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0521461049 - 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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PUBLISHED BY THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE

The Pitt Building, Trumpington Street, Cambridge, United Kingdom

CAMBRIDGE UNIVERSITY PRESS

The Edinburgh Building, Cambridge CB2 2RU, UK

40 West 20th Street, New York NY 10011-4211, USA

477 Williamstown Road, Port Melbourne, VIC 3207, Australia

Ruiz de Alarcón 13, 28014 Madrid, Spain

Dock House, The Waterfront, Cape Town 8001, South Africa

<http://www.cambridge.org>

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First published 1994

Reprinted 1998

First paperback edition 2004

Typeface Sabon.

A catalogue record for this book is available from the British Library

ISBN 0 521 46104 9 hardback

ISBN 0 521 52492 X paperback

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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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Acknowledgments

Richard S. Westfall supervised my graduate studies and thesis research. He prepared me well for teaching and writing the history of science and has always been a powerful model for me. I am grateful for his continuing friendship and support.

Several people have taken the time to read all or part of earlier drafts of this book: H. Floris Cohen, David Duncan, Paul Farber, and Lynn Joy. Their comments and criticisms – as varied as their interests and approaches – have vastly improved its quality. Lisa T. Sarasohn has been a close friend and companion in Gassendi studies since we first met – by fate, chance, or providence – in 1978. She has read and criticized my work at every stage of this project, and she has generously shared drafts of her own work.

Betty Jo Teeter Dobbs deserves special thanks for reading not just one but three complete drafts of this book. Her criticisms have always been honest and her encouragement genuine. The book has improved and I have grown in response to her comments. I have been fortunate to have her as a friend and mentor. We share memories of great days in the Canadian Rockies when she reinforced my understanding of the limits of mechanism and of the importance of the vegetable spirit.

An anonymous reader for Cambridge University Press read two successive drafts of the book, making detailed and extremely thoughtful comments that guided me through extensive revisions and saved me from some egregious errors. That the reader and I do not agree on all matters of interpretation in no way lessens the usefulness of the readings.

Muriel Blaisdell, Roberta Beeson, Catherine Gerbich Marcus, and Karen Torjesen many years ago formed a community of friendship that was personally sustaining and helped me form my point of view. Bernard Cooke, Maria Eriksen, Jean Hall, Marsha P. Hanen, Francine Michaud, Barbara J. Shapiro, Martin S. Staum, and Robert G. Weyant have, in one way or another, been excellent friends and colleagues. Jack MacIntosh has read chapters and discussed ideas with me at length. He is the only colleague I know whom I can phone in desperation at 11:30 at night for yet one more lucid and gracious explanation of future contingents. I learned a lot about nothing during many stimulating conversations with Jane Jenkins, who wrote her Master's thesis on the concept of the void under my supervision. She also ferreted out obscure journal articles for me in the University of Toronto library. Edward B. Davis, Philip Holtrop, and Jan W. Wojcik generously shared their dissertations with me.

Time for sustained work was provided by three sabbatical leaves granted by the University of Calgary, for the academic year 1980–1, for the fall term of 1984, and for the 1991 calendar year. Life was made more pleasant by Leave Fellowships from the Social Sciences and Humanities

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Research Council of Canada granted for the first two of these sabbaticals. More time was provided for research by the Calgary Institute for the Humanities, which awarded me an Annual Fellowship for the academic year 1987–8 and by an Isaac Walton Killam Resident Fellowship, which I received for the fall term of 1989.

Other friends, not directly connected to this work, are a deep source of stimulation and inspiration.

Paula R. Backscheider's energy and determination stand as a model that has more than once pulled me out of the slough of despond.

Blythe McVicker Clinchy constantly reminds me, in both word and deed, that the personal and the intellectual are inseparably bound and that humor and e-mail are essential to maintaining the connection.

My friend Betty Flagler has provided close personal support for many years and has always been patient with the strange demands that this project has placed on my time and energy.

J'nan Morse Sellery, to whom this book is dedicated, has been a close friend ever since we met in 1970 as colleagues at Harvey Mudd College in Claremont, California. She has always posed challenging questions, provided persistent goading, and offered insight and comfort. Her friendship has made it possible for me to sustain this work to completion.