The Seven Liberal Arts and the West Door of Chartres Cathedral[1]

by

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According to the medieval theologians, the Virgin Mary, by virtue of the innate perfection of her soul, possessed all the wisdom of which man is capable. A direct reference to this wisdom is to be found in the allegories of the seven liberal arts which, just outside an inner circle of adoring angels, decorate the tympanum of the Door of the Virgin.[2] In the medieval context the seven sciences—which were classified as the *trivium* of grammar, logic and rhetoric and the *quadrivium* of arithmetic, music, geometry, and astronomy—were not exclusively empirical sciences, as are those we know today. They were the expression of so many faculties of the soul, faculties demanding harmonious development. This is why they were also called arts.

Following an ancient tradition, Dante, in his *Convivio*, compares the Seven Liberal Arts to the seven planets, grammar corresponding to the moon, logic to Mercury, rhetoric to Venus, arithmetic to the sun, music to Mars, geometry to Jupiter, and astronomy to Saturn. The creators of the Royal Door of Chartres were certainly aware of this correspondence. It is thus doubly significant that on the tympanum of the left of the three doors the signs of the zodiac are portrayed. These belong to the unchanging heaven of fixed stars and thus represent the kingdom of the Divine Spirit, to Whom this door, with its representation of the ascension of Christ, is dedicated. The seven planets, on the other hand, govern, according to the ancient viewpoint, the world of the soul. And Mary is the human soul in all its perfection.

By means of the signs of the zodiac—not all of which, incidentally, appear on the same door since Pisces and Gemini had to be transposed for want of room to the Door of the Virgin—the arches surrounding the representation of Christ's ascension (on the left-hand door), can be seen to represent the firmament. Beside each of the twelve signs of the zodiac the corresponding month is represented pictorially in the form of its natural activity.

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[1] Extracts from *Chartres und die Geburt der Kathedrale*, (Chartres and the Birth of the Gothic Cathedral), Urs Graf Verlag, Olten Switzerland, 1962. pp. 60-64.

[2] The Door of the Virgin is the right-hand of the three constituent doors of the Royal Door of the West Facade. On the tympanum of the central door is a portrayal of Christ in Majesty.

These natural activities—one for each month—are the terrestrial reflections of the twelve signs of the zodiac. From them one learns to what extent the course of human existence depends upon the heavens: in seedtime and harvest, in work and leisure; for the heavens, in their cycle, bring heat after cold, dry after wet, and thus keep life in being.

This is significant for medieval art: in two tympanums and in the arches surrounding them, the whole cosmos is represented in its three great divisions: spiritual, psychic and corporeal. Medieval man always kept the profounder order of things in mind.

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The order in which the Seven Liberal Arts are listed, when properly understood, testifies to a Pythagorean view of things, and this was not without influence on medieval art. The division of these sciences—and all their elements—into *trivium* and *quadrivium* came into Christian culture from Greek antiquity in a late and simplified form. The medieval spirit, however, was able to reanimate the integral vision originally inherent in it.

"Philosophy has two main instruments", writes Thierry of Chartres, "namely intellect (*intellectus*) and its expression. Intellect is illumined by the *quadrivium* (arithmetic, music, geometry and astronomy). Its expression is the concern of the *trivium* (grammar, logic and rhetoric)".

In fact the *trivium* was a schooling both in language and in thought. It is language which makes man man; and this is why grammar comes at the beginning. Not without humor, the sculptor of the Door of the Virgin has portrayed this art as a woman threatening with a rod two young children who are writing. The figures of the famous grammarians Donat and Priscian stand beside her. Dialectic, whose feminine representation in Chartres carries a scorpion and has Aristotle as a companion, is none other than logic. Rhetoric is the art of speaking, or rather, speaking in so far as it is an art; Cicero accompanies its allegorical figure.

The four members of the *quadrivium* are likewise represented in a feminine form in Chartres. They are: arithmetic with a reckoning board; music with a glockenspiel; geometry with a drawing-board; and astronomy, contemplating the heavens and accompanied by Noethius, Pythagoras, Euclid and Ptolemy. These four arts or sciences refer to the four conditions of corporeal existence: number, time, space and motion. Music, of course, is not only concerned with time, but also with sound, but it is in the realm of sound that time manifests itself most immediately and characteristically; otherwise, we can only grasp it in movement, in which it is united with space.

"Everything proceeding from the profound nature of things", writes Boethius, the great transmitter of the *quadrivium*, "shows the influence of the law of number; for this is the highest prototype contained in the mind of the Founder. From this are derived the four elements, the succession of the seasons, the movement of the stars, and the course of the heavens".

It is a qualitative, and not a quantitative, conception of number that lies at the basis of medieval arithmetic. It is thus less a method of reckoning than a way of understanding the nature of number, its properties, and the uniqueness of numerical series obtained by certain constant relationships.

That each individual number does not merely represent a sum of elements, but in itself is an expression of an essential unity, appears most clearly when one transposes each number into its corresponding geometrical form: three into an equilateral triangle, four into a square, five into a regular pentagon etc. In each of these figures innumerable relationships appear, which multifariously throw light on the inner law proper to the figure in question.

The connection between arithmetic, geometry and music can be seen in that the relationship of musical notes to one another is made visible in the mutual relationship of the variously long strings which produce them. This can be easily demonstrated on a monochord, which has a single string and a movable bridge.

Following Greek tradition, Boethius distinguishes three kinds of proportions: the arithmetical, in which the same interval obtains between all members of the series, as, for example: 1, 2, 3, 4, 5, 6…; the geometrical, which progresses by means of a constant multiplication (a:c = c:b); and the harmonic, which unites the preceding two, according to the formula a:c = a-b:b-c. This is the most perfect proportion: in music it is made manifest as harmony, and in geometry as the "golden section."

THE SEVEN LIBERAL ARTS

Trivium 'the expression of intellect'	Grammar — Moon
	language
	Dialectic — Mercury
	logic
	Rhetoric — Venus
	speech as an art

Quadrivium 'intellect'	Arithmetic — Sun
	number
	Music — Mars
	time (harmony)
	Geometry — Jupiter
	space (proportion)
	Astronomy — Saturn
	motion (rhythm)

The regular relationship of different movements to one another is rhythm. The day, the year, the cycle of the moon, are the great rhythms which measure all change, and in this regard astronomy, the last member of the *quadrivium*, is the science of cosmic rhythms.

Number, proportion, harmony and rhythm are clear manifestations of unity in diversity and also clear indications of how to find the way back from diversity to unity. According to Boethius, the essence of things is intimately connected with unity: the more unity a thing possesses in itself, the more profoundly it participates in being.

In medieval science, it is less a question of knowing many things, than of having a "whole" view of existence. Its method was anything but designed for the investigation of the material world and the furthering of technology. On the contrary: it possessed the means to open the spiritual eye to the beauty of mathematical proportions, and the spiritual ear to the music of the spheres.