, she attempts to save Dummett and Tooley's scenarios from my criticisms. I shall try to show that she too fails.

Dummett and Tooley describe situations in which agents of the one set can observe but cannot interfere with the events of the other set. Since both Roache and I have concentrated on Tooley's more elaborate scenario, and since for our purposes there is no relevant difference between his scenario and Dummett's, I shall continue to focus on the former in this paper.

Here is what Tooley's world looks like:

> Consider . . . the following world. It consists of two spatial regions segregated from each other by a wall with some remarkable properties. First, the wall has always existed. Secondly, it is indestructible, and so it will exist at every future time. Thirdly, there is no way of getting around the wall, so that something can travel from the one region of space to the other only by going through the wall. Finally, the wall's properties differ depending upon the direction through the wall: in one direction, no causal processes at all can be transmitted from the one region to the other, while, in the opposite direction, light waves, but nothing else, can pass through the wall. (Tooley 1997: 64)

The reader is now supposed to live 'on the side of the wall that can receive light waves from the other side', a side very similar to our actual world, and to observe the processes on the other side, processes that occur in an order opposite to that in which they occur in our world. We thus have, in Tooley's world: (i) relative backwards causation; (ii) interaction between the two event-sets that is sufficient to determine temporal relations between events of different sets; and (iii) inability of agents of the one set to interfere with processes in the other, prevent relative later causes from occurring and turn the scenario into an incoherent one. It might seem that Tooley succeeded in describing a possible world with relative backwards causation.

Against this I argued as follows (Ben-Yami 2007: 454–55). The wall does not participate in or influence the causal transactions on either of its sides; it just prevents the observers from interfering with events on the observed side. The nature of the causal processes on either side of the wall would be the same if the wall were replaced by some appropriate breakable one-way mirror or glass. But then it could be broken, observers could step into the observed side, and they could interfere in the processes there and prevent the alleged relatively later cause of a relatively earlier effect from occurring. So Tooley's scenario is not a coherent scenario containing relative backwards

causation. More generally, the constraints on the interference of agents of one event-set with events of the other should not be contingent relative to the nature of the causal processes involved – otherwise they could be removed, and in that way it would be demonstrated that one has failed to describe a coherent scenario with relative backwards causation. But Tooley (and Dummett) failed to supply such constraints.

I have justified this line of argument in some more detail in my mentioned paper. But whether or not readers are convinced by it at this stage, we can accept it here at least for the sake of argument, for Roache accepts it in her paper. When she considers Tooley's world, she allows a section of the wall to be destroyed so that people can pass from each side to the other. And since a broken wall serves no purpose in this story, we can simply remove the wall altogether.

So if people of each event-set can interfere with events of the other event-set, how can bilking a relatively later cause be prevented? Roache argues as follows. She correctly notes that '[n]either side's causation is privileged by running forwards with respect to some independently determined temporal order'. Accordingly, if we wish to claim that a person of one event-set is able in principle to bilk causes of the other set, then we must concede that a person of the other event-set can do so too. But *both* persons cannot have this ability, for according to the bilking argument, the ability to bilk proves that all causation is forwards causation relative to the person who bilks, and that any apparent causation backwards relative to that person is bogus. Since *both* persons cannot have the ability to bilk, and since there is no reason to suppose that one of them but not the other has this ability, the only remaining conclusion seems to be that neither person has this ability. Bilking attempts would therefore invariably fail. This was, almost verbatim, Roache's argument.

The basic problem with this argument is that it presupposes that we assumed the scenario to be coherent and were only trying to prove that actually all causation in it occurs in a single temporal direction. However, what we were trying to do is different: we were trying to show that a world with two sets of causal processes occurring in opposite temporal directions is incoherent. And we tried to do that by forcing some contradiction on the scenario. Now two contradictions are not worse for our purposes than one: any number of contradictions proves the scenario incoherent. If we assume that causal processes can occur in opposing temporal orders, and then show that the possibility of interference of the bilking kind proves this incoherent, then we assumed something impossible, which should be rejected. What the symmetry which Roache justly emphasizes in fact shows is not that the scenario is coherent and that bilking attempts will fail, but that the incoherent scenario cannot be saved by claiming that actually all causation in it occurs in some one of the two alleged temporal directions. The symmetry shows that the scenario should be totally rejected. It saves nothing.

Roache's argument is thus invalid. And we can better appreciate the incoherence of the position she ends up with by looking at the description she gives, later in her paper, of the way bilking attempts would allegedly fail. (Remember that Roache allows interactions between events of the two sets.) She considers only the following attempt (similar to ones found in Tooley's discussion and mine): suppose that people on the one side of where the wall was are playing cricket, and a person from the other side waits for the ball to be apparently 'back-hit' by a batsman, and then rushes in to prevent the bowler from 'catching' it a little later. All that Roache tells us is that he would fail and that 'failed bilking attempts will fail for a variety of reasons'. Yet be the cricket case as it may, we are not considering here just specific attempts like it: the moment a person steps into the meadow on the other side, trampling a single leaf of grass that was not, relative to him, broken a little earlier (namely, a little later relative to the leaf of grass), we have a contradiction. The causes of the state of the relatively earlier fully developed and unbroken leaf were supposed to be in its relatively later less-developed and also unbroken state, but this state would not exist if the leaf is trampled. The abstract assertion that 'bilking attempts will fail for a variety of reasons' is far from sufficient: Roache should not let people set their foot on the other side of the wall; almost any interaction will involve bilking, and should therefore be impossible. Roache should thus allow no interaction between the two sets of events. But as we noted above, and as Dummett and Tooley realized, some interactions of this kind must be allowed if we are to determine temporal relations between events of the different event-sets, relations necessary for the processes of the one set to occur backwards relative to the other. Accordingly, as Roache cannot allow such interactions, she did not describe a coherent scenario of the kind she attempted to describe. Backwards causation is still impossible.

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