

**William Harris Stahl, “The Curriculum of the Seven
Liberal Arts”**

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thesis with the secular "religion of culture" by placing his treatise on the seven arts in that context.

THE CURRICULUM OF THE SEVEN LIBERAL ARTS

To a modern, the curriculum of the seven arts at first appears to have no principle of unity; it seems to be a random grouping of subjects in which any substitution of one for another would be no more significant than the substitution of geography for Spanish in a modern pupil's course of study. However, teachers of the early Middle Ages—Cassiodorus, Isidore, Alcuin, Rabanus Maurus, John of Salisbury, Thierry of Chartres¹⁹—regarded it as an integrated curriculum with seven components, all necessary. The origins of the curriculum were in classical Athens.

It is well known that the study of rhetoric began in the Greek world of the fifth century B.C. and was marketed in Athens by the Sophists;²⁰ Aristotle is reported to have regarded Zeno as the founder of dialectic;²¹ grammar, the technical study of language, of the etymology and usage of words, also began with the Sophists.²² The mathematical studies are older than this, but it was in classical Athens, especially in fourth-century Athens, that the two groups of studies—the literary-linguistic and the mathematical—came together to form a curriculum. The rhetorician Isocrates regarded mathematics (in moderation) as an acceptable propaedeutic to rhetorical study,²³ while Plato prescribed that the guardians of his republic study literature in their boyhood before they approach the mathematical and dialectical period of their training.²⁴ In the next generation, Aristotle expected pupils to have

¹⁹ Cassiodorus *Institutiones II praef.* 1-2; Isidore *Etymologiae* 1. 2.; Alcuin *Grammatica* (Migne, PL, Vol. CI, cols. 853-54); cf. pseudo-Bede, *Elementorum Philosophiae libri IV* (Migne, PL, Vol. XC, col. 1178); Rabanus Maurus *De clericorum institutione* (Migne, PL, Vol. CVII, cols. 395-404); John of Salisbury *Metalogicon* 1. 12; 1. 24; 2. 9. On Thierry, see Édouard Jeuneau, "Le Prologus in Eptatheucon de Thierry de Chartres," *Mediaeval Studies*, XVI (1954), 174 f.

²⁰ See, e.g. G. Kennedy, *The Art of Persuasion in Greece*, chap. 2.

²¹ See Sextus Empiricus *Adversus mathematicos* 7. 7; Diogenes Laertius *Lives of the Philosophers* 8. 57; 9. 25.

²² This is the period in which Plato's *Cratylus* is set.

²³ *Amidosis* 264-69.

²⁴ *Republic* 376-98b.

studied literature dialectic, rhetoric, and mathematics before they came to him for philosophy.²⁵ The first extant writer whose works cover the essentials of the seven liberal arts is Heraclides of Pontus, a pupil of Aristotle who wrote on grammar, rhetoric, dialectic, music, and geometry, besides his philosophical works.²⁶ Even at this early stage, then, the people who were most interested in the full span of subjects were philosophers; and the seven liberal arts were in essence, and always remained, a philosophers' curriculum.

This may seem an exaggerated statement, considering that, as Marrou points out, the philosophers were not alone in fostering this program: Cicero and Quintilian, for example, considered the liberal arts to be the base of the ideal orator's education. In Marrou's words: "In the Roman epoch, the *encyklios paideia* appeared at least theoretically to be the necessary preparation for all forms of higher culture: literary, technical, scientific, as well as philosophical."²⁷

Nevertheless, there is a world of difference between lip service and fulfillment. Quintilian, for instance, never shows any sign of proficiency in, or real concern with, the mathematical studies of the seven (geometry, arithmetic, astronomy, and music); Cicero, in his translations of Aratus and the *Timaeus*, shows more genuine interest—but then Cicero was more of a philosopher than Quintilian. The program of the liberal arts was no more than an unattainable ideal; "no longer the object of a regular education, it was merely a frame which each man's erudition strove to fill more or less."²⁸ The only people who seriously promoted the study of all seven liberal arts were philosophers, to whom alone the last four studies were important, for they are branches of the mathematical studies prescribed by Plato.²⁹

The justifications for the first three studies in the curriculum were simple. Grammar covered both the elements of language—which we still call "grammar"—and the study of literature, especially poetry; it was thus the minimum introduction to one's cultural inheritance, the foundation of all education. Dialectic was a training in logic, a formal train-

²⁵ See Marrou, *Saint Augustin et la fin de la culture antique*, pp. 221-22.

²⁶ See Diogenes Laertius *Lives* 5. 86-88.

²⁷ Marrou, *Saint Augustin*, pp. 222-23 (my translation).

²⁸ *Ibid.*, p. 226.

²⁹ *Republic* 7. 525a-31e.

ing in verbal thinking; rhetoric, training in expression. They correspond to such subjects in modern English-speaking schools as English grammar, English literature, English expression, and logic—which may not all be taught as formal subjects in any one school today but are nevertheless part of its education.

So much for the three subjects which the Middle Ages called the trivium. The quadrivium, as Klinkenberg says,³⁰ was conceived by Boethius “as a genus whose species are the four mathematical disciplines of arithmetic, geometry, astronomy, and music. What gives it unity is the subject with which it deals: number, or rather magnitude. Arithmetic deals with magnitudes as such, geometry with immovable magnitudes, astronomy with magnitudes in motion, and music with the relations of different magnitudes to one another.” The philosophers studied these subjects because, to quote Boethius, “everything that is formed from natural origins seems to be formed on a numerical basis. For this was the design foremost in the mind of the creator.”³¹ The science of number, arithmetic, is the key to the other three studies: geometry is the study of number given shape (we recall Martianus’ description of Four as “the sure perfection of a solid body, for it comprises length breadth and depth” [734]); astronomy is the study of such shapes given motion (and furthermore, the stars in Platonism are divinities with special relationships to the souls of men); while music, the discipline of number in its proportions, was considered the key to all the relationships, physical and spiritual, quantitative and qualitative, of the world. According to Boethius, the cosmos is held together by number: “You bind the elements with numbers so that cold consorts with flames, dry things with liquids, so that the purer element of fire may not fly away or their weight drag down the submerged lands.”³² We are reminded instantly of the opening invocation of Martianus’ work.

For probing the secrets not only of the physical world but of divinity and of the human soul as well, the quadrivium is an essential pre-

³⁰ Hans Klinkenberg, “Der Verfall des Quadriviums im frühen Mittelalter,” in Josef Koch, ed., *Artes Liberales von der antiken Bildung zur Wissenschaft des Mittelalters*, 2 (my translation).

³¹ Boethius, *De Arithmetica* 1. 2; Migne, *PL*, Vol. 63, col. 1083b.

³² *Consolation of Philosophy* 3. m. 9. 10-12; cited by Klinkenberg, p. 2.

liminary. It serves two purposes: it trains the mind in the mathematical concepts and skills necessary to comprehend and investigate the mathematical basis of the world and the life of the world; and it purifies the soul by leading it to dwell on immaterial things, abstractions, and thus removes it from the life of nature to that of Soul and Mind. The latter purpose is well-known from Plato’s exposition in his *Republic*, and was an argument which justified these studies to the Christian Clement of Alexandria.³³ Of course, mathematics had often been studied by scientists for its own sake, and the mathematical and astronomical works of Hipparchus, Eratosthenes, Euclid, and others had no religious motive. But in late antiquity, with the new impetus which Neoplatonism brought to philosophy, there was a new religious emphasis on the purification of the mind and heart. With the resurgence of a philosophy which used number, harmony, shape, and the stars as essentials in its ethics and metaphysics, these four mathematical studies reasserted their importance. Together with the literary studies they formed a total of seven, a number of great mystical significance—so much so that Augustine, who included philosophy in his list of liberal studies, omitted arithmetic (which would in any case be assumed as underlying geometry, astronomy, and music) in order to keep the magic number.³⁴

In modern times we justify mathematical studies in our curricula either as a training in spatial, numerical, and nonverbal thinking or, pragmatically, as a preparation for a great many types of jobs and situations in everyday life. To the ancients the second consideration did not apply at the level of education we are discussing, for these were “liberal” studies, and were thought to be above the trivialities of earning a living. (This is hidden allegorically under Apollo’s remark about Medicine and Architecture: they are not to speak at the wedding of Philology and Mercury because they are too occupied with mundane matters [891].) The first consideration was carried further by the ancients than we would carry it, to the point that they regarded these studies as a purification of the mind preparatory to mystical contemplation of truth. This justification, linked with their belief in the

³³ *Stromata* 6. 10-11.

³⁴ Marrou, *Saint Augustin*, p. 192. See above, p. 7, n. 11.

necessity of mathematics for understanding God, man, and the world, was obviously accepted only by philosophers and was dismissed by rhetoricians, who regarded these studies as impractical. The curriculum of the seven liberal arts, therefore, was fully taught only by philosophers, and widely accepted only when a resurgence of philosophy coincided with a decline of rhetoric. A sign of this coincidence may be read in the fact that between Varro, in the first century B.C., and Martianus, there is no evidence that any handbook of the seven liberal arts was written; yet, contemporary with Martianus, Augustine started one; in the next century, Cassiodorus compiled one, while Boethius wrote on many of the subjects, discussed the basis of the liberal arts, and appears to have coined the word "quadrivium" (or, in his form, *quadrivium*); and Isidore of Seville, at once an offspring of antiquity and a sire of the Middle Ages, treats of them in the first three books of his *Etymologies*.

Concerning the state of education in Martianus' time we learn almost nothing from Martianus himself; but, if our dating is right, he is almost an exact contemporary and fellow countryman of Augustine, whose education is well documented and has been exhaustively studied.³⁵ Augustine was brought up in the literary and rhetorical educational tradition and turned to philosophy only in maturity; he therefore provides an excellent picture of rhetorical education in its dotage.

The first study after learning to read and write was grammar, in its two senses of literature and linguistic structure. The linguistic structure taught in North Africa in the fourth century A.D. was the Latin of Rome of the first century B.C. It concentrated on morphology, deriving the rules of syntax more from the forms of inflected words than from their function in expressing meaning; by grammatical "errors," its teachers meant the deliberate irregularities and licenses found in some classical writers, especially poets—not the ignorant errors likely to appear in the Latin of a fourth-century provincial boy. The treatment of literature was if anything even more contrary to modern ideas: it consisted mainly in commenting on the text word by word, pointing out grammatical form and function, meaning (a fourth-century teacher might well have had to paraphrase a classical author much

³⁵ See Marrou, *Saint Augustin*.

as a modern teacher does with Shakespeare), rhetorical figures, etymology, any pertinent history or mythology (especially for proper names), and in general any item of information which the understanding of a particular word might require. Such a procedure could give the pupils a broad mass of historical, geographical, and other knowledge in the course of literary studies, and to that extent it provided a form of general education; but this knowledge was inevitably disorganized, derived haphazardly from single words as they occurred in a literary context. Moreover, this procedure could ruin the work as literature—never treating a passage as a whole, always atomizing it, breaking the continuity, emphasizing the trivial at the expense of the sublime.

Dialectic was often treated in antiquity as the counterpart of rhetoric. The Stoic Zeno had used the image of a hand:³⁶ the clenched fist is dialectic, compressed and forceful; the open palm is rhetoric, expansive and wide-ranging. The purpose of dialectic in the curriculum was to train the power of reasoning, to discover and fortify the arguments which rhetoric would then use. It was a subject of little interest to others than philosophers and its place in the trivium was effectively as the handmaid of rhetoric. Not until the twelfth century did it come into its glory.

The next major study after grammar, and for many the only other study, was rhetoric, generally according to the formal rules laid down by Cicero, with examples drawn from his speeches. The teaching of rhetoric in Martianus' time had not changed much since Quintilian: first the terms, divisions, and rules of rhetoric, then the elementary exercises, finally the *controversia* and *suasoria*, the declamations. The political themes were still drawn from the experiences of the Roman Republic or even the earlier Greek city-states, though Rome had been a monarchy for centuries; the legal themes were still those of Quintilian's day, though law had become increasingly a specialist's province. The main areas left to the orator as fields for his talents were display oratory and writing.

The narrowness of this education, so apparent to us as we list its sub-

³⁶ Cicero *Orator* 32; *De finibus* 2. 6. 17; Sextus Empiricus *Adversus mathematicos* 2. 7.

ject matter and procedures, escaped the notice of its teachers and most of its students because of the great attention it paid, after its fashion, to comprehensiveness. Did it not require the study of all the seven liberal arts as essential for any educated man? And if these studies were "taught" not as coherent intellectual disciplines but as scraps of information like those picked up at random in the grammar class—a procedure which to us vitiates their educational value—it does not mean they were dismissed as unimportant. "Learning" was desired and admired in a man insofar as it might help his oratory. Metaphors from astronomy, appeals based on ethical arguments, examples drawn from history (or mythology), these were sought and valued. So came those handbooks of many subjects which Martianus used as sources, pocket histories like that of Valerius Maximus; and though the "encyclopedias" had had a different genesis, they too were put to this use.

This tradition of polymathy, or universal learning, was an old-established one. Hippias the Sophist in the fifth century B.C. had an encyclopedic range of interests;³⁷ Aristotle had tried and must have practically succeeded in mastering the whole field of learning in his day; the scholars of Hellenistic Alexandria had tried by condensing and epitomizing to reduce the field of knowledge to manageable proportions. No one, however, seems to have tried alone to write an account of all that is known until Varro in the first century B.C. His works covered not only specialized treatises on the Latin language and on agriculture but also a survey of the nine arts (including medicine and architecture), a vast collection of essays in mixed verse and prose (the *Menippean Satires*), and a long work, the *Antiquities*, which was a primitive encyclopedia. Varro was emulated by Pliny the Elder, whose nephew has left us a vivid picture of his uncle's "scissors-and-paste" method: his slaves would read aloud to him the works of others, while he told them what passages to excerpt and copy out.³⁸ The consequences—secondhand information, an uncritical approach, inconsistencies, failure to acknowledge sources, lack of structure—are a foretaste of Martianus. Although many handbooks on individual subjects or groups of subjects were prepared in the interval, from some of

³⁷ Plato *Hippias Major* 285b-86c; Philostratus *Lives of the Sophists* 495.

³⁸ Pliny the Younger *Letters* 3. 5.

which Martianus did his own excerpting, there seems to have been no treatise with the range of Varro's or Pliny's; for when Augustine, at the same time as Martianus, felt impelled to write on the seven liberal arts, it was to Varro that he turned for a model. Martianus' work, derived from such sources, themselves derivative, could be produced only in an old and failing civilization: centuries of true scholarship, the whole range and depth of Greek and Roman learning, lie behind its stock definitions, its trivialities and inconsistencies. "Are all thy conquests, glories, triumphs, spoils, shrunk to this little measure?"

Because *The Marriage* was later used as a school text, it has often been assumed to have been written as such. Yet its range is too wide and its treatment too inadequate, compared with the scope of the ancient school texts we know, for this to have been its genesis. Because it contains many Neoplatonic and Neopythagorean elements, it might appear to have been a contribution for the pagan opposition to Christianity; but at best this would apply only to the first two books; the last seven are ideologically neutral, and the work as a whole has no polemical or exegetical purpose at all. Because it appeared in a time of crisis and collapse, it has been thought to have been intended as a summary of the learning of antiquity, an "encyclopedia," to be transmitted to posterity before the barbarian invasions; but again the scope is too narrow and deliberately restricted. Furthermore, such a plan presumes a degree of foresight and a sense of foreboding of which Martianus gives no indication.

These elements are not to be disregarded: the seven liberal arts were at base a school curriculum; the work is that of a pagan using Neoplatonist terms; it did appear at a time of crisis. But these features are not sufficient to explain the work. In the words of Claudio Leonardi:

The attitude, the taste, which here prevails and can explain it is not only a custom of erudition or a Neoplatonist faith; it is an attitude of "decadent" culture, and a manner of self-justification and defense by putting everything on display. It is a question of a human attitude and a cultural reaction clearly explainable in a moment of declared crisis or decadence: a defense by the parading of all one's "property", one's accumulation of learning.³⁹

This purpose of display accounts for several otherwise unaccountable

³⁹ Claudio Leonardi, "Nota introduttiva per un'indagine sulla fortuna di Marziano Capella nel medioevo," *BISIAM*, LXVII (1955) 270, n. 67.

features of the work. For this reason, it covers all the seven liberal arts traditionally necessary to the formation of an educated man. For this reason, it employs the language and style of pedantic display, the tortuousness and bombast of a writer straining to impress his readers with his literary skills, and to show off his knowledge of Greek terms, Greek proper names, Greek declensions. For this reason, does a book on the seven arts have a gaudy mythological framework, laden and fretted with allegory, to our eyes so disproportionate in size and inappropriate to the main body of the work. Martianus is displaying his learning, in a religious context, perhaps to win for himself the immortality that Plato and Aristotle, Cicero and Varro, achieved. And, with all his faults, has he not been to some extent successful?