

planetary system proposed by Tycho Brahe? Without a clear definition of ideology, answers to these questions are difficult to assess.

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Stephan Schmid. *Finalursachen in der frühen Neuzeit: Eine Untersuchung der Transformation teleologischer Erklärungen*. Berlin: De Gruyter, 2011. Pp. xii+410. \$165.00 (cloth).

This is a book about why and to what extent early modern rationalists rejected teleological explanations and descriptions of natural phenomena (21). It is centered around Descartes (27) and discusses five authors in detail: Descartes himself, two predecessors (Aquinas and Suárez), and two followers (Spinoza and Leibniz). The discussion shows an impressive amount of learning, acuity, and original insight.

One of the main aims of the book is to qualify the standard view, according to which Descartes and his followers rejected teleological explanations. Stephan Schmid convincingly argues, first, that natural teleology is already effectively called into question by Aquinas and, second, that none of the authors discussed actually reject natural teleology in all of its forms. As one of the main sources of the trouble, he identifies the “cognition requirement” as stated by Aquinas: in order for something to happen for the sake of an end, a cognition of an end is required (92). As Schmid knows, this had already been put forward by Avicenna (92 n. 112), so if the issue were who started everything, Avicenna would certainly belong in the book. But the issue is rather who gave Descartes the idea, and arguably, these were Aquinas and Suárez. So for Schmid’s purposes, everything starts with them.

Aquinas, following Aristotle, analyzes teleological phenomena in terms of final causes, and he assumes that natural substances are subject to teleological changes. Since he also accepts the cognition requirement and assumes that nonrational beings have no cognition, he must maintain that nonrational beings have their final causes only by virtue of being cognized by some rational being, that is, God. Being an intellectualist, however, Aquinas cannot admit that God’s cognition changes the essence of its object. Therefore, it seems that no natural substance can be essentially teleological (369). Schmid shows how each of the other authors defends the possibility of natural teleology by rejecting one of Aquinas’ assumptions, while all of them stick to the cognition requirement (372–79).

Aquinas claims that all efficient causes act for the sake of an end. Schmid argues, correctly I think, that Aquinas can say this because he gives it a rather weak meaning. That every cause acts for an end simply means that to be a cause is to have a specific effect (50). According to Schmid, Aquinas develops this into an essentialist dispositional theory of causation, according to which the causal powers of a cause lie in its essence (58–68). This sounds like a rather strong claim, but it may still be harmless; of course a cause cannot cease to have its effect without ceasing to be what it is, namely, *this cause*. However, it is always tempting to read such claims in a stronger way, so that there is something in the essence of a thing that makes it cause its effects, and it is not always clear to me whether Schmid resists this temptation. For instance, he says that according to Aquinas, all true statements of the form “A causes B” must be analytically true (68, 384), and this must be an overstatement. Even if the causal powers of a cause belonged to its essence, there would always be many descriptions of it under which it is not analytically true that it has these powers. “The cause of heat causes heat” is analytical, but “fire causes heat” is not.

One of the many virtues of Schmid’s treatment is that it gives Suárez the distinguished place in the history of early modern philosophy that he deserves. Suárez defines a cause as a principle that confers, as such, being on something other (*principium per se influens esse in aliud*). This may simply mean that to be a cause is to make something be such and such. Suárez, however, seems to take “being” in an unqualified sense, not as “being such and such” but as “existence,” so that a cause must always give rise to the existence of something. At any rate, Schmid reads him like this (110). This would explain why Suárez thinks that the definition of a cause really only applies to the efficient cause and not literally to the final cause. For, as Avicenna says, final causes are causes of essence, not of existence. Schmid also infers from this that causality, like existence, transcends the categories, so that things are causes and effects insofar as they exist, and not insofar as they belong to any of the categories (120). This would mean that only the existence of a substance can be a cause or an effect and not, for instance, the shape of a thing or its weight. But there is no need to go this far. That causality transcends the categories does not mean that no instance of causation belongs to any of the nonsubstance categories; it merely means that not all cases of causation belong to only one of the categories. In particular, it means that in addition to substances, accidents can be causes and effects.

In any case, Suárez takes a cause to be something that confers being on something, and therefore, if the final cause is to be a cause, there must be some act by which it confers being, accidental or substantial, on something else. This leads, again, to the picture of final causation suggested by Avicenna:

the final cause presents the idea of a goal to an agent, and this makes the agent act in a certain way. (Schmid does not mention Avicenna here.) Suárez says that in such cases, the goal moves the agent by a “metaphorical motion” (124). Further, since final causes act by moving an agent, even if only metaphorically, Suárez concludes that God’s actions do not have final causes. For God is not moved by anything (138). Instead, says Suárez, God’s creation is guided by exemplary causes (140), which do not move anything (144). It is not clear why he calls them causes, then, but so be it.

Most of Descartes’s arguments against final causes are thus already present in the tradition. If teleology requires cognition, and thus all natural movements can only have final causes because God wants them to, and if we either do not know God’s purpose or even know that he does not act for any, then it follows that we should not try to explain natural phenomena in terms of final causes (179–87). The only thing that Descartes adds is his confidence that one can do well without them. This, however, does not mean that nothing should be explained by reference to final causes. First, there are goals and purposes for rational beings. Second, as Schmid shows in one of my favorite parts of the book (206–23), the human body is teleologically structured by virtue of being united with a soul. This explains why and in what sense the soul is in a body, not merely like a captain is in a ship but more intimately.

As Schmid makes clear, Spinoza and Leibniz both argue that Descartes cannot actually do physics without final causes. On the face of it, Spinoza rejects all kinds of teleology, but in fact, he only rejects teleological explanations, not teleological descriptions (240). He says that extended bodies are not merely passive but manifestations of active powers (272), so that they all have what Spinoza calls their *conatus* (278). Schmid suggests that Spinoza’s *conatus* differs from Aristotle’s *dunamis* in that the former is active and the latter merely passive (294). As far as Aristotle is concerned, this is wrong: His *dunamis* may be either active or passive (cf. *Metaphysics* Δ 12). Also, Spinoza says that all teleological movements are passive because they follow from (or are described in terms of) inadequate causes (296, 245–46). But then, it seems that a *conatus* cannot be both active and teleological. It might not be teleological after all.

Leibniz argues that in order to do physics, we must individuate bodies in terms of forces and substantial forms (309). Since forces are directed and Leibniz accepts the cognition requirement, he concludes that bodies must be individuated in terms of something like a Cartesian soul (346). Further, since he thinks that substances must be causally independent of all other things, he concludes that their actions can be explained only in terms of final causes

(326). One problem with Leibniz is that he derives nonintuitive claims from assumptions that are not that much more intuitive. Why stick to the cognition requirement? Why insist on the causal isolation of substances? Schmid promises at the outset to take the authors discussed seriously, as philosophers who argue for their claims with intelligible arguments (vii). He largely succeeds in doing so, and given the range of authors he discusses, this is an admirable achievement. As for Leibniz, however, he fails to make his position plausible. But this may well be Leibniz's fault.

All in all, the book is clearly written, well argued, and well informed. Anyone who is interested in the extent, the reasons, and the repercussions of Descartes's rejection of final causes should have a look at it.

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Noa Naaman-Zauderer. *Descartes' Deontological Turn: Reason, Will, and Virtue in the Later Writings*. Cambridge: Cambridge University Press, 2011. Pp. xii + 224. \$85.00 (cloth).

In the past couple of decades, the scope of English-language Descartes scholarship has expanded considerably, with respect to both topics and texts. *Descartes' Deontological Turn (DDT)* reflects this expansion: in *DDT*, Noa Naaman-Zauderer focuses on relatively understudied aspects of the *Meditations* and later writings, especially the *Passions of the Soul* and related correspondence. The six chapters of *DDT* constitute three distinct, albeit interrelated, parts, focusing on error, the will, and ethics. Although these topics have all received attention from commentators, *DDT* is unique in treating these topics together and in centering on the concept of the will: *DDT* is the first sustained published treatment of the will in Descartes's mature writings. *DDT* seeks to show that "Descartes considers the will, rather than the intellect, as the most significant mark of human rationality, both intellectual and practical. The overarching theme of this book is that the right use of free will, to which Descartes assigns obligatory force, constitutes for him an end in its own right and not only a means for acquiring true knowledge, happiness, or any other valuable end" (ix).

Chapter 1, the longest chapter of the book, ranges widely, treating the nature of clear and distinct ideas, the question of whether Descartes is a direct realist or a "representationalist" about perception, the nature of objective