Arts in Conflict

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In 1941, after Jacques Maritain had concluded his Aquinas Lecture on the “Problem of Evil” at Marquette University, a naive youth approached the philosopher to ask him a question unrelated to his lecture. The young person introduced himself as a student of liberal arts at that university and explained that he was advised by the director of those lectures to pose his question to Maritain himself. The question was the following: how is it possible to convince one’s parents, who, while intelligent, have had no more than an elementary education, that it is good to study the liberal arts?

Maritain gave the young questioner his complete attention. Then he said: “Young man, that is a very difficult question.”

I submit that it has always been difficult and that it is to this very day. Why should anyone spend so much time and money in studying the liberal arts? Why should a person labor over the ancient Greek and Latin languages, English Literature, European history, mathematics and philosophy, when he desires most of all to become a physician? The answer given in all the books the young man could find on the liberal arts was that these were the subjects that made up the necessary background for all professional studies. This answer was completely unintelligible to his parents.

So let the question be posed again: What does this expression “liberal arts” mean? What is so good about them? And, in any case, who needs them?

Most college graduates would consider the first question absurd. Without hesitation, they would say something like this: English, History, Biology, Economics, and German—exactly the subjects they had studied as undergraduates. But since, at some excellent universities, many undergraduates never study half of the subjects just mentioned, the question, “What are the liberal arts?,” does not appear absurd. Besides, has any
teacher of liberal arts ever found a consensus among his colleagues on the answer to this question?

I. Ancient Origins: Plato and Aristotle

If we look at two great ancient Greek educators, Plato and Aristotle, we learn what education meant to them: "the liberal arts started with the Greeks, and, as so often, it was the Romans who gave them a canonized form."1

"The one great thing—or instead of great let us call it sufficient" thing for the citizens of a republic is "their education and nurture (paideia and trope)," says Plato; if the city is "good in the full sense of the word it will be wise, brave, sober and just."2 These virtues are for the soul what health is for the body.3 Also, the guardians, or philosophical leaders of that city, will always have their eyes fixed on "the most true" (alethestaton) as they frame laws that are beautiful, just and good. This turning of the mind from a day whose light is darkness to the true day is in Shorey’s translation a "conversion" (peristrophe).4

For Plato, the educational process, for both boys and girls, begins with music (which includes literature) and gymnastics in their simplest forms. Music will also include learning to play the lyre and cithara. Gymnastics include dancing and military exercises for both sexes. These studies should occupy the years ten to thirteen.5

For a select few, the above subjects should be followed by the study of arithmetic, geometry and astronomy.6

The last formal studies will be given to philosophy ("dialectic") for five years. The consummation of this education will be fifteen years of public service. These guardians of the republic will retire at the age of fifty, and

3 Ibid., 444c.
5 Laws VII 809e. Translations from the Laws are taken from that of A.E. Taylor, reprinted in The Collected Dialogues of Plato, eds. Hamilton and Cairns.
6 Ibid., VII 817e. Cf. Republic VII 525a-531c.
will spend the rest of their lives "devoting the greater part of their time to
the study of philosophy." 7

For Aristotle, "there are two periods of life with reference to which edu-
cation has to be divided, from seven to the age of puberty, and onwards to
the age of twenty-one." 8

Aristotle in his day spoke of education as it was actually practiced much
as we might speak of it in our own day:

That education should be regulated by law and should be an affair of
state is not to be denied, but what should be the character of this pub-
lic education, and how young persons should be educated, are ques-
tions which remain to be considered. As things are, there is disagree-
ment about the subjects. For mankind are by no means agreed about
the things to be taught, whether we look to virtue or to the best life.
Neither is it clear whether education is more concerned with intellec-
tual or with moral virtue. The existing practice is perplexing; no one
knows on what principle we should proceed—should the useful in life,
or should virtue, or should higher knowledge, be the aim of our train-
ing; all three questions have been entertained. Again, about the means
there is no agreement; for different persons, starting with different ideas
about the nature of virtue, naturally disagree about the practice of it. 9

The word "virtue" (aretē) for Plato and Aristotle always means excellence.
However, Aristotle does indicate some of his educational preferences:

There can be no doubt that children should be taught those useful
things which are really necessary, but not all useful things: for occupa-
tions are divided into liberal and illiberal; and to young children
should be imparted only such kinds of knowledge as will be useful to
them without vulgarizing them. And any occupation, art, or science,
which makes the body or soul or mind of the freeman less fit for
the practice or exercise of virtue, is vulgar. . . . There are also some liberal
arts quite proper for a freeman to acquire, but only in a certain degree,
and if he attend to them too closely, in order to attain perfection in
them, the same evil effects will follow . . .

The customary branches of education are in number four; they are:
(1) reading and writing, (2) gymnastic exercises, (3) music, to which is
sometimes added (4) drawing. Of these, reading and writing and draw-
ing are regarded as useful for the purposes of life in a variety of ways,
and gymnastic exercises are thought to infuse courage. 10

7 Republic VII 532a–540b.
8 Politics VII 17 1336b38–40.
9 Ibid., VIII 2 1337a33–b4.
10 Ibid., 1337b4–27.
The importance of moral training seems to be the same for Aristotle as it is for Plato: "We ought to have been brought up in a particular way from our very youth as Plato says so as both to delight in and to be pained by the things that we ought; for this is the right education."12

To Aristotle, the most puzzling of these subjects is music: for he does not see it as necessary or even useful in the way that the other subjects are. "There remains, then, the use of music for intellectual enjoyment in leisure,"13 After discussing at length the various rhythms and modes of music he settles upon the Dorian as being the most temperate and therefore the most suitable for young people. "Thus it is clear that education should be based upon three principles—the mean, the possible, the becoming, these three."14 And, as Thomas More likes to say: the mean is hard to find.

So far, we have seen nothing of mathematics in the Aristotelian curriculum. However, when we look at "that one of the mathematical sciences which is most akin to philosophy—namely astronomy,"15 we see his appreciation for mathematics since astronomy was the highest branch of ancient mathematics, presupposing knowledge of arithmetic and geometry. Yet this must be qualified because, like optics and harmonics, astronomy is one of the more physical of the branches of mathematics.16 Also, when Aristotle refers to astronomy as that branch of mathematics "most akin to philosophy," the word "philosophy" must here signify first philosophy, not only because this is said in his work on that subject (the Metaphysics), but for two other reasons as well: (1) astronomy is a branch of mathematics which itself is, for Aristotle, one of the three types of theoretical philosophy; and (2) astronomy is needed to discover how many prime movers are required to cause the eternal movement of the animated heavenly bodies.17

We have sketched the ideal curricula of Plato and Aristotle for two reasons. First, because the origins of important matters are intrinsically fascinating; we cannot forget the popularity of Isidore Etymologies or Origins in medieval times. But, secondly, because a principle conduit of the liberal arts to the Middle Ages was the Marriage of Philology and Mercury by Martianus Capella, described by his twentieth-century translator as a

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12 Nicomachean Ethics II.3 1104b9–13.
13 Politics VIII.3 1338a20.
14 Ibid., VIII.7 1342b33.
15 Metaphysics XII.8 1073b4.
16 See Physics II.2 194a7–12.
"philosopher's curriculum." Why does Stahl name it that? The short answer to this question is that while present usage of the term "philosophy" is restricted to logic, philosophy of nature, metaphysics, philosophy of knowledge, ethics and political philosophy, in antiquity it also included all the branches of mathematics as well as rhetoric and literary criticism and all the sciences that investigate natural phenomena.

It is important to notice that Aristotle sees reading, writing, drawing, gymnastic exercises and moral training as "useful" subjects; therefore the distinction of liberal and useful arts should not in practice be made a separation. Also, Aristotle's addition of drawing and no doubt, some of his physical studies makes a different curriculum from that of Plato.

Why these differences? (1) Individual people differ: Plato was a follower not only of Socrates but also of Pythagoras: Aristotle as Plato's student had probably studied mathematics at the Academy but before that he was the son of his physician father. (2) Also, because it is neither possible that all subjects could be included in a curriculum for all students (it would take too long for the students to do anything with their lives besides studying); nor would it be possible to assemble an adequate faculty since, echoing Albertus Magnus, other sciences of the future are still waiting to be born.

II. A Fifth-Century Tradition: Martianus Capella

We know that the most important sources of the liberal arts are those ancient Greek giants, Plato and Aristotle in the fifth and fourth centuries B.C. We also know that Varro and Vitruvius included the theory of architecture and medicine among the liberal arts in the first century B.C.; also that Martianus Capella omitted both those studies in his famous fifth-century A.D. The Marriage of Philology and Mercury, because they were too "mundane." Nevertheless, Thomas Aquinas in the thirteenth century seems to

19 Owens, A History of Ancient Western Philosophy, p. vi.
20 "Since these ladies (Medicine and Architecture) are concerned with mortal subjects and their skill lies in mundane matters, and they have nothing in common with the celestial deities, it will not be inappropriate to disdain and reject them." Martianus Capella and the Seven Liberal Arts, vol. 2, The Marriage of Philosophy and Mercury, trans. William Harris Stahl and Richard Johnson with E.L. Burge (New York: Columbia University, 197), p. 346. Hereafter this work will be referred to as Martianus.
consider them as possible candidates for re-admission to the list of liberal arts since each of them is a kind of wisdom in its own field.\textsuperscript{21}

For Martianus, Mercury symbolized eloquence and Philology learning: the former represented persuasive speech; the latter the trivium (grammar, logic and rhetoric) and the quadrivium (arithmetic, geometry, music and astronomy). Together, writes W.H. Stahl, these subjects "constituted the only academic curriculum familiar to the Roman world."\textsuperscript{22}

A brief description of Martianus’s work, “one of the most popular books of Western Europe for nearly a thousand years,”\textsuperscript{23} may be useful. We omit the first two books on the betrothal and marriage of the principles.

“Grammar” in antiquity always included the study of literature.\textsuperscript{24} However, the chapter of Martianus devoted to this subject is unremarkable. It is doubtful that anyone teaching Latin grammar today would find it useful.

Martianus’s treatment of “Dialectic” is substantially the formal logic of Aristotle’s \textit{Prior Analytics}. In writing his “Rhetoric,” Martianus borrows from a variety of ancient sources but most of all from Cicero’s \textit{De Inventione}.\textsuperscript{25} In any case, it is to the contemporary reader the most interesting and charming part of the entire work.

We should also notice that there is in antiquity no Latin version of the geometry in Euclid’s \textit{Elements}; that work does not appear until it is translated from Arabic into Latin in the twelfth century by Adelard of Bath.\textsuperscript{26}

What is it then that Martianus calls “geometry?” Stahl describes it as a “mathematical geography.”\textsuperscript{27} For the most part, it gives the measurements of various places in the then-known world and their distances from each other; in short, it is the work of Roman surveyors (agrimensores).

The second book in Martianus’ account of the quadrivium is on “Arithmetic.” The first dozen pages are devoted to “arithmology” or “numeralogy” or number symbolism. This part of his treatment seems to derive from the \textit{Introduction to Arithmetic} of Nicomachus of Gerasa (about 100 A.D.); it is thought to have originated with the early Pythagoreans and to have lasted until the late Middle Ages.\textsuperscript{28} As the translator rightly says, this “be-

\begin{footnotes}
\footnotetext[21]{\textit{Summa Theologiae} IIaIIae, q. 45. a. 1.}
\footnotetext[22]{\textit{Martianus}, vol. l. p. 25.}
\footnotetext[23]{Ibid., p. 21.}
\footnotetext[24]{Ibid., p. 100.}
\footnotetext[25]{Ibid., p. 118.}
\footnotetext[26]{See Ullman, “Geometry in the Medieval Quadrivium,” pp. 264; 273.}
\footnotetext[27]{\textit{Martianus}, vol. l. p. 46.}
\footnotetext[28]{Ibid., p. 44.}
\end{footnotes}
comes for us tedious reading." The other ultimate source is Euclid’s *Elements*. The balance of the work is confined to the ratios of odd and even numbers by way of addition, subtraction, multiplication and division, though he also discusses prime and incomposite numbers. At this point the translator says: “Readers may wish to skip over the remainder of Martianus’ account which makes dull reading.” He could have said this as a footnote to the first sentence of this entire “arithmetic.”

Book viii on “Astronomy” is less daunting than the contemporary non-historian might have thought. Granted, many constellations and signs of the zodiac appear strange to him. Even more strange to the twentieth-century reader is the geocentric view of the universe; yet, there is one exception to this. Martianus reports that Venus and Mercury do no travel about the earth; they encircle the sun. Copernicus himself is said to have been impressed with this; but, Stahl says, other popular handbooks had already made this statement. Most surprising is Stahl’s judgment that “Astronomy makes the best presentation of the quadrivium bridesmaids, perhaps of all the seven bridesmaids.”

Strangest of all, “music,” or “harmony” in Stahl’s translation, has nothing to do with learning to sing or to play an instrument. After his first dozen pages of introduction, Martianus describes the mathematics of music; it is similar to the first five books of Augustine’s *De Musica*, written about the same time as Martianus’s *Marriage of Philology and Mercury*. No doubt it is intelligible to any musicologist who has specialized in early medieval music. But for the present purpose, its most notable contribution is Martianus’ description of the liberal arts in his last paragraph as “encyclopedic arts.”

Few if any historians of the Middle Ages praise the work of Martianus. At best, they say nothing about him apart from giving his name and a bibliography for him.

Any person today who has taught three or four of Martianus’ liberal arts, e.g. Latin grammar, Aristotelian formal logic, or high school mathematics and science must be grateful to the successors of Martianus who have de-
developed the liberal arts so far beyond their condition in the fifth century A.D. Even Christopher Dawson refers to the fifth century as a "dark age."35

However, to say anything more about the history of any of Martianus's seven liberal arts would be rash since today those very histories have become specialties of numerous scholars over and above those who practice these arts or sciences themselves. For example, when working on the history of Archimedes we consult the works of Marshall Clagett; in medieval science we look to Pearl Kibre and Charles Homer Haskins; for Copernicus and Kepler we return to A. Wolf and Alexander Koyre; for Galileo, Stillman Drake and William Wallace; for Copernicus and Kepler we return to A. Wolf and Alexander Koyre; for Galileo, Stillman Drake and William Wallace; for Copernicus and Kepler we return to A. Wolf and Alexander Koyre; for Galileo, Stillman Drake and William Wallace; for the entire history of science, Pierre Duhem, A.C. Crombie and George Sarton. None of these historians is considered to be a scientist; they are thought of as humanists. We have already sampled two such historians, Stahl and Ullman, in their accounts of the devolution of the liberal arts.

III. Modern Reflections: Jacques Maritain

Jacques Maritain taught so many human beings in the twentieth century that it is appropriate to conclude our discussion with a few words about him. Besides, Thomas Aquinas, Maritain's main source, lived centuries before Copernicus and therefore could say little about the sciences which were to be pursued during the "scientific revolution" of the seventeenth century; but we today cannot ignore them. We cannot even imagine a curriculum of liberal arts that does not include some of them, e.g., biology, chemistry, physics and at least one branch of higher mathematics which is for modern scientists the indispensable instrument with which they daily practice their science.

We must also applaud Maritain's suggestion that we include the history of science in our liberal arts curriculum. Such a history is like the work of the ancient Thucydides or the modern Etienne Gilson; that is, it is not science in the modern sense of that term. Hence Marshall Clagett, the historian of Archimedes, works in the "Institute for Research in the Humanities" at the University of Wisconsin. On the contrary, our modern sciences concentrate on that spectrum of facts which are the latest to be discovered in their field; that is, a modern scientist, as a scientist, does not seem to need history. At the same time, those students who do not plan on becoming scientists will find the history of a science to be something they can under-

stand: in this way, it becomes an approach to what, taken in itself, might be simply beyond their native talent. 16

Secondly, Maritain thinks that we today should not require “dead” languages of all our undergraduates in liberal arts programs. How many of them will ever use sufficient Hebrew, Greek or Latin after they leave their formal schooling? All one has to do is look around at one’s larger family to know that the majority of them have not had the time for such things, nor will they, nor need they. As Maritain puts it, those who go on to graduate studies in literature, philosophy or history can learn these things as needed. 37 This was already apparent to John Locke in the eighteenth century; Locke was educated as a physician, a Christian, and one who had learned enough Greek to teach it at Oxford University. But he also tutored enough young men to learn what was necessary and what was not. John Locke may have been the most commonsensical of all the British Empiricists.

Thirdly, Maritain, who had read authors from the ancient Aristotle to the modern Emile Zola, reminds us that in teaching young people in an introductory curriculum of liberal arts we should not require too many authors. More important than a large number of such writers is the student’s being led to savor the beauty and the truth of some of them. This takes much reading and re-reading. But, joy in the truth and beauty of such teachers is the one incentive that will draw young people to move themselves to further study. Especially for children who have for one reason or another acquired a distaste for learning, the delight in coming to know can lead them to study for the sheer love of seeing with their minds throughout their lives. 38

Without this disinterestedness in knowing what we ought to know 39 , we cannot appreciate the great-souled energy of mind in Socrates of Athens. Aristotle never met Plato’s Socrates in person; but he did know from Plato himself the kind of man that Socrates was. Aristotle devotes all of Book iv, chapter 3 of the _Nicomachean Ethics_ to what must be a portrait of the man who was Plato’s spiritual father. Aristotle is discussing the virtues concerned with honor; the first virtue he mentions is, in Greek, _megalopsychia_. W.D. Ross translates this word as “pride;” M. Ostwald and H.G. Apostle

38 Maritain, _The Education of Man_, pp. 72–79.
39 Ibid., p. 47.
translate it as "high-mindedness;" only H. Rackham expresses it as "greatness-of-soul" which is an exact, literal translation of Aristotle.\footnote{See Nicomachean Ethics IV.3 1123a4–1125a35.} To see how closely Aristotle’s view of moral virtue is to the Socratic identification of virtue and knowledge, read Aristotle: “A good man (they think)\footnote{Cf. Laws IV 722dff.} since he lives with his mind fixed on what is noble, will submit to argument, while a bad man, whose desire is for pleasure, is corrected by pain like a beast of burden.”\footnote{Nicomachean Ethics X.9 1180a9–11.}

The liberal arts may be seeing the morning of a new day. Some presidents of community colleges are now proposing them for everyone.\footnote{See Pittsburgh Post-Gazette, 21 March 1995. section B. p. 2.} What is more, this American dream is now being dreamed by the people of Russia also and those of Nigeria and those of England. Just a few years ago Donald and Idella Gallagher said this was not utopian. Indeed it is not, if the word is translated as "no-where."\footnote{Maritain, The Education of Man, p. 147.} But the liberal arts are utopian if they are understood to mean good-place, reasonable-place, happy-place. Thomas More knew a good pun when he saw one. \textit{That is the point.} Liberal arts are not needed for our survival. They are needed for our \textit{well-being}.

Also, they are needed for our survival if "survival" means our survival as a democracy; as Maritain translates that name of which we are so proud, “government of the people, by the people and for the people.”\footnote{Maritain, Education at the Crossroads, pp. 19–20.} Yet, if our pollsters could return to Athens as it was in 399 B.C. to ask men and women on the street what they thought of this question, just about as many might vote for universal access to a college education as against it. After all, Socrates himself was surprised at the large number of people voting for his release at the same time that a majority voted for his condemnation. As Maritain puts it: democracy “demands primarily liberal education for all.”\footnote{ Ibid.} Why? Because the “common man” must “be capable of judgment about the good of the people.”\footnote{Anton C. Pegis, “St. Thomas Aquinas.” in Lee C. Deighton, ed.-in-chief, \textit{Encyclopedia of Education}, vol. 1 (New York: Macmillan Publishing Co., Inc., 1971), pp. 250–257.}

But why is that enrichment of the mind, known as a liberal education, still so rare? One of Maritain’s students may have answered that question when he said: “education is really the divine schooling of human existence.”\footnote{ Ibid.} This reminds us of the fact that we learn from a teacher by listen-
ing to him only when we want to: that is to say, we believe for the sake of knowing—but no one can make us believe if we do not choose to.

Education is at a crossroad in every generation. Why? Because knowledge is a personal possession. This means that unless one has it in himself, or as a part of himself, such a person literally does not know what he is missing. This is the way it is with all spiritual things; they are known in the full sense of that word only when received. They are invisible: or, they are visible only from within to the person who has one.

Consequently, the endless debates of the 1960's between the presidents of universities, deans of liberal arts and sciences, the members of the faculties of such colleges and their students. What had been taken for granted for so many years was now called into question. The question of the liberal arts was not only difficult to answer, it was impossible to demonstrate the value of such disciplines to anyone who did not already possess at least one of them.

The incommunicability of prudence is clear enough for it is a kind of wisdom. But that this is also true of all the other intellectual virtues is not obvious. No doubt the arts and sciences can be taught; after all they are being taught every day around the world. What we are saying is they are teachable but not otherwise communicable. Apparently, teaching is an extraordinary kind of communication.

Most mysterious of all is the fact known to such towers of wisdom as Archimedes and Ignatius of Loyola, but, it seems, to few others: that the only way to prove to oneself or to another that one knows a subject is actually to teach it to someone else. That is why in the thirteenth century A.D., and apparently not much longer than that, a university degree was granted only to those students who, having done their formal studies, were recognized now to teach them to beginners under the strict supervision of senior professors. This was simply an extension of the practice followed by earlier guilds (or trade-unions) of carpenters and physicians.

48 Maritain, Education at the Crossroads, p. 26. See also St. Augustine, De Magistro, XI.38.


What are the results of our investigation? All human beings need the liberal arts because they are liberating arts. They deliver us from ignorance, from prejudice and from pure self-interest.\textsuperscript{51}

Also, as John Dewey puts it, a well-rounded education shows a person access to a virtual infinity of occupational options. And for Maritain, every citizen in a democracy needs what Martianus called the "encyclopedic arts" because every citizen must be prepared to make good judgments about the welfare of all, the \textit{common good}. For Aquinas, it seems that everyone needs the "speculative arts" simply because they are perfections of human nature. They mold or shape us \textit{as humans}. Is it possible that every man could benefit from a "philosopher’s curriculum"?

It is not only possible. It may even be actual. Does not every parent—and of course we only mean those worthy of the name—wish to leave good things for their children? And is not education and nurture "the one, great, sufficient thing" as Plato said? Plato even calls a counselor of young people a "foster father."\textsuperscript{52} A liberal education may be mankind’s \textit{patrimony} to its youth.

What good is conflict over the continuance of the liberal arts tradition? Like the imminence of death, conflict marvelously concentrates the mind. Also, like "the good fight" of which Paul speaks, it can be the "moral equivalent of war" that William James dreamt of. Finally, if we make war only so that we may have peace, as Aristotle puts it, then all of us must relish such a conflict. Long live the liberal arts!

\textsuperscript{51} See Plato, \textit{Republic} VII 486a.
\textsuperscript{52} \textit{Laws} VII 809b.