THE QUADRIVIUM AND THE DECLINE OF BOETHIAN INFLUENCE

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The De institutione arithmetica [hereafter De arithmetica] and the De institutione musica [hereafter De musica] surely are among the least read of Boethius’s works, a status they have held for some time. They received English translations only in the late 20th century. Before the publication of modern scholarly editions in the 19th century, they had been out of print for nearly 300 years. Yet, for a millennium after their composition, they had served in their fields as standard textbooks, and as the prototype for many that followed. The quadrivium, the four-subject cluster of mathematical disciplines that Boethius promoted and to which his books contributed, was equally long-lasting. The quadrivium had provided a means for organizing the instruction of mathematics; but more important were the claims that Boethius made in these works about the nature and value of mathematics and the quadrivium. Their long use as textbooks built a Platonic, even Pythagorean, approach into mathematical studies and their applications that merits recognition as one of the major strains or traditions of Platonic thought in the Latin West.

When the quadrivium dissolved in the later 16th century, the application of these belief systems about the nature of mathematics to teaching faded with it. The individual mathematical disciplines of the quadrivium, and new ones as well, were then freer to advance as specialized fields. Newer ways of thinking about the relationships between arts and sciences developed, many of which persist to the present, and mathematics generally lost its claims to providing insights into the divine mind or to affect the character and moral disposition of its students.

THE RISE AND PERSISTENCE OF THE QUADRIVIUM

Boethius composed his quadrivial texts early in his life; they are his first known works, written between 500 and 506. Those that survive, the De arithmetica and the De musica, are primarily Latin versions of Greek texts by Nicomachus of Gerasa. The Geometria, which survives only in fragments, was Euclidean, and Boethius apparently took his lost Astronomia from Ptolemy. These works were part of Boethius’s project to convey
into Latin some of the treasures of Greek scholarship, as he noted in the introduction to the *De arithmetica*, in an age in which the Latin portion of the old Roman Empire was losing the use of the Greek language and thus access to its scholarship and literature. Like the works of other late antique translators and digesters, they served for centuries as the narrow filters through which ancient learning in Greek could pass to Latin readers.

We know of Boethius’s *Astronomia* only from scattered later references.¹ The *Geometria*’s fortunes were more complex.² It is not clear how much of Euclid Boethius translated. Cassiodorus states that he had made the *Elements* known in Latin,³ but what survives does not go beyond Book 5 of Euclid’s 13 or 15. Two partial versions of Boethius’s *Geometria* survive. Each incorporates sections on geometry along with other material, and both were used in quadrivial instruction.⁴ The first, usually referred to as *Geometria I*, was used mainly from the 9th through the 11th centuries; its contents represent the type of geometry instruction in use in the era. In addition to the Boethian material, it includes elements taken from a collection of Roman *agrimensores*, practical treatises on land surveying. These texts were of interest to post-classical educators mainly for their geometrical elements rather than for actual practical application in surveying. The manuscripts of this version date primarily from the 9th through 11th centuries, mainly from the Carolingian monasteries that were at the heart of the era’s educational culture.

The other version, *Geometria II*, is composed in two books. It also includes sections of Boethius’s Euclid translation and *agrimensores*

¹ For example, by Gerbert (the future Silvester II) in a letter of 983; see Leo Schrade, “Music in the Philosophy of Boethius,” *The Musical Quarterly* 33 (1947), 188–200.
⁴ These versions, along with the other supporting evidence, suggest that Boethius’s *Geometria* resembled his other quadrivial works in being a rendering into Latin of Greek textbooks on the subject in a format somewhat more free than would merit the term translation. Boethius’s *Geometria*, then, was a partial version of Euclid’s text. Thus, for all of these quadrivial works, the role of Boethius as “author” was quite different from his role as author of the *Consolatio* or the other works he seems truly to have written de novo. The surviving versions of the *Geometria* combined fragments of this text with other ancient fragments to form a sort of textbook or handbook.