

# Abstract

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Title: Geometry in Varro, Cicero, and Vitruvius. A Philological Study.

Author: Erik Bohlin

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Department: Department of Languages and Literatures, University of Gothenburg,  
Box 200, SE-405 30 Göteborg

In antiquity the mathematical field of geometry was developed by the Greeks. As the Romans came into closer contact with Greek culture, they also encountered its repertoire of learning, of which geometry was a part. The three Roman authors Marcus Terentius Varro, Marcus Tullius Cicero, and Vitruvius were each in his own way influenced by Greek learned culture and endeavoured to transmit a measure of it to the Roman context. In the present study the literary evidence of this activity by these authors is investigated as regards geometry.

The aim of the study is threefold: (1) to reexamine the evidence of the supposed Varronian works *De geometria* and *De mensuris* in order to address the questions: Did Varro write on geometry? If so, which work(s)? What can be said about its/their title(s) and contents? Furthermore, the aim is to investigate the rôle, significance, and usage of geometry (2) in Cicero's *De inventione*, *De oratore*, *Partitiones oratoriae*, *De re publica*, *Academica*, *De finibus*, *Tusculanae disputationes*, and *De officiis*, and (3) in Vitruvius' work *De architectura*. A number of relevant passages have been selected from these works and are systematically commented upon and discussed. Customary philological method is applied throughout the study.

Chapter 1 deals with Varro. The investigation indicates that Varro wrote *one* book; as regards its title and contents, the plausibility of different suggestions is discussed. In Chapters 2 and 3 the passages in Cicero and Vitruvius respectively are treated. In the Conclusion some main points of Chapters 2 and 3 are restated and developed; in Cicero and Vitruvius general theoretical knowledge of geometry and the practical use thereof are recognized as manifestations of sophisticated human culture.

Key words: Marcus Terentius Varro, Marcus Tullius Cicero, Vitruvius, geometry, ancient mathematics, Roman literature, *De architectura*, *Disciplinarum libri*, *De geometria*, *De mensuris*, *artes liberales*, ἐγκύκλιος παιδεία, Corpus Agrimensorum Romanorum, pair of compasses, Euclid