BOOK REVIEW

Getting Causes from Powers. By Stephen Mumford and Rani Lill Anjum. (Oxford: OUP, 2011. Pp. xvi + 254. Price £19.99.)

Contemporary philosophical discussions of causation are still dominated by Hume's demand to identify a relation that deserves the title 'causal'. This motivates, for instance, accounts of causation in terms of counterfactual dependencies. In their admirable little book, *Getting Causes from Powers*, Mumford and Anjum defend a powerful and, to my mind, basically convincing alternative. They propose to think of causation not as a relation but as 'a continuous process with a beginning, and end and change between' (p. 156). Within such a process, one might single out distinct events, a cause and an effect, which may then be counterfactually related. This counterfactual relation, however, should be explained in terms of the process that unites cause and effect, rather than vice versa (p. 151). As for causal processes, Mumford and Anjum emphasize that they need not necessarily unfold as they do (ch. 3), and that instances of them can indeed be observed (ch. 9).

Some readers will already disagree with the above. I am, for my part, so far on board with Mumford and Anjum. As a consequence, however, I am all the more critical of the particular way in which they implement their view. For they do not only argue that causation is a process, they also suggest thinking of this kind of process as an encounter among things with dispositions. As I will explain, I am not sure this helps their cause.

Here is how Mumford and Anjum summarize their general idea: 'Rather than depicting causation as a relation that stands between two wholly distinct relata, we argue that it should instead be seen as a single unfolding process that occurs when a number (any number) of mutual manifestation partners meet' (p. ix). Causal processes are further analysed as manifestations of dispositions. Moreover, the result of these manifestations, if there is one, will be a change in the way things are disposed. Since causal processes thus appear to be manifestations of dispositions for changes in dispositions, Mumford and Anjum establish their position by embracing pan-dispositionalism: the view that all properties, and thus all manifestations of dispositions, are themselves clusters of dispositions. Now as Mumford and Anjum admit, dispositions are identified

in terms of their manifestation (p. 5). If the manifestation of a disposition is itself a further disposition, the complete pan-dispositionalist account of a given disposition will have to look somewhat like this:

disposition for (disposition for (. . . disposition for (___) . . .)).

What about the innermost blank space, ___, in this formula? Are we to leave it empty? Or are we to accept that the account can never be completed? I am sure that this is one of the first potential objections that comes to anyone's mind, including pan-dispositionalists themselves, and they will certainly have something to say about it. I, for my part, suggest that one should not think of dispositions as most basic. Dispositions are identified in terms of their manifestation, and therefore, the manifestation of any given disposition is more basic than it. At some point, one will have to identify manifestations of dispositions without turning them into further dispositions. Then, however, one might as well start out focusing on causal processes themselves, rather than the dispositions for undergoing them. Besides, I don't think that the manifestation of a disposition is always a property. Many dispositions are manifested by processes, and processes are not further dispositions.

The reason why Mumford and Anjum find pan-dispositionalism attractive is, presumably, that it offers a way of describing causes as directed at a certain outcome, such that this outcome is not necessitated by them. Dispositions are directed at something that might fail to materialize. However, I do not think that in order to get this kind of directedness, one needs to turn to dispositions. Actual causal processes might be directed at something that may fail to materialize, too. As Anscombe puts it, 'A man can *be doing* something which he nevertheless does not *do*' (1963: section 23), and as Michael Thompson adds, this is also true of a tree: it might have been falling over but not have fallen over (2008: p. 126). Instead of reducing processes to dispositions, it might thus be time to revise our understanding of actual causal processes.

Since the notion of a disposition is basic in Mumford and Anjum's view, one should not expect them to reduce it to something else. It is basic. Still, Mumford and Anjum employ two means for explaining what dispositions are. First, they describe dispositional modalities as selection functions: a disposition is a property that 'picks out a limited number of outcomes from all those that are merely possible' (p. 189). Dispositions, I take it, divide the set of possible outcomes into the following two subsets: the ones that are not surprising and the ones that require further explanation.

Secondly, Mumford and Anjum represent dispositions by vector diagrams, and this would ideally tell us a lot about what they are and how they work. Mumford and Anjum present their vector diagrams as alternatives to what they call neuron diagrams. They think that the nodes in a neuron diagram represent events and the connections between them causal relations. This

might be true for much of the literature, but I think it is worth pointing out that David Lewis, who seems to have introduced neuron diagrams, did not think of them in this way. In his diagrams, the nodes represent things (neurons, for instance), and the connections between them stand for interactions among these things (1986: p. 200).

In any case, Mumford and Anjum propose to model causes as vectors (ch. 2). They use vector diagrams in a rather intuitive way, however, and some more rigour might have been desirable. Some of their vectors are thicker than others, some are longer, and some are dotted (e.g. p. 147). These varieties are introduced where they are needed, but there seems to be no fixed set of rules for drawing and interpreting vectors. The length of a vector, for instance, may either represent the intensity of a power (p. 24), or the probability of its operation (p. 79), or even, it appears, the passing of time (p. 169).

Mumford and Anjum's vectors are supposed to represent 'the powers that are exercising or operating' in a given setting (p. 38). There is a difference between operating and manifesting. For Mumford and Anjum also suggest that vectors may cancel each other out, and that there might be certain thresholds that must be reached, after all vectors are added, for a manifestation to result (p. 73). Each vector therefore represents a power that operates, but not necessarily one that is manifest. This means that the vectors do not as such represent causation, nor do they represent the effects of their operation (p. 74). They represent potential causes rather than actual ones. As a consequence, vector diagrams do not actually depict the processes that occur when manifestation partners meet (cf. p. 26), they only depict the powers of these manifestation partners.

Speaking of manifestation partners: there seems to be no way of adequately representing active and passive powers in the same vector diagram. Mumford and Anjum argue that not all causation involves an active and a passive part (p. 36), and they might be right. As they admit, however, most cases of causation do involve the exercise of both active and passive powers. For instance, the power of a book to be read can only be exercised when someone reads it (p. 38). Now as Aristotle shows in *Physics* III 3, the exercise of an active power and the exercise of the corresponding passive power are one and the same event. For the reader to read and for the book to be read are one and the same process. This means that if vectors represent dispositions and dispositions are identified by their manifestation, the vector that represents the power of the reader will have to be identical to the vector that represents the power of the book. There can be no separate vectors for passive powers.

I conclude that Mumford and Anjum's pan-dispositionalism causes more problems than it solves. However, it is not required for the rest of their position, and if one leaves it aside, their book is still the kind of book I would like to have written, and certainly a book I would urge everyone who cares to read.

REFERENCE

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