

Review of: "Teleology, backward causation, and the nature of concepts. A study in non-locality of reason"

Mark Cresswell

Potential competing interests: No potential competing interests to declare.

Introduction

The notion of 'backward causation' - an ostensibly counter-intuitive idea - has been the subject of a small literature since the mid-1950s. The gist of the arguments for and against are ably summarised in Marcin Poreba's article. The thrust is in support of backward causation in a circumscribed sense and Poreba marshals his evidence for this with particular reference to twentieth century developments in quantum physics and an account of the ontology of 'concepts'. There is a logic to this, although objections always circle back to the idea's inexorable counter-intuitiveness and populist associations with dystopian science fiction. As this reviewer's contribution has been in the area of social causation within the philosophy of the social sciences, the substance of this review leans upon that disciplinary terrain, for which the problem of counter-intuitiveness seems especially pronounced. Even so, Poreba has provided a service in reviewing the issues with clarity. For the time being, I don't think this saves the notion from its drawbacks but the author also signposts some future analysis which may strengthen and further delimit the argument whilst providing for it additional empirical foundations.

The main argument

Theories of causation have generally assumed a forward direction of temporal travel whether the propulsion imparted comes from the past or the present or some sediment of the past in the present. This assumption - derived from common-sense as much as philosophy - is what gives backward causation its 'weird' flavour, to use Poreba's expression. Yet, as Poreba points out, textual support for it can be found in both Hume and Kant; and this makes sense because if the mere appearance of forward causation is somehow hard-wired into human cognition it does not follow that it is a constitutive feature of underlying reality. Two arguments Poreba offers in favour of backward causation are:

1. An argument from topological holism
2. An argument from quantum physics

1. The argument from holism is connected to that of teleology and functionalism - Poreba's other main themes. Poreba canvasses the prospects for backward causation with the following argument:

'assigning a function to a system...involves assumptions concerning its future states...if this is to be interpreted as a species of causal explanation, then the causality involved in it is clearly a backward one, a causality working backward in time'.

In the case of sociology, this sounds *prima facie* plausible: sociological theory is very familiar with the idea that a whole system ('society') is constituted in such a way that its governing function or 'design', to use Poreba's phrase, exercises causal power in a backward direction. There are a number of candidate theories here which have tended to be tarnished with the brush of 'determinism': Marxism, with the idea that it is the economy 'in the final analysis' that is the motivating principle; and structural functionalism, as associated with Talcott Parsons, with the notion that it is social homeostasis, as expressed in a conservative cultural value-system, that predominates. Initial plausibility, however, tends to reduce once one looks beyond such 'vulgar' exegeses: Karl Popper's, for example, in the case of Marx; certain Marxist and feminist interpretations in the case of Parsons. But once more sophisticated developments of these traditions are examined, only forward causation is arguably found. This is true of Marx himself - hence the famous mantra that people 'make history but not in circumstances of their choosing' as given flesh in his historical essays such as *The Eighteenth Brumaire of Louis Napoleon*; and it also seems true of Parson's notion of 'the sick role' from his medical sociology, which, though abstract in itself, is meant to facilitate empirical, forward-directed, analysis. Structural functionalism is a real test-case, though; for, if a distinction is to be made between the diachronic and the synchronic aspects of a whole system, as Radcliffe-Brown did within Anthropology, then whilst forward causation may be mandatory with regard to diachrony, it is not obvious that backward causation is ruled out in the case of synchrony.

Is this, though, the sort of circumscription of backward causation that Poreba is arguing for? I don't think so. One criticism of his article I would make is that Poreba fails to provide the detailed empirical examples of backward causation with which we might make sense of it in the 'middle-sized objects of everyday experience' with which the social sciences are chiefly concerned. Without that empirical flesh, forward-travelling causality seems mostly serviceable. Take, for example, the notion of 'internalisation' which is a feature of many sociological theories, as well as psychoanalysis (which influenced Parsons greatly as well as post-Marxism and post-structuralism). The idea here is that we apprehend certain moral values, rules, and norms from the society around us and they then become part of our 'self', 'identity' or 'subjectivity' (depending on which theoretical tradition is canvassed). These internalisations influence us and this influence operates causally in terms of individual and collective behaviour. Now, it is certainly possible that these rules and values represent the idealised features of a social system psychologically projected into a future moment in time - what 'beauty' should look

like, for example, in a given culture - but, once internalised, these values seem then to proceed in a forward causal direction. Internalisation does not require the idealised future state to actually have real existence; it's enough for it to be imagined, fantasised, or otherwise have the status of a 'social construction'. Durkheim's 'conscience collective' and the Marxist notion of 'ideology' seem to share this status. Poreba makes the useful distinction between teleology as really involving backward causation and 'as if' or 'reflective teleology'. Sociologically, significant amounts of purposive action could be seen as reflexive and causally relevant in the forward-directed sense as in Anthony Giddens' notion of 'reflexive modernisation': we internalise social norms and values as if they were real; we then really and causally act upon them. According to this perspective, the synchronic, idealised future states of society are certainly relevant but it is only the internalised rules and norms that are causally active and in a future-directed way. It is also clear that many of these internalisations may emerge from the mythical past as well as the idealised future. So, it would seem that backward causation, whilst theoretically plausible, appears to have little empirical traction in the case of sociology.

The diachronic/synchronic dichotomy raises a separate issue which Poreba does not consider. This is that in sociology and historical sociology a salient issue has been, not backward causation, but the contrast between present and past causation. A dispute here is between Keith Sawyer - who held that social causation required 'a present synchronous account' - and Margaret Archer, who felt that the synchronic and diachronic processes were 'both always in play', an idea that may also be associated with E.P. Thompson's Marxist historiography. Poreba's backward causation seems not to be 'in play' here at all, although his 'topological' holism, concerning the ontology of concepts, is suggestive and worth feeding into the analysis. The argument for topological holism is worth quoting at length:

'a concept is a global property of the region...[we can] elaborate on our conception of a concept so as to allow concepts to extend over regions of space-time always inhabiting some portion of the future...the decisive move consists in abandoning...the 'locality assumption'...that concepts are instantiated at every point in the spatio-temporal region...typically, that is a segment of a person's life trajectory. Instead, I propose to treat concepts non-locally...pertaining to such regions as wholes...if we look at the matter from topological perspective and consider such regions as open sub-sets of a larger topological space, we can even demand that every point within such a region has a neighborhood containing...points belonging to its future...to say of someone that she is in possession of a certain concept *c* at time *t* means that *t* belongs to a region to which *c* can be attributed as a global property...On the non-local treatment of concepts...concepts constitutive of a given piece of action pertain to a region extending into the future and covering the time at which the supposed outcome of the action will or will not take place. Some features of this future time...are constitutive of the fact that this concept was at work in forming the representation of the intended purpose of the action. ...the conceptual relevance of the future, suggesting spatio-temporal non-locality of concepts, invites us to reconsider our...past-oriented worldview. If concepts are spatiotemporally extended, if they are spread over regions ranging not only into the past but also into the future...then the idea that the future might be no less real than the past...gains plausibility...this...opens up a perspective on backward causality as a factor shaping reality on a par with the familiar forward species...' (original emphases)

Poreba is careful to circumscribe the scope of topological holism: the fact that it demonstrates the ‘conceptual relevance’ of the future to an understanding of purposeful action in the present rather than ‘real causal pressure’ of the future on the past, is admitted. But this seems only consistent with the sociological account of internalisation given above: the future is treated primarily as a ‘representation’. So, it would seem that much more work needs to be done to pin down the idea’s efficacy and this reviewer agrees with Sawyer that causation ‘cannot be debated strictly on a theoretical level’ – specific and detailed empirical examples are useful and Poreba would be providing a service if they could be provided.

1. I suspect, though, that Poreba’s argument for backward causality rests more substantially upon quantum physics and its ‘extra-conceptual considerations’ than on topological holism. This seems to constitute an ontological posit only really conceded in footnote 20:

‘I think that the very distinction between macroscopic and microscopic causes and effects is a merely conceptual one as all causal work goes on at the micro-level’.

I admit to the potential for some inter-disciplinary misunderstandings here. When a sociologists hears about ‘macroscopic causes’ they tend to think of collective entities such as ‘the economy’ or ‘the state’ and ‘individual thoughts and feelings’ and ‘small group interactions’ when they think of ‘microscopic causes’. Whether causal priority should be accorded to the individual level, the collective level, or some interplay of the two, has formed a core part of the theoretical problematic of the discipline since at least Durkheim. But whatever their theoretical commitments, most sociologists, and especially the empirical researchers amongst them, would be surprised to discover that ‘all causal work goes on at the micro-level’ especially if that level was then considered synonymous with the quantum level. In future work, Poreba really needs to be clear about this and to circumscribe the argument for backward causality still further. It is not really clear what the revisionist argument for the ontology of concepts could really amount to if all the argumentative, not to mention causal, weight in the theory of causality is placed at the quantum level. This clarification alongside the requirement to provide more concrete examples of backward causality in action in the ‘middle-sized objects of everyday experience’ would be the main points of critique I would direct towards this interesting and stimulating article.

Mark

Dr. Mark Cresswell (markcreswell@mail.com)