Whether Logic Should Satisfy the Humanities Requirement

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Background

In a discussion recently in the Curriculum Committee of my college, a professor questioned whether students should continue to have the option of satisfying a humanities requirement in part by taking courses in elementary logic from the Philosophy Department. He expressed the view that logic, especially symbolic logic, was not a humanities subject. In response the Philosophy faculty discussed the issue at a department meeting, and voted to reaffirm the place of logic. It deputed me to write something defending its position. (It should be noted that to satisfy the requirement in our college students also have to take other humanities courses, and they must satisfy independent requirements in the areas of English Composition and Literature.) What follows is the result of my efforts, and is offered in case it may be of use or interest to others.

There has been some interesting work published in this journal on the pedagogy of logic in a modern liberal arts curriculum. Historically, logic has always been viewed as one of the liberal arts, and Preston Covey, Thomas Schwartz, and Gerald Massey have all contributed papers with advice on how to teach symbolic logic within a modern liberal arts curriculum. James van Evra has also argued, somewhat more ambitiously, that W.V.O. Quine's "natural logic" provides a basis for treating logic as part of a non-trivial scientific enterprise, in the spirit of the more scientific liberal arts.[1] To my knowledge, however, there has been no recent work on the conceptual issue of whether logic should count as falling within a modern humanities curriculum. Indeed, in my discussion with colleagues I have been surprised how many are unfamiliar with the distinct historical roots of the liberal arts and the humanities, and, more importantly, with the conceptual connections between the ideals they express. In what follows I try briefly to map the common historical roots of logic, the liberal arts, and the humanities, and to explain the conceptual connections. For the latter I make use of the thesis of Garin, Kristeller and others that the humanities have had as their central focus moral

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philosophy, and Cardinal Newman's point that the purpose of a liberal education is a large scale perspective on the diverse claims to human knowledge.

The clarification of concepts is something for which philosophers are suited, and I have found that if brief and eye catching, such a piece may actually be read by colleagues in other fields. Such at any rate has been my experience with the little "disputation" I am offering here — our logic courses have been left unmolested. It is, therefore, in part for the novelty that I chose the disputation style. Equally, I hoped to drive home the historical link between logic and the liberal arts tradition. I also wanted to demonstrate ~~the~~ facility in language ~~that is the breath~~ of logic, and to provide a concrete example of the sort of sustained, hard-hitting reasoning that is, at some level of consciousness, one of the "critical thinking goals" of many current humanities requirements.

Whether any particular course in logic should satisfy a given college or university humanities requirement is, as we say in logic, a complex question. In what follows I shall limit myself to arguing for an affirmative answer to the root question of whether logic should count as a humanities subject at all. The answer to the secondary question of whether a particular logic course should satisfy a particular humanities requirement will turn on the course's content and the specifications of the requirement. Courses and requirements differ greatly among institutions. Elementary courses may be divided roughly into two broad classes: informal logic ("critical thinking") and symbolic logic. Introductory symbolic logic, in turn, varies in difficulty from very basic courses, like ones covering Copi's natural deduction, to more serious introductions, at the level say of Kalish, Montague and Gar, or Tennant.[2] Humanities requirements range all over the place. Some seek to insure some exposure to the literature or great works of the humanities; some emphasize the teaching of writing or critical thinking; some try to foster specific skills found in formal or informal logic. To give some guidance to whether particular courses satisfy particular requirements, I shall be reduced to the following strategy. In pointing out why in general logic counts as a humanities subject, I shall mention specific virtues of logic that are more or less "humanistic." I will then be forced to leave it to the reader to see whether any combination of these fits any particular institutional setting.

Quaestio: Whether Elementary Logic Falls Within the Humanities

It would seem that Elementary Logic does not fall in the Humanities, and this for two reasons.

Objection 1. Logic does not count as one of the humanities quite simply because it does not number among any of the traditional humanities subjects. Renaissance scholars carefully delineated the *studia hu-*

manitatis as comprising four main subjects: classical languages, literature, history and philosophy. This list, which still accords well with university usage,[3] was designed to exclude those medieval studies that they considered technical and sterile. For this reason the Humanists turned away from physics and mathematics. Logic they particularly despised, and because it had formed the heart of the medieval curriculum known as the trivium, it was dismissed as "trivial". In excluding logic from philosophy, the Humanists were, indeed, reviving a doctrine of the classical Neoplatonists whom they so much admired. The followers of Plato, being first confronted with Aristotle's newly created subject, founded a tradition which culminated with the great Aristotelian commentator Alexander of Aphrodisias (second century A.D.), who judged logic to be an elementary discipline, at best a preparatory study for philosophy, and not part of philosophy proper.[4] The Humanists particularly despised as caviling and juvenile the scholastic *logica nova* of the 14th century's Aristotelian revival. Francesco Petrarca (Petrarch), the patriarch of Italian humanism, well expressed the tradition's opprobrium. He compared logic to a child's hobby horse.[5] The great Renaissance platonist Lorenzo Valla (1407-1457) dismissed logic as a *res brevis et facilis*, unworthy of mature thinkers.[6] More deeply, the Humanists feared logic as a species of misology. They questioned its intellectual sincerity. Of dialecticians engaging in debate, Petrarch said, "They so much enjoy the combat itself. They are not set to find the truth — they want the struggle."[7] Logic today is equally technical and trivial. Courses in informal logic teach essentially the same fallacies as Aristotle's justly forgotten lists in the *Sophistical Refutations*.[8] Today's formal logic which is taught in elementary symbolic logic courses is even more sterile than the scholastic syllogistic decried by the Humanists. Its curriculum of truth-tables, formalized arguments, and deduction rules imparts no skill usable outside the logic classroom, and gives students the false confidence they are prepared for serious thought.

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Objection 2. Even if logic were part of philosophy, it by no means follows that it is therefore one of the humanities. The Humanists, quite rightly, rejected as technical and sterile even some parts of philosophy proper. Among the branches of philosophy they refused to legitimize were metaphysics, abstract theology, and especially logic. As Eugenio Garin explains in his classic study *Der italienische Humanismus*, that part of philosophy the Humanists embraced was above all moral philosophy. As Garin explains, the main conceptual thread uniting the diverse lists of humanities subjects, both in the Renaissance and today, both in and out of philosophy, is what these subjects have to teach about moral virtue. From languages and literature we were to learn the ethical lessons of the ancients, from history the errors of past ways, and from philosophical works a theoretical understanding of right and wrong. The more modern

extensions of the humanities which we find in universities today that include subjects like the fine arts and even parts of the social sciences may similarly be explained as deriving from what these fields have to teach about the human predicament and how to deal with it. Parts of the social sciences are clearly morally relevant. Likewise the fine arts, like poetry, which even in the Renaissance was considered a central humanities subject, are morally edifying and instructive.[9] In contrast, logic was viewed by the Humanists as morally pernicious, and rightly so. The logician, Petrarch said, was no less than a "monster .... armed with double-edged enthymemes." He admonished, "If you aim at virtue, avoid this sort of man."[10] Technical logic is today no different from its scholastic antecedents. It may train the student in quick wit and ready argument, but like the sophistry vilified by Socrates, it is no substitute for virtue. Logic may be put to evil uses, or if taken as an end in itself, obfuscate the moral purpose of intellectual life. Therefore, since logic falls outside moral philosophy, it would be an elementary syllogistic error to reason that since moral philosophy falls within the humanities, so does logic. Moreover, since logic is plausibly not even part of philosophy, and is certainly not part of moral philosophy, it is *a fortiori* not part of the humanities.

On the contrary, Hegel said "Logic is the all-animating soul of all the sciences, and its categories the hierarchy of the Spirit".[11]

I answer that logic is integral to the study of both philosophy and morality, and without logic any appreciation of the human situation is vain. Within academic classifications the proper category in which to place logic is, above all, that of the liberal arts. Though the humanities as an academic concept did not evolve until the Renaissance, that of the seven liberal arts is of ancient origin. It reached it zenith in the Middle Ages during which the undergraduate university curriculum (the "faculty of arts") was organized on its basis, being divided into the trivium consisting of grammar, logic and rhetoric, and the quadrivium comprising arithmetic, geometry, astronomy, and music. The classical enumeration of the arts has been extended today to include all the humanities, and the social and physical sciences of the standard liberal arts curriculum. The conceptual thread which unites these subjects and distinguishes them from professional and non-academic fields is the idea referred to in the modifier *liberal*. It is by the study of the liberal arts that the free man distinguishes himself from the slave. That is, the liberal arts are the proper occupation for developing those aspects of mankind that are divorced from concerns for basic survival and brute labor. These include the cultivation of the theoretical sciences and civic virtues. As such the liberal arts overlap in large measure the humanities, as the traditional inclusion of the humanities within the liberal arts confirms.

oned the view of John of Salisbury, a spokesman for the eleventh century *logica vetus*, which being closer to the classics than twelfth and thirteenth century termist logic, was more humanistic in outlook. He explained the linkage of logic to prudence this way:

> Of all things the most desirable is wisdom, whose fruit consists in the love of what is good and the practice of virtue, . . .which is called prudence. Logic is the science that provides the solid basis for the whole activity of prudence.[16]

Early in the Renaissance, Salutati, the Chancellor of Florence (1375-1406), wrote to Petrarch that moral philosophy and dialectic were inseparable. Leonardo Bruni developed the point systematically. In his *Isagagion moralis disciplinae* (1421-24) he argued that the special study of literature using new dialectical methods would contribute in an important way to prudence. In *De studio et litteris* (1422-29) he argued that applying similar dialectical methods to history would also lead to prudence.[17] Pierre de la Ramée (1515-1572) advanced his own version of topics logic and popularized it. As his logical "method" of practical reasoning spread throughout Europe, it was expanded upon and became more detailed. A dialectical "method" of textual analysis, a forerunner of literary criticism, was held to contribute to moral education, as Erasmus captured in his dictum, *lectio transit in mores*. Dialectical method was also applied in the law courts, and widely championed in manuals like that of Abraham Faunce, *The Lawiers Logike* (1588).[18] Thus, far from seeing logic as in principle antithetical to morality, humanists contributed to and expanded upon logic as a discipline and did so in ways that exhibited its deep contribution to the moral life.

Today, we see similar movements that seek to apply logic broadly to moral thinking and civic life. Prelaw students regularly study elementary symbolic logic, and questions on formal inference appear in the LSAT. The "critical thinking" movement in the schools derives almost entirely from philosophy professors taking to the world at large lessons from the university's informal logic curriculum, one of its major goals being the development of practical moral reasoning and civic virtue. Therefore, since moral philosophy is the central study of humanism, and logic is integral to moral philosophy, it follows, *contra the second Objection*, that logic is part of the humanities.

To the First Objection, I say that: It is a non-sequitur to reason that since logic does not appear in the list of traditional humanities subjects, it was not considered to be a humanistic study. On the contrary, the Humanists came to view logic as present within each and every humanistic discourse. Under the name of *dialectic* (a term used by Plato — the standard medieval term *logic*, invented by Cicero, being viewed as a neologism), it came to be seen as the intellectual method in terms of which all the humanities should be pursued.

well to the empirical sciences. Indeed, Francis Bacon's empiricism and "experimental method" is a direct outgrowth of Ramist applications of Aristotelian topoi.[28]

It must be emphasized that the Humanists even came to look with favor upon the heart of the scholastic logic curriculum, the traditional syllogistic. Valla acknowledged its utility.[29] Agricola assigned to the syllogism a central place and devoted to it one of three books of his *Dialectica*.[30] Ramée, who divided dialectic into discovery and judgment, assigned to the syllogism two roles crucial in judgment: in demonstrative reasoning that of deriving the consequences of necessary truths *(demonstration)*, and in non-demonstrative science that of deriving the consequences of non-demonstrative contingencies.[31] At the end of the tradition Leibniz (1704) was able to summarize the developed appreciation of the syllogism this way:

> I hold that the discovery of the syllogistic form is one of the most beautiful of the human spirit, and even one of the most important. It is a sort of universal mathematics, the importance of which is not enough understood, and one can say that contained within it is an art of infallibility.[32]

Thus, the Humanists came to value the core of the mediaeval logic curriculum, and more importantly, they embraced logic as an essential tool of humanistic thinking. They advanced the frontiers of the subject in new and fruitful ways. Logic was not listed as a separate subject falling under the humanities, because to do so would be to mistake the direction of conceptual subordination. Logic is not *one of* the humanities; rather the converse holds. Logic was judged humane because the several humanities, viewed as varieties of method, were each regarded as species of logic. Even today though one does not expect to find syllogistic reasoning in a modern poem or the exhibition of logical symbols in works of history or literary criticism, all the humanistic disciplines are based on reason and couch their writing in persuasive prose. They each adopt what the Humanists called *method*. Logical reasoning is common to them all, and in law, theology, and philosophy the exposition is often formal indeed, even approximating the mathematical ideal of Leibniz. Therefore, ***contrary to the argument advanced in the first Objection***, since logic broadly conceived is the study of humanistic methods, to study logic is to study the humanities.

Notes

1. The author would like to thank Christopher Gauker and the journal's anonymous referee for helpful comments on earlier drafts, and Tom Williams for posing the question.

Preston Covey, Logic and Liberal Learning: Some Salient Issues," *Teaching Philosophy*, vol. 4:3&4 (1981), pp. 207-30; Gerald Massey, "The Pedagogy of Logic: Humanistic Dimensions," *Teaching Philosophy*, vol. 4:3&4 (1981), pp. 303-36; Thomas Schwartz, "Logic as a Liberal Art," *Teaching Philosophy*, vol. 4:3&4 (1981), pp. 231-47; James W. van Evra, "Logic, The Liberal Science," *Teaching Philosophy*, vol. 8:4 (1985), pp. 285-94.

2. The contrast is between relatively easy symbolic logic texts for non-majors like Irving Copi, *Introduction to Logic* (New York: Macmillan, various editions), and harder texts more appropriate to courses for majors like Donald Kalish, Richard Montague, and Gary Mar, *Logic: Techniques of Formal Reasoning* (New York: Harcourt Brace Jovanovich, 1980); Neil Tennant, *Natural Logic* (Edinburgh: Edinburgh University Press, 1978); or the author's *Elements of Formal Semantics* (Orlando: Academic Press, 1987).

3. The National Endowment for the Humanities is a good guide to modern usage. The definition arrived at in the foundational report for the Endowment says:

> The humanities are generally agreed to include the study of languages, literature, history, and philosophy; the history, criticism, and theory of art and music; and the history and comparison of religion and law. The Commission would also place the creative arts within the scope of the Foundation.

Report of the Commission on the Humanities (Washington, DC: American Council of Learned Societies, 1964). The Congressional Act establishing the Endowment (Public Law 89-209, 1965) reads:

> The term 'humanities' includes, but is not limited to, the study of the following: languages, both modern and classic; linguistics; literature; history; jurisprudence; philosophy; archeology; the history, criticism, theory, and practice of the arts; and those aspects of the social sciences which have humanistic content and employ humanistic methods.

In 1990 the act was amended to include the additional language:

> . . .and the study and application of the humanities to the human environment with particular attention to reflecting our diverse heritage, traditions, and history and to the relevance of the humanities to the current conditions of national life.

This definition departs from that of the Renaissance mainly in including under 'the humanities' the fine arts, law, and parts of the social sciences. The Humanists could not judge the social sciences because they did not then exist. Law as it was done then they viewed as a non-theoretical professional study, and the arts they classified as mere crafts. The moral and the humanistic relevance of modern law and the social sciences is not to be denied. Nor was it until the Enlightenment that the concept of the fine arts evolved as a classification of a distinct branch of learning. See Note 9 below and Paul Oskar Kristeller, "The Modern System of the Arts," *Journal of the History of Ideas*, vol. 12 (1951), pp. 465-527; vol. 13 (1952), pp. 17-46.

4. *Alexander of Aphrodisias, On Aristotle's Metaphysics 2 & 3* (Ithaca: Cornell University Press). For a discussion of this Neoplatonic tradition see A.C. Lloyd, *The Anatomy of Neoplatonism* (Oxford: Clarendon Press, 1990).

5. "A Disapproval of an Unreasonable Use of the Discipline of Dialectic," [late 14th century]. *Opera* [Basel, 1581, pp. 579-80] . Translated in Ernst Cassirer, Paul Oskar Kristeller, and John Herman Randall, Jr., *The Renaissance Philosophy of Man* (Chicago: University of Chicago Press, 1956), pp. 134-39.

6. *Dialectica disputationes*. See John Monfasani, "Lorenzo Valla and Rudolph Agricola," *Journal of the History of Philosophy*, vol. 28 (1990), pp. 181-200.

7. *Op. cit.*.

8. See C. L. Hamblin, *Fallacies* (London: Methuen, 1970).

9. See Kristeller, *op. cit.* In the eighteenth century, what was taken as distinguishing the *beaux arts* from the *arts libéraux* was the way in which the arts give pleasure and strive for beauty, and it was in terms of these distinguishing characteristics that the arts were seen as relevant to ethics.

10. Petrarca, *op. cit.*

11. William Wallace, ed. and trans., *The Logic of Hegel* [1816], p. 24 (Oxford: Oxford University Press, 1965).

12. *Report of the Commission on the Humanities, op. cit.*

13. Garin, *op. cit.*, p. 75.

14. Newman, John Henry, *The Idea of a University* [1853], p. 85 (Notre Dame: University of Notre Dame Press, 1982).

15. Zabeeh Farhan, ed. and trans., *Avicenna's Treatise on Logic* (The Hague: Nijhoff, 1971).

16. *Metalogicon* [1159] , p. II,1 (author's translation). See Daniel D. McGarry, ed. and trans., *The Metalogicon of John of Salisbury* (Gloucester, MA: Peter Smith, 1971). On John of Salisbury as a proto-humanist see Jerrold E. Seigel, *Rhetoric and Philosophy in Renaissance Humanism*, p. 184 (Princeton: Princeton University Press, 1968) and the references cited therein.

17. For discussion of the views of Salutati, Bruni and others of like mind, see Victoria Kahn, *Rhetoric, Prudence, and Skepticism in the Renaissance* (Ithaca: Cornell University Press, 1985).

18. For the quote from Erasmus see Kahn, *ibid.*, p. 40. For a general discussion of the spread of Ramist "logical method" and its development into textual analysis and forensic rhetoric, see Lisa Jardine, "Humanistic Logic," 173-198, in Quintin Skinner *et al.*, eds., *The Cambridge History of Renaissance Philosophy* (Cambridge: Cambridge University Press, 1988).

19. By Aldus Manutius. See Jardine, *op. cit.*, p. 194.

20. Petrarca, *op. cit.*

21. See Jardine, *op. cit.*, p. 177.

22. *Dialectique* [1555], pp. ii [50], I:1 [61], I:4 [63] (author's translation). See Michel Dassonville, ed. Pierre de la Ramée, *Dialectique* (Genève; Lib. Droz, 1964).

23. Monfasani, *op. cit.*, p. 183; Jardine, *op. cit.*, p. 178 ff.

24. Monfasani, *op. cit.*, p. 185; Jardine, *op. cit.*, pp. 181 & 188; Neal W. Gilbert, *Renaissance Concept of Method* (New York: Columbia University Press, 1960) p. 76.

25. Paraphrased in Gilbert, *op. cit.*, p. 77.

26. Quoted in Garin, *op. cit.*, p. 164.

27. So attested Gianozzo Manetti. See Seigel, *op. cit.*, p. 232.

28. Jardine, *op. cit.*, p. 192; Gilbert, *op. cit.*, p. 129 ff.

29. Monfasani, *op. cit.*, p. 183.

30. Jardine, *op. cit.*, p. 181; Gilbert, *op. cit.*, p. 76.

31. Ramée, *op. cit.*, pp. II:83[123]-119[144].

32. *Nouveaux Essais*, IV, xvii, 4 (author's translation). Quoted in Louis Couturat, *La Logique de Leibniz* (Paris: Félix Alcan, 1901).

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