



1989

**Review Essay: Edward Grant and John E. Murdock, eds.,
*Mathematics and Its Applications to Science and Natural
Philosophy in the Middle Ages: Essays in Honor of Marshall
Clagett***

Harvey W. Becher
Northern Arizona University

Follow this and additional works at: <https://scholarsarchive.byu.edu/rmmra>



Part of the [Comparative Literature Commons](#), [History Commons](#), [Philosophy Commons](#), and the [Renaissance Studies Commons](#)

Recommended Citation

Becher, Harvey W. (1989) "Review Essay: Edward Grant and John E. Murdock, eds., *Mathematics and Its Applications to Science and Natural Philosophy in the Middle Ages: Essays in Honor of Marshall Clagett*," *Quidditas*: Vol. 10 , Article 19.

Available at: <https://scholarsarchive.byu.edu/rmmra/vol10/iss1/19>

This Review is brought to you for free and open access by the Journals at BYU ScholarsArchive. It has been accepted for inclusion in Quidditas by an authorized editor of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.

Freeman discuss cases in which, paradoxically, power is gained by refusing to exercise it.

These essays never deny women's subordinate position in medieval society, but they do discuss the instances in which women did achieve power and how that power was used. All the authors put the notion of public/private sphere dichotomy to good analytical use. The variety of subjects examined and the mixture of historical and literary topics make this a volume of exciting, well-paced reading. It is unfortunate that all the manuscript illustrations could not have been reproduced in color and that bilingual versions of citations were not provided in the Chojnacki piece. These wishful objections aside, this collection provides illuminating reading for historians and for those interested in women's questions generally.

Joan M. West
University of Idaho

Edward Grant and John E. Murdoch, eds., *Mathematics and Its Applications to Science and Natural Philosophy in the Middle Ages: Essays in Honor of Marshall Clagett*, Cambridge University Press, 1987.

Better than a quarter of a century ago, Marshall Clagett decided that history of medieval science was mere speculation because of the paucity of original sources. He set out to recover, translate, and annotate medieval manuscripts, and he trained students to do likewise. Ever since, Clagett's intellectual heirs have continued to mine the shaft that he opened. This anthology fits well that tradition.

The introductory pages are an all-too-short review of Clagett's career, reinforced by a bibliography of Clagett's publications, which is appended at the end of the book. Unlike most festschriften, there is no initiatory attempt at bringing consistency to the diverse contributions that follow, and there is no need for that: the unifying theme for this publication, as for Clagett's lifelong research, is mathematics, and the contributors' methodologies rest first and foremost on Clagett's proviso that there can be no history of medieval science without critical textual analysis.

In the opening chapter, Wilbur Knorr untangles the complex genesis of an influential tract in the Latin corpus of Archimedes, *De curvis superficibus*. By means of linguistic analysis and comparison of mathematical techniques, Knorr not only confirms Clagett's argument that the text rests on the translation of a Greek source but also confirms that the thirteenth-century document is of a composite nature.

Knorr's essay treats pure mathematics; the other ten treat applied mathematics. George A. Molland provides an overview by assessing the

extent that mathematics penetrated medieval thinking. Not surprisingly, he concludes that the establishment of a mathematical worldview had to await the seventeenth century or later.

In the realm of natural philosophy, Edith D. Sylla finds that Roger Swineshead, a contemporary of Richard, put together a uniquely founded theoretical system that incorporated, but was not limited to, physical entities. In the following chapter, John E. Murdoch shows that Thomas Bradwardine's *Tractatus de continuo* is remarkable in that it follows the axiomatic, deductive form of Greek geometry.

In a section devoted to astronomy and cosmology, Bruce Eastwood argues that Plinian astronomical excerpts and diagrams promoted "a virtual breakthrough" in the study of astronomy during the Carolingian renaissance. J. D. North shows that late medieval astronomers' geometrical algebra (as opposed to analytical geometry) involved techniques similar to those used in nineteenth-century nomography. Edward Grant affirms that medieval cosmologists had to desert Aristotelian fundamentals to harmonize Ptolemy's mathematical devices and Aristotelian physics.

Concerning optics, A. I. Sabra recounts how Alhazen's psychological explanation of the "moon illusion" displaced the mathematical account of Ptolemy. In subsequent chapters, David Lindberg and Sabeti Unguru pinpoint the innovative aspects of Roger Bacon's and Witelo's applications of mathematics to optics while acknowledging that Bacon and Witelo did not escape their medieval heritage. Finally, Michael R. McVaugh manifests, in his discussion of the research and practice of Jordanus de Turre, that quantification pervaded medicine.

Historians of science will take delight in this volume; medievalists who are not historians of science probably will not because there is no attempt to render the material meaningful to the general historian. Has not Clagett's program paid off, and is it not time to begin to integrate medieval science into medieval history?

Harvey W. Becher
Northern Arizona University

Christopher Harper-Bill and Ruth Harvey, eds., *The Ideals and Practice of Medieval Knighthood: Papers from the First and Second Strawberry Hill Conferences*, Boydell Press, 1986.

The eleven papers comprising this volume are a selection of those read at 1983 and 1984 Medieval Knighthood Conferences held at St. Mary's College, Strawberry Hill, the former home of Horace Walpole. The purpose of these meetings was to bring together historians and literary scholars whose