

**Stathis Psillos**

*Philosophy of Science A-Z.*

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This book is part of Edinburgh's 'Philosophy A-Z' series, the volumes of which are essentially dictionaries or glossaries of the terminology, nomenclature and major figures frequently referred to within a sub-discipline. Other A-Z titles include volumes on epistemology, ethics and the philosophy of language. Like all the volumes in the series the entries here are heavily cross-referenced to each other and to suggested sources of further reading. Psillos' book is intended to introduce students of the philosophy of science to its many complicated terms and schools of thought and to be a handy quick reference aid for professionals. Psillos has produced an extremely useful volume that will serve both these functions for a long time to come.

Producing a work like this faces difficult challenges. After all, no single small book can fully cover every term or significant philosopher important to a discipline, and the philosophy of science is no exception. However, the philosophy of science poses its own special challenges. Just as the twentieth century saw a massive expansion in the scope and specialization of the sciences, a similar diversification and expansion happened within the philosophy of science. This process increased after the 1960's, when the naturalist turn eroded the distinction between philosophy and science and the philosophy of science became more concerned with the details of the different special sciences. The result is a wide, varied and highly technical set of philosophical sub-fields: the philosophy of physics, biology, chemistry and so on. Mastering all the technical vocabulary of even one of these sub-fields is the work of a career; encompassing all of them in one volume is an especially daunting challenge. Psillos' well known work on the realism question, which touches on many areas, has left him in as good a position as any to attempt a general philosophy of science dictionary.

Not surprisingly, the realism question is well covered, and the various entries on it trace the turns in the debate back through a century of philosophy. Recent variations such as van Fraassen's constructive empiricism and structural realism are very well covered. The entries on structural realism in particular are excellent. Logical empiricism has had a massive impact on the philosophy of science and continues to exert influence, and this topic is very fully covered as well. Other well-documented topics are probability and the various theories of confirmation.

This book also includes entries on many of the major figures in the philosophy of science. The various logical empiricists are very well treated, for example. A major question in this context is whom to omit and whom to include. Psillos has a natural and fair solution: to get an entry a philosopher must have had a major impact and have been born before the end of the

Second World War. This avoids the difficulty of choosing between the many important but younger philosophers whose longer-term influence is not yet fully established.

Psillos' writing and clarity of explanation are very clear, and the book is pitched to be comprehensible to a novice readership. The discussion is also sufficiently detailed for use as a quick reference by the professional. Of course, every book has to make compromises, and Psillos has made some. While he does emphasize the diversity of contemporary philosophy of science, the book focuses on general philosophy of science questions and on the philosophy of physics more than on other branches of the field. While the entry on Darwin is excellent, philosophers of biology might have desired a bit more on, e.g. the species question, or cladistic classification. For my part, while I very much appreciated the entries on how developments in logic have affected the realism debate, such as the entry on Craig's theorem, I would have liked an entry on the Löwenheim-Skolem theorem. Likewise, I was a little disappointed to not to see specific entries on set theory or the Gödel theorems. Others will have their own preferences.

Of course, pleasing everyone in the context of one small volume is impossible, and Psillos has done his best at making the volume as useful as possible to the largest number of readers in the field. For a graduate student contemplating a career in the field this book will be indispensable, and professionals will also make much use of it. For anyone else just interested in learning a little about major developments in the field, this is simply the best book on the market right now. Its scope is very surprising given its manageable length. Specialist and student readers alike will greet Psillos' work with enthusiasm, and it will be much read for a long time to come.

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