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052152492X - Divine Will and the Mechanical Philosophy: Gassendi and Descartes on Contingency and Necessity in the Created World

Margaret J. Osler

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This book is about ways of understanding contingency and necessity in the world and how these ideas influenced the development of the mechanical philosophy in the seventeenth century. It examines the transformation of medieval ideas about God's relationship to the creation into seventeenth-century ideas about matter and method as embodied in early articulations of the mechanical philosophy. Medieval thinkers were primarily concerned with the theological problem of God's relationship to the world he created. They discussed questions about necessity and contingency as related to divine power. By the seventeenth century, the focus had shifted to natural philosophy and the extent and certitude of human knowledge. Underlying theological assumptions continued to be reflected in the epistemological and metaphysical orientations incorporated into different versions of the mechanical philosophy.

The differences between Pierre Gassendi's (1592–1655) and René Descartes' (1596–1650) versions of the mechanical philosophy directly reflected the differences in their theological presuppositions. Gassendi described a world utterly contingent on divine will. This contingency expressed itself in his conviction that empirical methods are the only way to acquire knowledge about the natural world and that the matter of which all physical things are composed possesses some properties that can be known only empirically. Descartes, on the contrary, described a world in which God had embedded necessary relations, some of which enable us to have a priori knowledge of substantial parts of the natural world. The capacity for a priori knowledge extends to the nature of matter, which, Descartes claimed to demonstrate, possesses only geometrical properties. Gassendi's views can be traced back to the ideas of the fourteenth-century nominalists, while Descartes' can be linked to the Thomist tradition he imbibed at La Flèche. Refracted through the prism of the mechanical philosophy, these theological conceptualizations of contingency and necessity in the world were mirrored in different styles of science that emerged in the second half of the seventeenth century.

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MARGARET J. OSLER
THE UNIVERSITY OF CALGARY



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For J'nan, who knows why

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Acknowledgments

This book has been a long time coming. In the process, I have accrued many debts. I began working on it during my years as a young graduate student in the Department of History and Philosophy of Science at Indiana University. I vividly remember one of Richard S. Westfall's eloquent lectures in his course on the Scientific Revolution in the spring of 1964, one in which he compared the mechanical philosophies of Gassendi and Descartes. That lecture, coupled with my reading of E. A. Burt's *Metaphysical Foundations of Modern Science*, stimulated me to explore the history of the mechanical philosophy more deeply, leading in due course to a Master's thesis, a doctoral dissertation, and eventually – so many years later – this book. Progress has not been steady, and the road has not been straight. At times I felt that I was in a trackless wilderness, and sometimes I shared Voltaire's exasperation when he described his plans for writing the history of the century of Louis XIV: "God preserve me from devoting 300 pages to the story of Gassendi! Life is too short, time too precious, to spend it speaking of useless things."¹ That I did not succumb to despair and that I continue to find meaning in this work owes as much to the support of my good friends and colleagues as to my own determination to persevere and bring to fruition a project I undertook with youthful innocence.

Since adequate thanks would require me to write an autobiography, which would extend far beyond the bounds of prefatory propriety, abbreviated acknowledgments will have to suffice.

To begin at the beginning, I am grateful to my parents who raised me to be a scholar and have always supported my academic endeavors. They will not be mistaken if they detect some resonances of our many, sometimes heated, dinner table discussions in this book.

1. Voltaire to Jean Baptiste Dubos, 30 October 1738, in *The Complete Works of Voltaire*, edited by Theodore Besterman et al., 135 vols. (Geneva: Institut et Musée Voltaire, and Toronto: University of Toronto Press, 1969), vol. 89, p. 345; my translation.

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