

*Descartes on Causation*, Tad M. Schmaltz, Oxford: Oxford University Press, 2008, 237pp., ISBN 978-0-19-532794-6.

As its title suggests, Tad Schmaltz' new book concerns that most perplexing of Cartesian problems, causation, as it pertains to both body-body and mind-body interactions. Among the strengths of this important work is its sophisticated and very informative analysis of the scholastic concepts that preceded and informed the debate in Descartes' day, as well as Schmaltz's critique of the current trends and approaches to Cartesian causation in the contemporary literature. In short, Schmaltz rejects the occasionalist and concurrentist readings that have dominated recent treatments of Descartes' theory of causation. "Occasionalism" is "the view that God is the only real cause and creatures merely 'occasional causes' of changes in nature" (p. 4), whereas "concurrentism" holds "that creatures have real causal power but that nonetheless . . . God contributes a causal 'concursum' to every creaturely action" (p. 6). Instead, Schmaltz sides with "conservationism", the view that "God's role in natural causation is limited to the creation and conservation of the world" (p. 6). Schmaltz summarizes his overall position as follows: "I find reasons internal to Descartes's system—drawn particularly from his account of causation in physics—for the conclusion that created entities rather than God are the true causes of natural change" (p. 6).

The content of the book is separated into five chapters. Chapter 1 covers the development of these causal concepts, especially occasionalism and concurrentism, starting from medieval Islamic thought through Scholasticism, with special attention devoted to the early modern scholastic, Suárez. Chapter 2 begins the examination of the general causal axioms that guided Descartes' thinking, with much space devoted to the eminent/formal containment thesis and God's conservation of the world at each moment. Schmaltz's main contention in this chapter is that Descartes' use of these causal axioms does not predispose his metaphysics to any of the three accounts of causation listed above, but that only the details of his actual treatment of causation in specific cases can help to determine his preferred view. Chapter 3 covers body-body causation in Descartes' physics, with Schmaltz's preferred conservationist interpretation put forward as a better alternative over the rival occasionalist and concurrentist schemes. In Chapter 4, which examines body-mind causation, Schmaltz develops an account that emphasizes the union of the mind and body as a means of understanding this form of causation (as opposed, for instance, to Margaret Wilson's account that conceives the union as a sort of disposition of the mind to have certain sensations given various bodily changes). The problems associated with mind-body causation are also explored in detail in this chapter, in particular, the vexed issue of whether or not the conservation laws are endangered by this form of interaction. Finally, in Chapter 5, Schmaltz deals with causation and human freedom, with the traditional problem of reconciling God's foreknowledge with free will serving as the basis for Schmaltz' idea that the eternal truths can provide a means of overcoming this dilemma.

Schmaltz new book will (and has) generated much debate within the scholarly community dedicated to these causal issues, whether it concerns mind-body, body-body, or the free will debate. Given limitations of space, however, we will confine the proceeding analysis to a few themes in the chapter on physics, especially since some of these topics have not been raised in previous reviews. Building upon the earlier work of

Gabbey and Gueroult, Schmaltz develops a view that deems God the cause *secundum esse* of material substance, but with bodily forces serving as the *secundum fieri* with respect to the changes in motion among bodies (i.e., changes in the distribution of the world's conserved quantity of motion), and with the attribute of bodily duration providing the key to understanding the nature of these bodily forces:

If this account is correct, then for Descartes the bodies in motion that God continuously conserves have as modes of their duration various forces that determine the outcomes of collisions, just as the motion that he conserves has as modal features of itself various inclinations that determine not only how it would proceed if unimpeded, but also certain effects that a moving body actually does have. These forces and inclinations are therefore true causes *secundum fieri* that produce the particular changes due to contact among bodies. (p.121)

Accordingly, contra Garber's well-known interpretation that denies the existence of such bodily forces, Schmaltz concludes "that Descartes's intention is to allow for a physical world that has an internal source of activity" (p. 128), and that "Descartes's considered view is that the nature of bodies is not exhausted by the purely geometric and kinematic aspects of extension" (p. 88).

Nevertheless, the problem with these last assertions is that it is very difficult to pinpoint anything like an "internal source of activity" in Cartesian matter. Descartes' consistently appeals to the purely geometric and kinematic aspects of matter when specifying the details of any property that we would normally associate with bodily forces, and this fact would seem to undercut the kind of conservationist reading that Schmaltz prefers in favor of a more God-involved scenario, i.e., occasionalism or concurrentism. Take impenetrability, for instance: Descartes explanation, in the correspondence with More, utilizes extension alone to explain impenetrability (namely, two overlapping extensions would result in a loss of extension, which is presumably outlawed because there can be no such decrease in the world's extension). Yet, like tangibility, impenetrability is conceived as "a real property, intrinsic to a thing" (in its non-sensory sense; AT V 342, *Philosophical Writings*, vol. 3, Cottingham et al., eds., Cambridge, 1991, p. 372 [CSMK III]). Hence, this "real property" would seem to be entirely reducible to extension: i.e., rather than use a bodily property, force, to explain why two bits of extension fail to interpenetrate (as would Leibniz), Descartes' explanation goes in the opposite direction, using geometry to explain the property of impenetrability. This type of explanatory strategy is common throughout Descartes' later work, and its important ramification is that it seemingly leaves no room for any functioning notion of force in Cartesian physics at the *fundamental* level, whereas one could still invoke such forces as a sort of higher level property, or more accurately, mode, of *extension*, as Descartes would seem to support: "impenetrability belongs to the essence of extension and not to that of anything else" (CSMK III 372). Now, Schmaltz reads force as a mode of bodily duration, as noted above, but the problem here is that instantaneous forces, i.e., inclinations, tendencies, etc., have no duration (as Schmaltz admits, p. 120), but they seem to be employed much like durational forces in explicating bodily interactions (as Schmaltz also admits, p. 121). This last point would thus seem to call into question associating force with duration, as opposed to simply associating it with

extension; and, of course, the latter option is specifically endorsed in Descartes' quote above. In addition, how can a mode of extension, or duration, constitute an "internal source of activity"? the inability to offer a coherent answer to this question is why the occasionalist option, in particular, seems irresistible, for it can allow the nature of bodies to be fully captured by the purely geometric and kinematic aspects of extension.

Furthermore, also in the correspondence with More, Descartes provides an illuminating discussion of the rest force of bodies that would seem to raise problems for Schmaltz' interpretation:

I think that what causes you difficulty in this matter is that you conceive of a certain force in a quiescent body, by which it resists motion, as being something positive, namely as a certain action distinct from the body's being at rest; whereas in fact the force is nothing but a modal entity (AT V 404; CSMK III 379-380).

The upshot of this passage is that the rest force is *not* distinct from the body's merely being at rest, which explains why it is not "something positive" in bodies. In the subsequent paragraph, moreover, Descartes provides examples of the mode, motion, and the details exclusively concern the separation/non-separation of the body from its contiguous neighborhood (AT V 405), a geometric or kinematic account that is perfectly in accord with Part II of *Principles*. Of course, these considerations do not refute a reading, like Schmaltz', that appeals to an internal principle of some sort in matter, but they do seem to lend more support for a God-based conception that can conveniently sidestep these worries.

The above criticisms should not be taken as a judgment on the overall value of Schmaltz' book, it is important to note, since the difficulties involved with understanding the ontology of force in Descartes' physics are notorious. Indeed, Schmaltz' distinctive effort to untangle these mysteries is a noteworthy addition to the literature, and a close perusal will reward the reader with its many insights and valuable discussions. As consistently noted in the book, Descartes frequently uses language that directly ascribes forces to bodies, thus Schmaltz' sophisticated defense of this type of interpretation (i.e., non-occasionalist and non-concurrentist) is both warranted and constructive.

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