

Margaret J. Osler, ed. *Rethinking the Scientific Revolution*. New York: Cambridge University Press, 2000. xii + 340 pp. \$69.95. Review BY RENZO BALDASSO, COLUMBIA UNIVERSITY.

Dedicated to the memory of Betty Jo Teeter Dobbs and Richard Westfall, this volume comprises fifteen essays. Its coherence comes from the authors' engagement with some aspect of the Scientific Revolution. Despite the title, no essay is a real attempt to rethink the Scientific Revolution. Rather, "this book reflects the problematization of the canon in recent scholarship" (3). Each essay provides valuable qualifications to the recent efforts of reinterpreting the Scientific Revolution. Collectively, these papers not only provide to the reader food for thought, but they also represent the state of the field.

In her introduction, Margaret Osler offers a balanced overview of the high points of the historiography of the Scientific Revolution, reviewing in detail the revisionary efforts of the last decade while also presenting her own recommendations partially based on the conclusions of the papers in the volume. Unlike some recent scholars who have questioned the validity of the concept and the existence of the Scientific Revolution, Osler, like all of the volume's contributors, remains committed to it. Although she rejects "the Whiggish tendency to understand the history of science as the unfolding of ideas by their own, internal logic" (6), she approaches the Scientific Revolution from the perspective of intellectual history. She argues that historians may gain a better understanding of the changes in natural philosophy that took place during the period 1500 through 1700 by abandoning the assumption that there is a right or preordained way for ideas to develop. In seeking historical explanations, historians should take "questions of agency seriously . . . using actors' categories to account for the development of ideas" (6). Furthermore, she stresses the usefulness of the notion of appropriation, for which thinkers appropriate concepts and methods from traditions known to them and adapt the ideas to solve their own problems.

One of the earliest challenges to the old canon was Dobbs' work on Newton's alchemical and biblical studies. Her research forced scholars to rethink his position as the first modern scientist and the culmination of the Scientific Revolution. A succinct but insightful overview and import of Dobbs' scholarship is her address to the History of Science Society presented in 1993 which Osler reprints. Dobbs's paper is set against Richard Westfall's reply. His essay represents a modern interpretation of the old canon. Westfall defends the view that "with Newton the new science and the new philosophy of nature found their definite form in which they shaped the scientific tradition of the West for the coming two centuries" (48); "alchemy helped Newton transcend the limitations of conventional mechanical philosophy, [but he] abandoned alchemy after he incorporated transmuted alchemical concepts into his notion of force" (53).

The next eleven essays are grouped under two rubrics: "Canonical Disciplines Re-Formed" (Peter Barker on the role of Lutherans in spreading Copernicanism; Bruce Janacek on Sir Kenelm Digby's natural philosophy and alchemy; Pamela Smith on Johann Rudolph Glauber; William Burns on astrology in the Interregnum; and Jane Jenkins on More and Boyle and the religious issues raised by the void) and "Canonical Figure Reconsidered" (Jan Wojcik on Newton's and Boyle's different conceptions of the power and scope of human reason; Lawrence Principe contrasting Newton and Boyle's alchemies; Paula Findlen comparing Newton and Athanasius Kircher as Baroque intellectuals; James Force on Newton's integration of science and religion; J. E. McGuire on Newton's theology; and Richard Popkin on Newton's biblical studies). The first group of papers stresses the well-known notion that in the early modern period natural philosophical speculations were often closely intertwined with religion, and connected with "non-canonical" subjects such as astrology and alchemy. The second group "rethinks" the figure of Newton. Possibly, the most interesting essay is Smith's presentation of Glauber—a chemical entrepreneur—exemplifying the import that artisans had in producing not only knowledge but also, and more importantly, a new

epistemology based not on the authority of the classics but in practices and tangible results. Under the rubric "The Canon Constructed," the closing essay by Margaret Jacob shows how the old canon of the Scientific Revolution was developed in the eighteenth century; Jacob underscores that it was then that mathematical sciences—and specifically Newton's contributions—were selected and separated from theological and alchemical issues.

In sum, readers of this journal will find this volume useful for the merits of the individual essays. For those familiar with the discussions of the past decade in which historians of science have tried to reassess the Scientific Revolution, the volume does not offer any radical new idea. Finally, it is significant that—save Smith's—none of the essays focused on medicine or technology, or other larger cultural trends that may have helped shape cultural styles and influenced the approach to understanding and representing nature.

Jorge Secada. *Cartesian Metaphysics: The Late Scholastic Origins of Modern Philosophy*. Cambridge: Cambridge University Press, 2000. x + 333 pp. + \$59.95. Review by LUCIANO BOSCHIERO, UNIVERSITY OF NEW SOUTH WALES.

Most of the scholarly works during the past fifteen years regarding Descartes' career have provided valuable contributions to our understanding of Cartesian natural philosophy. Jorge Secada's text, focusing on the origins of Descartes' metaphysics, manages to enrich further this field of study in seventeenth-century history and philosophy of science. He illustrates a model for understanding Cartesian metaphysics by addressing the significance Descartes placed on defining the essences of substances. Furthermore, Secada suggests that Descartes' essentialism originated from Late Scholastic thought. In fact, the aim of Secada's book is "to offer a unified reading of Descartes' metaphysics against the background of Scholastic philosophy" (1), thus opening the way for a thorough and contextual account of Cartesian metaphysics.