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978-0-521-62754-2 - Renaissance and Revolution: Humanists, Scholars, Craftsmen and Natural Philosophers in Early Modern Europe

Edited by J. V. Field and Frank A. J. L. James

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*Renaissance and Revolution* is a collection of fifteen essays on some of the problems presently associated with the Scientific Revolution of the sixteenth and seventeenth centuries. The topics treated include the dissemination of Greek science, medical empiricism, natural history, the relations of scholars and craftsmen from the fifteenth to the seventeenth century, the so-called 'mechanical philosophy' in France and England, the work of Isaac Newton, and the difficulties encountered by Newtonianism in Italy in the early eighteenth century. Figures discussed include Leonardo Fioravanti, Jan Swammerdam, Piero della Francesca, Johannes Hevelius, Jonas Moore, Robert Boyle, Isaac Newton, Christiaan Huygens, Francesco Algarotti and Luigi Ferdinando Marsigli. There is an introduction by the editors and an afterword by A. Rupert Hall. The authorship is international, including scholars with established reputations as historians of science.

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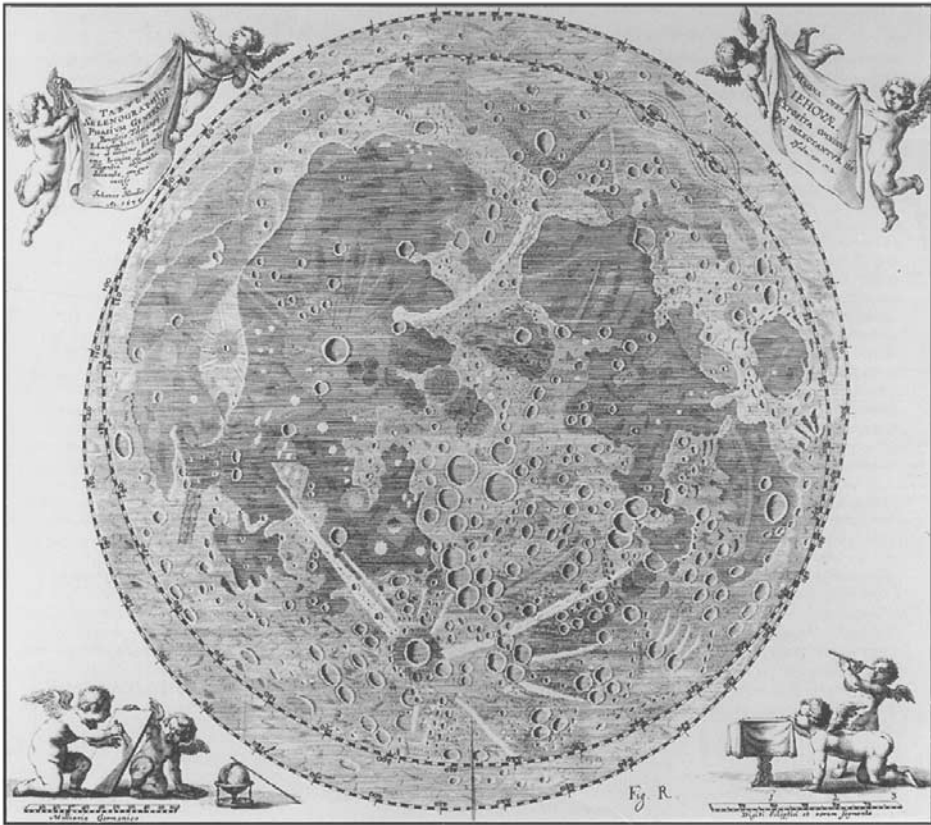
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Full Moon engraved by Hevelius. Putti probably added by Adolph Boij. Hevelius, *Selenographia*, (Gdańsk, 1647) pp. 262–3.

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# Renaissance and Revolution

## Humanists, scholars, craftsmen and natural philosophers in early modern Europe

*Edited and introduced by*

J. V. FIELD

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and

FRANK A. J. L. JAMES

*Royal Institution Centre for the History of Science and Technology*



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## *Preface*

The papers collected in this volume originate from the British Society for the History of Science Summer Meeting of 1990, held in Keble College, Oxford, with lectures in the University's Engineering Department. In honour of the seventieth birthday of Professor Rupert Hall, the title of the meeting was 'The Scientific Revolution'. Its subject matter ranged widely, by no means being confined to topics considered in Hall's similarly titled book of 1954 (second edition 1962) or its slightly less similarly titled third edition of 1983.

The conference was attended by about 160 people. Despite the heat – which strained the credulity of foreign visitors and the air-conditioning of the lecture theatre used for the plenary sessions – discussions, both formal and informal, were lively and friendly. References to some of them are to be found in footnotes of papers in this collection.

That everyone at the meeting seemed happy to talk shop with everyone else suggested a community of historical interests that was not immediately apparent on scanning the titles of the papers presented. In selecting papers for publication, we strove to preserve something of the diversity that enlivened the conference while at the same time bringing out some of the unifying elements that made the conference so friendly. Such elements have helped to give coherence to this book.

Like most of the members of the Organizing Committee of the Oxford conference, the editors were students in the Department of History of Science and Technology at Imperial College, where they both wrote their Ph.D. theses (J. V. Field's research being supervised by Rupert Hall, F. A. J. L. James's by Marie Boas Hall). In drawing up the programme of the conference there was general agreement that the guiding principle should be not to look for personal connections with the Halls but rather to ask for papers on subjects with which they had been concerned. This use of the Halls' scholarly work as an organizing principle was never intended to lead, and in the event did not lead, to a conference that was a homage to the Halls in any sense other than that of showing that some of the intellectual hares they had started were still up and running. We consider that this, together with being read, is the healthiest form of homage to a historian. It has been repeated, in a more durable mode, in this book.

The two editors were co-secretaries to the Organizing Committee for the conference, which developed from an idea put forward by John Hendry. The other members



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of the Committee were Janet Browne, Robert Fox, Willem Hackmann, Graham Hollister-Short, Malcolm Oster and Mari E. W. Williams.

We should like to record our gratitude to John Pickstone (Programme Secretary, BSHS) and Wing Commander Geoffrey Bennett (Executive Secretary, BSHS) for their help; and to the British Academy, the International Union for the History and Philosophy of Science, the Royal Society of London and the Wellcome Trust for generous financial support for the conference.

We are grateful to our contributors for their patience in responding to editorial queries and for allowing the emendations required to give the volume an acceptable degree of stylistic coherence. In particular, we are grateful to Michael Hunter for guidance based on his own experience as an editor, and, most particularly of all, to Rupert Hall, who kindly read and commented on an earlier draft of our Introduction. We owe thanks also to John Henry, Anita McConnell and Simon Schaffer, who provided us with bibliographic references and other items of aid.

During most of the time that work was being done on this book, JVF was an academic visitor in the Mathematics Department of Imperial College of Science, Technology and Medicine (University of London). We should like to express our gratitude to the College and the Department for facilitating our work in this way.

Much of the editorial work involved using FAJLJ's word processor. We are grateful to the other members of the James household – most particularly Joasia James – for their forbearance in tolerating the consequent disruption to their normal lives.

JVF FAJLJ

*London, August 1992*

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## *Abbreviations*

*BWN* *Biographisch Woordenboek der Nederlanden*.

*DBI* *Dizionario Biografico degli Italiani*.

*DNB* *Dictionary of National Biography* [British].

*DSB* *Dictionary of Scientific Biography*.

*KGW* Kepler, Johannes, *Johannes Kepler gesammelte Werke*, ed. M. Caspar, *et al.*, Munich, 1938–.

*OCCH* Huygens, Christiaan, *Œuvres complètes de Christiaan Huygens*, ed. D. Bierans de Haan, J. Bosscha, D. J. Kortweg and J. A. Vollgraff, 22 volumes, The Hague, 1888–1950.

*OGG* Galilei, Galileo, *Opere di Galileo Galilei*, ed. Antonio Favaro, 20 volumes, Florence, 1890–1909, 1929–1939, 1964–1966.

*NNBW* *Nieuw Nederlandsch Biografisch Woordenboek*.

*TBDOO* Brahe, Tycho, *Tychonis Brahe Dani Opera Omnia*, ed. J. L. E. Dreyer and J. Ræder, 15 volumes, Copenhagen, 1913–1929.