

Jeroen de Ridder, Rik Peels, and Rene van Woudenberg, eds. *Scientism: Prospects and Problems*. Oxford University Press 2018. 320 pp. \$74.00 USD (Hardcover ISBN 9780190462758).

What is scientism? It isn't easy to say. Clearly it involves a high degree of confidence in and deference to the natural sciences as applied in areas not generally agreed to be within their domain. But beyond that, as the editors of *Scientism: Prospects and Problems* observe in their useful editorial introduction, scientism is a view 'which is widely but often implicitly adopted, that is rarely stated explicitly or defended rigorously, and that mostly does not go by the name "scientism"' (2). Yet it is also a view—or, better, a family of views—which, if true, would have philosophical significance and practical repercussions of the highest order, as the editors convincingly argue in their introduction, and thus deserves to be on the philosophical agenda.

In the first chapter, Rik Peels offers a conceptual map of scientism, based on a thorough review of the literature, which meticulously distinguishes a variety of scientistic claims and delineates their interconnections. The hope is that such a map will enable the proponents and the opponents of scientism to agree at least on the terms of the debate. He suggests that what he calls partial epistemological scientism—the view that only the natural sciences are capable of providing rational belief and knowledge in 'a smaller or larger realm of life that goes significantly beyond what are widely considered to be the borders of the natural sciences' (44)—is particularly worthy of attention, since it is a form of scientism entailed by the majority of varieties of scientism he considers.

In his contribution, Mikael Stenmark offers a general unifying definition of scientism—briefly, 'the view that everything eventually, or as much as possible, could and should be understood in terms of the natural sciences' (58), which Peels endorses in his contribution—and also provides a taxonomy of scientism, which is not as elaborate as Peels'. He arrives at a definition of core scientism as the conjunction of the claims that only science provides genuine knowledge and that the only things that exist are those discoverable by science. He then contrasts core scientism with a number of rivals: liberal naturalism, humanism, social constructionism, religious naturalism, and theism. These are all worldviews, Stenmark says, which are, if not contradictory, at least in tension.

Alex Rosenberg is famous, or notorious, for espousing a particularly radical form of scientism, which, inter alia, rejects the existence of abstract objects and embraces eliminativism about intentionality, as in his *The Atheist's Guide to Reality* (W.W. Norton 2011). In 'Philosophical Challenges for Scientism (and How to Meet Them?)' he identifies what he regards as two great challenges to his view—explaining knowledge of mathematics and finessing the self-refuting nature of eliminativism—and sketches a variety of ways that he hopes to meet them. It is disappointing and frustrating that his contribution is virtually identical to his 'Strong Scientism and Its Research Agenda,' published in *Science Unlimited: The Challenges of Scientism* (University of Chicago Press 2017) but unmentioned here.

Like Rosenberg, James Ladyman is willing to accept the label 'scientism,' but he prefers a less radical and more 'humane' version that eschews overreach and arrogance. And he prefers to adopt it not as a doctrine but as a stance, in the sense of Bas van Fraassen's *The Empirical Stance* (Yale University Press, 2002): doing so, he argues, enables scientism to avoid the objection that it is hoist by its own petard and to incorporate non-doctrinal elements such as commitments, norms, and values. It would be interesting to consider how his view would comport with recent work in the philosophy of science focusing on the attitudes distinctive of science such as Lee C. McIntyre's *The Scientific Attitude: Defending Science from Denial, Fraud, and Pseudoscience* (MIT Press 2019) and

Robert T. Pennock's *An Instinct for Truth: Curiosity and the Moral Character of Science* (MIT Press 2019).

In his contribution, Hilary Kornblith formulates scientism in terms of Wilfrid Sellars's contrast between the scientific image and the manifest image: 'We should endorse features of the manifest image only to the extent that they are part of the scientific image' (127). To make his point, he provides a fascinating case study involving deliberation in the formation of beliefs, which (he argues with reference to the psychological literature) appears quite different from the first-person and the third-person perspectives. There is no way to reconcile the apparent contradictions, according to Kornblith, and the historical record of the success of science in overturning commonsense but erroneous beliefs is sufficient reason to judge the scientific image to prevail.

Ian James Kidd doesn't answer the question of the title of his contribution 'Is Scientism Epistemically Vicious?' simply because he isn't willing to evaluate the epistemic virtuousness or viciousness of scientism in the abstract. (The editors seem to mischaracterize his project in their introduction.) Instead, he deploys the resources of virtue epistemology to interpret the common charge that the proponents of scientism are dogmatic, closed-minded, and arrogant, with closed-mindedness the center of his attention. It isn't clear, however, what is gained by doing so. Faced with the charge, the proponents of scientism might avail themselves of G. K. Chesterton's retort: 'The object of opening the mind, as of opening the mouth, is to shut it again on something solid.'

René van Woudenberg is thus the first contributor to argue against scientism in the volume, focusing on Rosenberg's *The Atheist's Guide to Reality* and Don Ross, James Ladyman, and David Spurrett's discussion in *Every Thing Must Go: Metaphysics Naturalized* (Oxford University Press 2010). He offers a brisk rebuttal of Rosenberg's scientism as not convincingly supported, entailing absurd consequences, and not knowable on its own account. His detailed rebuttal of Ross, Ladyman, and Spurrett's discussion is not quite so brisk. A point of interest is that van Woudenberg argues that if scientism is a stance, as they hold, then its adoption is underdetermined by the evidence, so someone who declines to adopt scientism 'cannot be accused of irrationality' (188): but why think that rationality is exhausted by attention to the evidence?

In order to evaluate scientism, Jeroen de Ridder takes a clever approach: he tries first to identify what is distinctive of scientific knowledge and then to ascertain on that basis what, if any, limits there are to it. If scientific knowledge is construed in either of the ways he identifies as promising—as 'high-grade' knowledge or as 'objectifying' knowledge—then there are, he concludes, no fewer than seven types of limits to it. He stops short of presenting the conclusion as a full-fledged objection to scientism: that would require arguing that knowledge, if not scientific knowledge, is available in the off-limit areas. Since these include groundless basic beliefs arguably necessary for scientific knowledge, however, it seems that the required argument would not be much of a reach.

Like Ian James Kidd's contribution, Alvin Plantinga's 'Scientism: Who Needs It?' fails to answer its titular question. Whether or not he *needs* scientism, Plantinga doesn't *want* it, since even what he describes as a moderate version of scientism—'When faith and science clash, 'tis faith must go to smash,' as he amusingly puts it (227)—entails the falsity of the Christian faith, or at least the Christian faith as Plantinga understands it. His argument here will be predictable to anyone familiar with his previous work, and it is disappointing that he fails to engage with his fellow contributors: for example, he rehearses the argument that a strong form of scientism is self-refuting without considering Ladyman's attempt to evade the argument by construing scientism as a stance.

The last three chapters focus not so much on scientism as on its philosophical relevance. William FitzPatrick argues that philosophical work using empirical data to debunk ethical and metaethical views depends on a problematic form of scientism to do the heavy lifting. As might be