

Busard, H. L. L., *Johannes de Tinemue's Redaction of Euclid's Elements, the so-called Adelard III Version*, 2 vols. Stuttgart: Franz Steiner Verlag, 2001. 532 pp. pb. EUR 100. ISBN 3-515-07975-0.

Published in *Centaurus* 46 (2004), 173–175.

In 1953, Marshall Clagett discovered that the supposed “Adelard” version of Euclid’s *Elements* were in fact three very different versions – one translation, two redactions. Two other versions due to Gerard of Cremona and (probably) to Hermann of Carinthia were already known, and in 1961/62 John Murdoch discovered a translation made directly from the Greek. Beginning in 1967 with books I–VI of the Hermann version, H. L. L. Busard has now produced critical editions of all of these (in the case of “Adelard II” in collaboration with Menso Folkerts), together with an edition of a hitherto unknown redaction “Bonn et al”. The latest element of this impressive set is the present edition of the “Adelard III” version, based on the oldest extant manuscript (Oxford, Balliol College, MS 257), but giving all deviations of nine known manuscripts from this model (not all contain the full work), apart from variations in orthography and the writing of numerals. The resulting critical apparatus is of 187 densely written pages. Anybody familiar with Busard’s editions will correctly anticipate that even the present one is very careful.

“Adelard II”, the most influential version during the twelfth and thirteenth centuries, supplied only proof sketches throughout books I–VI (books I–IV being already a quite optimistic guess at what even students actively engaged in mathematical studies would normally read). “Adelard III” took over its propositions but constructed full, often quite pedantic proofs; it was not in itself widely used but influenced Campanus of Novara’s redaction from the late 1250es, which was to replace “Adelard II” as the standard version (and remain so until Clavius).

This is one reason that Busard’s edition is important for our understanding of high medieval mathematics. Another reason is the copious extra- and metamathematical considerations it contains, probably a reflection of the didactical context for which it was made (as already pointed out by John Murdoch). Having finally the full text at hand we see how far these range, and to which extent Campanus innovates, borrows, and excludes. Noteworthy already in the introduction are, for instance, the reference to mensurational practice not only as the *usus* that precedes theory but also as its ongoing *exercitatio* – taken seriously enough to include a discussion of metrologies; the extensive discussion of the nature of geometry, not yet according to the scheme of four causes but with regard to a more complex and flexible framework; and the comparison of geometry with the *Posterior analytics*, the latter both demonstrating and investigating demonstration, the former demonstrating only. Further on, one observes the statement following the common notions (taken over almost verbatim by Campanus) that Euclid presupposes many other *communes scientias*; the explanation of the manipulation of the compass when a circle is drawn (similarly in Campanus); the fairly mechanical explicitation of the various steps in a proof (which the reviewer would suggest to be inspired, both in the twelfth century and in the late ancient commentary

tradition from where the habit comes, by the teaching of rhetoric in similar steps (*inventio, dispositio*, etc.); the proofs by means of paradigmatic numerical examples in the arithmetical books; and an often rather conversational style

Busard points to a number of such characteristic features of the text in his introduction though mostly leaving to the reader to explore the details. Apart from that, the 22 pages introduction present the preceding development of the Arabo-Latin Euclid tradition, discusses how much can be said about the date and authorship of the “Adelard III” version, and describes the scientific parts of the nine manuscripts. Busard accepts Wilbur Knorr’s identification of the author (BJHS 1990, **23** (1990), pp. 298ff) with the author of *De curvis superficiebus*, Johannes de Tinemue. He apparently also endorses the identification of this otherwise unknown figure with John of London, giving further arguments from the manuscript distribution that the redaction should be of English origin; but he disagrees explicitly with Knorr’s claim that R. A. B. Mynors’ purely palaeographic dating of the oldest manuscript to the late twelfth century should not exclude that it was written two or even three decades later by a scribe who had been trained around 1200. Since knowledge of the *Posterior analytics* only became common late in the twelfth century he therefore dates John’s work to the late twelfth century.

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