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Arts and Sciences at Padua: The Studium before 1350. By Nancy G. Siraisi. *Studies and Texts*, 25. Toronto: Pontifical Institute of Medieval Studies, 1973. Pp. 199. \$10.50.

One of the most difficult tasks in the history of education and the history of thought is to discover what actually went on in the academic teaching process. Even today, when universities and colleges issue detailed catalogues, there are discrepancies between course descriptions and what actually goes on. In the Middle Ages, there were no university catalogues and even the written examination or report had not yet been invented, so we lack even such evidence. Dr. Siraisi has patiently pulled together what evidence there is: lists of teachers, academic statutes, chance remarks by writers about various professors, chronicles, local histories, transcribed orations, commemorative poems, and other materials. The result is an account more detailed than we have ever had of the subjects taught—certainly, probably, less probably, or conjecturally—from the 1220's, when the Paduan *studium* or university more or less began, until 1350, after which date our knowledge of the university has been more complete.

The author is interested particularly in the relationship between the natural science taught in the arts faculty and the study of medicine, and her work brings out in detail how close this relationship was—thus suggesting in a Cisalpine context what my own work on Ramism some time ago suggested in the Transalpine context at Paris, namely, that, in general, medieval scholastic “philosophy,” which constituted the arts course, was far more closely bound to medicine than to theology or law. At Padua the alliance was quite overtly formalized: philosophy and medicine were consolidated in the University of Arts and Medicine (a corporation of students) and in the corresponding College of Doctors of Arts and Medicine (the teachers’ association). These arts-and-medicine groups at Padua were often engaged in a struggle against the two Universities of Law (student groups) and the College of Jurist Doctors, for Law regularly threatened to take Arts and Medicine administratively under its wing. Theology was not publicly taught at Padua until 1363 (p. 18)—a fact which reminds us again that theology was a much smaller part of the total program of medieval universities generally than present-day semisolarly mythology would have us believe.

In treating the Paduan studium, Dr. Siraisi employs the conventional division of the arts subjects into seven liberal arts organized in the trivium and quadrivium. The trivium works well enough. Grammar, rhetoric, and logic were indeed taught in the studium, and indeed had probably been taught at Padua long before the studium emerged as a corporation in the early thirteenth century. As at other medieval studia, during the late thirteenth and the fourteenth century Padua experienced a growing emphasis on formal logic and/or dialectic, which, far from

becoming "decadent" (as the mythology just referred to would have it) grew more powerful and extended its purlieus to include logical analysis of physical and mathematical problems. (The similar incursion of a vigorous logic into grammar was one of the developments that sparked the antilogical program of Renaissance humanism).

The quadrivium proves far less serviceable, and indeed counter-productive, as a means of conceiving of the Paduan curriculum. Of the four assumed arts constituting the "quadrivium," arithmetic, geometry, astronomy, and music, the only one which Dr. Siraisi finds was surely taught as such at Padua was astronomy or, perhaps more properly, astrology, since in an Aristotelian cosmos the presumed influence of the celestial spheres was a matter of physics, not of occultism. With proper academic piety, professors at Padua occasionally state that one or another of the other three subjects of the "quadrivium" should be known by physicians and others. But to what extent this announced need was met by the studium remains uncertain, if it was met at all. Only one scholar studying at Padua in the thirteenth century, Witelo, a Pole, certainly knew geometry in any detail, and how much of his knowledge he got from Padua Dr. Siraisi considers questionable.

In the light of its minimal relevance to actuality, is it not time for us to forget a purported "quadrivium" in treating medieval university curricula and simply devote ourselves to describing the curriculum as it actually was or may have been? Following the reading of Dr. Siraisi's careful study, I can only repeat a statement I have risked before: I do not know of any curriculum anywhere at any time which ever taught the quadrivium as such—arithmetic, geometry, astronomy, and music. Having heard of the trivium and quadrivium directly or indirectly from the fifth-century Latin allegory by Martianus Capella, *The Wedding of Philology and Mercury*, medieval and later writers treat of both these reputed constituents of the arts curriculum often enough. But the fact is that, after the trivium, the quadrivium is represented in medieval universities only in the sense that most often something more or less like one or another of the reputed quadrivial subjects figures in what was studied in the arts faculty after grammar, rhetoric, and logic. And this something is mixed with still other matter not among the mythical seven liberal arts at all. To allow for this fact, Dr. Siraisi adds a whole chapter on "Scientia Naturalis et Metaphysica," pointing out that in the Padua studium natural science far outweighed metaphysics, which was given short shrift. (The same was true also at Paris, and elsewhere).

But whether or not we stay with the academic mythology of Martianus Capella as our frame of reference, the present book will serve well to make available the information on what actually was going on at the early Padua studium, one of the cradles of Western medieval and of modern university education.