Book Reviews

Stathis Psillos, ***Philosophy of Science A–Z***. Edinburgh: Edinburgh University Press (2007), 280 pp., $70.00 (cloth).

This is a dictionary of the philosophy of science. Its primary audience is likely to be undergraduate students coming to grips with the philosophy of science, though more advanced students in other areas of philosophy will find the book useful as well. It could well complement a standard text or anthology in a survey course in the philosophy of science. Philosophers who do not work in the philosophy of science, as well as academics in the sciences and social sciences, and members of the educated public may find the book of benefit as well. I can imagine it serving as a useful resource for a philosopher of science seeking guidance outside their customary patch. I picked up a few tidbits that were new to me. It will certainly find a place on my bookshelf.

The specialized vocabulary of the discipline can be daunting for the newcomer to the philosophy of science. So a dictionary is welcome. But to say that the book is a dictionary is to downplay it somewhat. Though Psillos does describe it as such, it is more than a mere dictionary. Some of the entries are definitions of key terms. But many of the entries contain more sustained discussion. As a whole, they provide coverage of a comprehensive range of topics in the philosophy of science. Most of the entries include references to works in the literature where the interested reader may turn for further enlightenment on a given topic. There are entries for classic authors as well as senior living figures in the field of the philosophy of science, which briefly describe their contribution and provide references to seminal works. Entries for central figures in the history of science such as Copernicus, Newton, Darwin and Einstein are also included. The book concludes with a fine bibliography of key works in the philosophy of science.

Few readers (other than this reviewer) will read the book from cover to cover. However, the experience of doing so reveals it to contain the rough equivalent of an introductory textbook. Its novelty and usefulness lie in the format. The book can be consulted in the manner of a dictionary by looking up entries on specific topics. One may then follow up related entries that are highlighted by bold print in each entry. In some cases, clusters of neighboring entries deal with related topics. If one wishes to dig deeper, one can track down the works cited at the end of most of the entries, though for many purposes the coverage provided may be suffi-

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cient. As far as the content is concerned, the book has the same range of topics, and goes into the same level of detail, as one would expect in a reasonably thorough introduction to the philosophy of science.

The entries vary in length from definitions to short essays. For example, the entry for 'argument' is a definition in the usual dictionary sense of the term. But the entry for 'analytic/synthetic' is a short historical essay that runs from Kant and Frege to Carnap and Quine, describing their several views on the nature of the analytic/synthetic distinction. The choice of entries is fairly fine-grained. So there is not only an entry on approximate truth, but entries on verisimilitude and truthlikeness as well. Many of the entries provide an introduction to current debates. So the entry on approximate truth indicates that the notion is crucial to the realist's response to the pessimistic induction. By flicking back and forth between entries linked to the entry on the pessimistic induction, to various entries on realism and inference to best explanation, one may achieve a reasonable overview of the issues around scientific realism. Further exploration will lead to informative discussions of such matters as truth, causation, laws of nature and universals. The reader wishing to learn something about confirmation will soon acquire a good sense of this by way of entries on confirmation, Bayesianism, Hempel, grue, and so on. Similarly, the entry on laws of nature introduces the topic, describes the main views in the area, and leads into the current debate.

For the purposes of the dictionary, philosophy of science is understood in a broad rather than a narrow sense. Instead of presenting it as an isolated discipline off on its own, it is embedded in philosophy at large. Psillos especially emphasizes its relations with epistemology and metaphysics, though connections with philosophy of mind and language are also made. Besides notions specific to the philosophy of science, there are entries on general philosophical notions, such as 'argument', 'belief', 'paradox', 'universals'. Moreover, there are entries on major philosophical figures of relevance to the philosophy of science, such as Berkeley and Descartes, as well as figures such as Bacon or Poincaré, whom one might think of as having more narrow relevance to the philosophy of science.

The book displays a neutral attitude toward the ideas and topics that it seeks to introduce. But Psillos does not hesitate to take a stand, where a reasonable judgement is appropriate. In the entry on Popper, for example, one finds the claim that "Popper was right when he stressed that knowledge does not require certainty but wrong when he tried to dissociate knowledge from justification—and in particular from having (inductive) reasons to believe that something is true" (184). In the current philosophical climate, few would demur. Even those deeply influenced by Popper must admit that this is one of the points where there has been stiff

resistance to Popper's ideas. The stand Psillos takes here is a nice example of a reasonable judgement that goes beyond mere neutral reportage.

Unfortunately, there are a number of spelling mistakes and one or two sense-distorting misformulations. Berkeley's *esse est percipi* comes out as 'to be is to perceive' rather than 'to be is to be perceived' (22). In the entry on confirmation, it is said that "Hempel's theory falls foul of the paradox of the ravens of the grue problem" where presumably 'and the grue problem' was meant (47). But these are minor flaws in what is otherwise a terrific book that I fully recommend.

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