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Edited by Margaret J. Osler
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Rethinking the Scientific Revolution

This book challenges the traditional historiography of the Scientific Revolution, probably the single most important unifying concept in the history of science. Usually referring to the period from Copernicus to Newton (roughly 1500 to 1700), the Scientific Revolution is considered to be the central episode in the history of science, the historical moment at which that unique way of looking at the world that we call “modern science” and its attendant institutions emerged.

Reexamination of the preoccupations of early modern natural philosophers undermines many of the assumptions underlying standard accounts of the Scientific Revolution. Starting with a dialogue between Betty Jo Teeter Dobbs and Richard S. Westfall, whose understanding of the Scientific Revolution differed in important ways, the chapters in this volume reconsider canonical figures, their areas of study, and the formation of disciplinary boundaries during this seminal period of European intellectual history.

Margaret J. Osler is Professor of History and Adjunct Professor of Philosophy at the University of Calgary. She has also taught at Wake Forest University, Harvey Mudd College, and Oregon State University. Professor Osler is the author of *Divine Will and the Mechanical Philosophy: Gassendi and Descartes on Contingency and Necessity in the Created World*. Her articles have appeared in *Journal of the History of Ideas*, *Isis*, *Studies in History and Philosophy of Science*, and many other publications.

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*In memory of
Betty Jo Teeter Dobbs and Richard S. Westfall,
mentors, colleagues, and friends*

CONTENTS

<i>List of Contributors</i>	<i>page</i> ix
<i>Preface</i>	xi
Introduction	
1 The Canonical Imperative: Rethinking the Scientific Revolution <i>Margaret J. Osler</i>	3
Part I The Canon in Question	
2 Newton as Final Cause and First Mover <i>B. J. T. Dobbs</i>	25
3 The Scientific Revolution Reasserted <i>Richard S. Westfall</i>	41
Part II Canonical Disciplines Re-Formed	
4 The Role of Religion in the Lutheran Response to Copernicus <i>Peter Barker</i>	59
5 Catholic Natural Philosophy: Alchemy and the Revivification of Sir Kenelm Digby <i>Bruce Janacek</i>	89
6 Vital Spirits: Redemption, Artisanship, and the New Philosophy in Early Modern Europe <i>Pamela H. Smith</i>	119
7 “The Terriblest Eclipse That Hath Been Seen in Our Days”: Black Monday and the Debate on Astrology during the Interregnum <i>William E. Burns</i>	137
8 Arguing about Nothing: Henry More and Robert Boyle on the Theological Implications of the Void <i>Jane E. Jenkins</i>	153

Part III Canonical Figures Reconsidered

- | | | |
|----|--|-----|
| 9 | Pursuing Knowledge: Robert Boyle and Isaac Newton
<i>Jan W. Wojcik</i> | 183 |
| 10 | The Alchemies of Robert Boyle and Isaac Newton:
Alternate Approaches and Divergent Deployments
<i>Lawrence M. Principe</i> | 201 |
| 11 | The Janus Faces of Science in the Seventeenth Century:
Athanasius Kircher and Isaac Newton <i>Paula Findlen</i> | 221 |
| 12 | The Nature of Newton's "Holy Alliance" between
Science and Religion: From the Scientific Revolution to
Newton (and Back Again) <i>James E. Force</i> | 247 |
| 13 | The Fate of the Date: The Theology of Newton's
<i>Principia</i> Revisited <i>J. E. McGuire</i> | 271 |
| 14 | Newton and Spinoza and the Bible Scholarship of the
Day <i>Richard H. Popkin</i> | 297 |

Part IV The Canon Constructed

- | | | |
|----|---|-----|
| 15 | The Truth of Newton's Science and the Truth of
Science's History: Heroic Science at Its Eighteenth-Century
Formulation <i>Margaret C. Jacob</i> | 315 |
| | <i>Index</i> | 333 |

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PREFACE

The most satisfying tribute a scholar can receive is serious consideration of his or her work by other scholars. When Betty Jo Teeter Dobbs died suddenly and prematurely on March 29, 1994, I decided to invite a number of her colleagues, students, and friends to contribute papers to a volume in memory of her scholarly interests and the impact of her work. Dobbs's groundbreaking studies of the meaning of Newton's alchemy irrevocably altered our understanding of the Scientific Revolution and early modern natural philosophy. The scholarship of her associates reflects this impact – in spirit as well as detail. This volume stands as a tribute to her contributions.

Dobbs herself articulated some of the far-reaching ramifications of her work on Newton in her History of Science Society Distinguished Lecture, "Newton as Final Cause and First Mover," in which she challenged the received understanding of the Scientific Revolution. This essay, which was originally published in *Isis*, opens the volume and sets the themes for the chapters that follow. Richard S. Westfall contributed an essay that went head-to-head with Dobbs's and which provides an eloquent defense of the utility – indeed necessity – of thinking in traditional terms about the Scientific Revolution. The debate between these two giants about the central concept in our field provides the broader context for the chapters in the volume. Subsequent events altered the direction of the volume after it was well underway. Westfall's sudden death on August 21, 1996, reinforced my decision to construct the volume in terms of their debate and, at the same time, to honor Westfall's memory along with Dobbs's.

Readers will observe that most of the chapters in the volume lean towards Dobbs's revisionism rather than Westfall's reassertion of the received view of the Scientific Revolution. Westfall was aware that his essay was going to serve as something of a foil for the volume. We had a long discussion about this fact some months before his death, and he understood what the tilt of the book would be. Despite the fact

that his views receive serious criticism in many of these chapters, the outlook of the volume itself was something he understood and accepted.

I am indebted to many people who contributed to the conception, content, and final production of this volume. Early conversations with Peter Barker, Paula Findlen, and Deborah Harkness helped formulate the shape of the volume and the list of contributors. Margaret C. Jacob read drafts of all the chapters and rewrote her own essay to make it serve as an epilogue to the volume. Margaret G. Cook, Andrew Cunningham, and Lawrence M. Principe read and reread various incarnations of the Introduction, making numerous suggestions for improving it. I am especially grateful to Alex Holzman, History of Science editor at Cambridge University Press, who supported this project from the beginning and provided wise counsel during difficult times. Brian MacDonald provided efficient and sensitive editing and advice as he guided the book through the production process. Jeff Wigelsworth assisted me with proofreading and other chores. My friend Betty Flagler was a constant source of good advice and emotional support.

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