

REVIEWS

EDITED BY JUDY V. GRABINER

All books, monographs, journal articles, and other publications (including films and other multi-sensory materials) relating to the history of mathematics are abstracted in the Abstracts Department. The Reviews Department prints extended reviews of selected publications.

Materials for review should be sent for abstracting as indicated in the heading of the Abstracts Department. Publishers who wish to accelerate the process of abstracting and subsequent reviewing may send a second copy directly to the editor of the Book Review Department: Professor Judy V. Grabiner, 424 West 7th Street, Claremont, CA 91711 USA.

Most reviews are solicited. However, colleagues wishing to review a book are invited to make known their wishes. Comments on books, articles, or reviews should be submitted to the Correspondence Department. We also welcome retrospective reviews of older books. Colleagues interested in writing such reviews should consult first with the editor to avoid duplication.

WITELONIS PERSPECTIVAE LIBER PRIMUS (Book I of Witelo's *Perspectiva*). An English Translation with Introduction and Commentary and Latin Edition of the Mathematical Book of Witelo's *Perspectiva*. By Sabetai Unguru. Wrocław (The Polish Academy of Sciences). 1977. *Studia Copernicana*, Vol. 15. 330 pp., 12 plates.

Reviewed by Nicholas H. Steneck
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During the latter half of the 13th century, a decidedly low point in the history of mathematics according to some scholars, a Polish-born cleric working at the Papal Court in Viterbo compiled a treatise on perspective (optics) that served as one of three introductory texts to this subject for nearly three centuries. Witelo's *Perspectiva*, unlike the other two texts, the *Perspectivae* of Alhazaen and of John Peckham, begins with an extensive introductory section on mathematics, which was intended to provide the needed tools for the study of perspective. The objective of Unguru's book is to present an edition and English translation, and commentary, for this introductory section (Book I) of Witelo's *Perspectiva*, and thereby to present an introduction to basic medieval mathematics.

While not a particularly creative work--Unguru argues that

"Witelo's use of the mathematical knowledge of his predecessors was to a very great extent uncreative" (p. 28)--the first book of the *Perspectiva* does provide insights into the state of mathematics at the end of the 13th century. For example, Unguru's careful analysis of each proposition and search for possible sources allow him to establish the likely pool of mathematical works available in the Latin West. These include the obvious sources that Witelo frequently quotes--Euclid, Apollonius of Perga, and Alhazen--as well as other sources that can be identified by similarities in arguments--Campanus of Novara's edition of and Theon's additions to the *Elementa*, as well as Eutocius's commentary on *De sphaera et cylindro*. As other likely sources, Unguru lists Pappus' *Mathematicae collectiones*, in unknown translation or in parts; Jordanus's *Geometria*; Theon's recension of Euclid's *Optica* and *Catoptrica*; Theodosius's *Sphaeris*, and Serenus's *De sectione cylindri*. These and other nonmathematical sources came to Witelo through the translations of his friend and colleague at Viterbo, William of Moerbeke.

Unguru's edition of the *Perspectiva* draws principally on three manuscripts and the Risner edition, although eight of a total of twenty-five manuscripts have been consulted and are cited. The translation is careful and stays very close to the Latin text, supplying terms and interpolations only when necessary. An introductory discussion of the life of Witelo, the circumstances surrounding the compilation of the *Perspectiva*, and its significance round out this book. All in all, it is an important addition to the growing collection of textual studies available to persons interested in medieval science and this portion of the history of mathematics.

VON EUDOXOS ZU ARISTOTELES. DAS FORTWIRKEN DER EUDOXISCHEN
PROPORTIONENTHEORIE IN DER ARISTOTELISCHEN LEHRE VOM
KONTINUUM (Studien zur Antiken Philosophie, Bd. 8).

By Hans-Joachim Waschkies. Verlag B. R. Grüner, 1977.
453 pp. Hfl. 90

Reviewed by Ian Mueller
The University of Chicago

The major general claim of this book is that the conscious goals of Aristotle's treatment of the continuous (*to sunechēs*) include the resolution, not only of physical and general philosophical problems, but also of questions in the foundations of mathematics raised by Eudoxus. More specifically, Waschkies attempts to give a developmental account of Aristotle's treatment of the continuous along with a reconstruction of some ideas of Eudoxus, and to argue that at a certain point in Aristotle's development these ideas make themselves felt. The book's primary audience is undoubtedly classical scholars, particularly histori-