

Dispositions. A Debate.

D. M. Armstrong, C. B. Martin & U. T. Place. edited by Tim Crane.
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This book is rather unorthodox in its composition. Instead of being a collection of essays, it consists of two series of debates between three writers. The first debate is between David Armstrong and U. T. Place and consists of two contributions from both writers. The second debate is composed of C. B. Martin's essay 'Properties and Dispositions' and two replies by each of the three authors. Although both debates are nominally about dispositions, they actually cover a wide array of questions that vary from causality to the *universalia*-problem. This is natural as the position taken on dispositions has consequences for views about causality, modality, laws of nature, and the ontology of properties, and vice versa. Probably the most important thing about the book is that it makes clear the central place dispositions have in ontology. This is a fact that has been forgotten all too often.

In the following, I will describe the core positions of each author without references to the plot of the debate. I will concentrate on their views on dispositions, less on their views on other issues that are also discussed quite broadly in the book. For example, the actual nature of Place's conceptualism and viability of Armstrong's analysis of laws of nature are discussed at length by all the three writers. The positions taken on these issues are certainly interesting, but the space does not allow me to comment on them.

David Armstrong's basic position may be nearest to the received view about dispositions. His basic idea is that there cannot be any "free-floating" dispositions around. According to him, the truthmaker for a disposition statement about an object must be found among the categorical properties of that object. The dispositional properties would then supervene on these categorical properties. This is a rather conventional way to handle the situation. However, his position is more complicated. To account for the fact that we attribute unmanifested dispositions and capacities to objects, he appeals to the laws of nature. According to Armstrong's analysis, the laws of nature are second-order relations between universals. His analysis does not refer to any primitive powers or dispositions, which Armstrong takes to be its specific advantage. Obviously his solution presupposes acceptance of the idea that properties are universals. This creates one of the central threads of the discussion in the book since Place and Martin do not accept universals, not to mention relations between them, in their preferred ontology. By arguing against Armstrong's position on universals they can argue against his position on dispositions at the same time. And this is what happens in the book.

In the following I will present a couple of problems in Armstrong's position, without going deeper into the *universalia*-problem. The first weakness in Armstrong's position is that he does not show that one actually can build up dispositional properties from purely categorical properties. Let us use his own example, the brittleness of a glass tumbler. In his view, the microstructure of the glass is the causal basis of its brittleness. The acceptability of Armstrong's position depends on his claim that the microstructure is a purely categorical property. As Place argues, this position cannot be sustained. Surely the complete analysis of brittleness would have to refer to the properties of the molecules that form the structure. Among these properties have to be at least some dispositional properties, such as bonding capacities of the molecules. This pattern can be shown to be general: when explaining a dispositional property one always has to refer to some other dispositional properties within the causal basis of the disposition. One might call this phenomenon disposition

regress. This phenomenon blocks any direct strategy for eliminating dispositional properties from one's ontology.

Disposition regress seems to be universal among non-fundamental properties, so the only hope for Armstrong's position is the possibility that the fundamental properties, that underline all the other properties would be categorical. However, there are some problems also for this option. One of the problems is that if we ever came to know the fundamental entities of the world, we would know them only by the way they act, that is, through their dispositional properties. Of course, we could hypothesize that there are categorical properties behind these dispositions, but these hypotheses would have a strange a priori status and that would certainly contradict Armstrong's well-known naturalistic attitude.

Martin raises a second problem to which, in my judgment, Armstrong is not able to give a satisfactory answer. Let us suppose that there are two kinds of elementary particles in the universe that are (contingently) located so that they never make contact with each other, and therefore, their characteristic dispositions to react to each other never manifest. Now, Armstrong¹ subscribes to the principle of instantiation, according to which every real property should have at least one instance in the actual world. As a consequence, he cannot accept the kind of uninstantiated modalities implicated in the example and so he must deem these interactions impossible. This creates a problem as the position is not in accordance with our modal intuitions and Armstrong acknowledges this. He tries to save his position by making suggestions, on the one hand, towards disjunctive laws with indeterminate truth-value and towards the empirical nature of the controversy, on the other. As the first suggestion seems hopelessly ad hoc, and the second undermines his whole approach, one is tempted to turn towards Place's and Martin's positions to see if they could offer more a plausible alternative.

In comparison to Armstrong, U. T. Place's position is much more unorthodox. He claims that the truthmaker for a disposition statement is nothing else than a counterfactual state of affairs. In contrast to Armstrong, he does not take for granted that the notion of categorical property is well-understood. Place is here pointing to a real problem in Armstrong's position, since the latter never characterizes categorical properties, except for the fact that they are supposed to be non-dispositional. For Place categorical properties cannot alone support dispositions, as the former are just spatio-temporal relations between the bearers of properties. In this Place also disagree with Martin, as the latter denies that categorical and dispositional properties are distinct. I think that Place is the most convincing of the three in this issue. However, some other aspects in Place's position are difficult to accept. Surprisingly he bites the bullet and accepts Armstrong's claim that the only alternative to the latter's categorical realism is to accept some kind of dispositional intentionality as a basic feature of our world. According to Place, intentionality is not a mark of the mental, but rather the mark of the dispositional. I have to agree with Martin in holding that Place is here stretching the notion of intentionality too far. Furthermore, I cannot see how this kind of analysis advances our understanding of dispositional properties.

The second problematical feature of Place's position is his thesis that the relation between a disposition and its basis is a relation between a cause and an effect. Certainly this relation is different from ordinary causation. First, the relata of causation are events, however in Place's analysis these relata would be properties. Second, in standard accounts of causality there is temporal succession between the cause and the effect, but the molecular structure of a glass does not precede its fragility in any temporal sense. Of course, there is some kind of determination relation between these two properties, but this is not a case of causal determination. Place's position comes more understandable when one first notices that he accepts a counterfactual analysis of causation. If the basis were not there, the disposition would not be there either. Second point to notice is that Place

wishes to underline that a disposition and its basis have distinct existences. Since Hume's times the cause and the effect have been primary examples of things that have distinct existences.

Although these two points make his position more understandable, they do not make it acceptable. Without making any comments about the viability of his counterfactual analysis of causation, one should notice three things. First, one should respect the category distinction between properties and events. Second, Place does not take into account the fact that the same disposition could be multiply realizable, which makes the simple counterfactual analysis inapplicable. Thirdly, I find it plausible that a disposition and the properties that form its basis could still be considered distinct properties, even though they are not thought to be related as a cause and an effect.

C. B. Martin subscribes to what he calls the Limit View. According to his view each real property has both categorical and dispositional aspects. (Martin prefers to talk about qualitative properties instead of categorical properties.) In his view, our usual talk about purely categorical or dispositional properties is a product of an idealization that does not reflect the character of real properties. I find the idea behind the Limit View going against common sense and our ordinary view of properties. Although it is quite difficult to give a general characterization of categorical properties, it seems plausible to suppose that, for example, shapes and volumes are paradigmatic categorical properties. In a same sense one can point to some paradigmatic examples of dispositional properties, such as brittleness and hardness. It is a different question, if the categorical properties can actually do the job Armstrong wishes them to do or if there ever could be an object without any dispositional properties. As it seems reasonable to separate these questions, it also seems reasonable to resist Martin's Limit View, especially as it is not clear if the terminological revision he suggests actually solves any conceptual problems at all.

Another problem in Martin's position is his liberalism concerning the entities that could have dispositions. He attributes dispositions at least to objects, states, events, processes and structures. A natural suggestion would be to hold that if dispositions are to be attributed to members of these diverse categories, the attribution would take place in quite a different sense in each of the categories. However, as Martin does not develop his account further, so it is difficult to say if he would agree with me on this point. I think this is a general problem for evaluating Martin's ideas. He makes quite a few suggestions, but does not develop them far enough to a reader to be able to make his mind about the usefulness of the ideas. For example, Martin suggests that we should replace our ordinary talk about causation with a talk about dispositions and their manifestations. However, the benefits of this conceptual revision are not mentioned.

The most promising thing about Martin's approach is his attempt to develop an ontology that takes dispositions seriously without trying to reduce them away as Armstrong does. However, this remains only as a promise. Martin does not develop his own view further. He contains himself to criticizing Armstrong's and Place's positions. A reader waits in vain, for example, for Martin's modal theory. As it is difficult to accept an ontological position in a piecemeal fashion, a reader cannot commit oneself to Martin's position, no matter how sympathetic one might be, without seeing the whole picture.

On the whole, this book works well as a rich source of information about the ontological positions of the three writers. In the discussion between them, there are many comments that help to make sense of their earlier contributions. As a treatise about dispositions one finds the debates somewhat disappointing. Although the contributions are lengthy, the writers are quite often sidetracked to issues that are not central from the point of view of dispositions. Secondly, there are some arguments and positions in recent discussions about dispositions that the writers do not mention or comment, although these points might have forwarded the discussions documented in the book.

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