**Book Reviews**


Shapin is a professor of sociology at the University of California, San Diego. He has established himself as a reliable historian in his previous two books, *Leviathan and the Air-Pump* and *A Social History of Truth*. Using insights from social science, he enriches the traditional history and philosophy of science.

The Scientific Revolution, a term coined in the early twentieth century, was considered as a watershed that surpassed everything since the rise of Christianity, and as the real origin of the modern world and its mentality. This book tries to explain the Scientific Revolution as a continuation from its medieval past: there was a diversity of understanding; there was no sudden and clear break from the past; and there was no immediate essence of the revolution. Although there may not have been a single revolutionary event, there is no doubt that key players, such as Boyle, Bacon, Galilei, and Descartes, were studying nature in a new way. Shapin describes this period of history as a social process. This book has three chapters that deal sequentially with what, how, and why.

The first chapter, "What Was Known," discusses the mechanization of nature and the depersonalization of natural knowledge. Shapin states that philosophers of the mid-seventeenth century used a mechanical metaphor to describe nature in contrast to the older school that ascribed to nature the capacities of purpose or intention as in anthropomorphism and animism. Some Christian philosophers also worried about "Renaissance naturalism" which projected supernatural power onto things to the detriment of Christian belief. Another characteristic of this Revolution is the matematization of natural philosophy, which used mathematics to describe natural phenomena. This came from the ancient root of Greek geometry. Its practicality was fully demonstrated by Kepler's law about planetary distances. It culminated in Newton's *Principia* which unified mathematics with both heavenly and earthly mechanics. However, there was and still is the debate of whether this matematization of the universe describes or truly explains nature's causes.

The second chapter, "How Was It Known," discusses the attempted mechanization of knowledge. Shapin describes science in the making, rather than science as static and disembodied belief. He points out that Copernicus argued that heliocentrism was an ancient view. Flemish anatomist Andrea Vassals saw himself as reviving the pure medical knowledge of the Greek physician Galen. Many natural philosophers (Bacon, Kepler, Newton) claimed that the ancient sources were pure, but had become corrupted over time. They followed the tradition of Renaissance humanism which reinspected the original Greek and Latin sources to reclaim cultural knowledge. However, the Scientific Revolution was new in its empiric principle of epistemology because it relied on environmental evidence and reason rather than on tradition. To increase empirical knowledge, artificially and purposefully contrived experiments were used in addition to natural observation. The scientists also recognized the boundary of natural knowledge by excluding theological, moral, metaphysical, and political discussions. They spoke only in mechanical terms. However, the difference still existed between theorists who explained through mathematical certainty versus experimentalists who recognized the limits on certainty.

The third chapter is entitled "What Was the Knowledge For?" and discusses the aspiration to use reformed natural knowledge to achieve moral, social, and political ends. First, different scientific societies and academies encouraged the collective effort of obtaining new knowledge, and regulating the rules of proper behavior in making and evaluating natural knowledge. Second, natural knowledge was used to support and extend broadly religious aims. Science was used in the argument from design for the existence and intelligence of a deity. In general, scientists acknowledged God's miraculous exercise of divine will as well as recognized his creative wisdom. Boyle even described experimental research as a kind of worship. Regarding the place of mystery in a world of science, different views between Newton and Descartes were described.

Shapin has demonstrated the heterogeneity of natural knowledge in the seventeenth century. Just as the beginning of Christianity, the beginning of science was not monolithic. Both took a long time to establish a central essence, method, and dogma. This book is very concise, but full of ideas and facts, and can serve as an authoritative bibliographical essay on the Scientific Revolution. It would be an excellent text for a history and philosophy of science course.

Reviewed by T. Timothy Chen, National Cancer Institute, Bethesda, MD 20892.


Davis, professor of philosophy at McKenna College, has written papers dealing with theistic proofs, as well as books in the field of philosophy of religion. In this book, which is simultaneously published by Edinburgh University, he exposes and evaluates the major theistic proofs, and tackles the issue of their relationship to the theistic faith.

Davis' book begins with a few basic notions of logic and philosophy. It seems to be intended for those without