

LOGIC TEACHING AT THE UNIVERSITY OF OXFORD FROM THE SIXTEENTH TO THE EARLY EIGHTEENTH CENTURY

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The title of the conference for which this paper was written was «From commentary to manual: the teaching of philosophy in the modern period», but where logic teaching at the University of Oxford is concerned, this title needs to be glossed, because the significant changes that took place involve the types of commentary and manual rather than the replacement of one by the other¹. At the beginning of the sixteenth century, university-wide lectures on logic presented the content of the central Aristotelian texts orally with or without detailed commentary, depending on the level of instruction, but students also worked with brief texts devoted to such medieval developments as *obligationes*, *insolubilia* and consequences, which had been gathered together in printed manuals, especially the *Libellus Sophistarum ad Usus Oxoniensium* which was published in England six times between 1499 and 1530, as well as on the European continent². If we jump to the beginning of the eighteenth century, we find that teaching now took place within the colleges and the halls, which, unlike colleges, were not permanent property-owning, self-

¹ For some general discussion of changes in textbooks, see ASHWORTH 1988(1), and for some general discussion of seventeenth-century Oxford, see ASHWORTH 1988(2).

² For details of the editions and their contents see ASHWORTH 1979 and ASHWORTH 1999, 385–386.

governing institutions, but which otherwise functioned in the same way. University-wide lectures had virtually disappeared, as had discussion of nearly all the specifically medieval developments, and, while commentaries were still read, students began, and often ended, their study of logic with succinct manuals that summarized Aristotelian logic, especially the *Logicae Artis Compendium* by Robert Sanderson, first published in 1615, and the *Artis Logicae Compendium* by Henry Aldrich, two slightly different versions of which were first published in 1691.

A long and complicated history lies behind these changes, and to understand what happened I shall start by considering the wider changes that took place in the organization of university teaching as well as more generally in English society. I will then consider humanism and the new Aristotelianism, and I will conclude with an overview of the most important logic manuals.

1. Changes in the University and in English Society

One might think that the place to begin would be an examination of the statutes that governed teaching. This would certainly be true for many European universities, whose changing statutes contained valuable details about the texts to be used³, but unfortunately, Oxford presents a very different picture. In the fifteenth century, the statute of 1431 had specified that three terms should be devoted to the study of logic, using either Aristotle's *Peri Hermeneias* or (*vel*) the first three books of Boethius's *Topics*, that is, *De*

³ FLETCHER 1986, 157–158, 174–175.

topicis differentiis, or alternatively (*aut*) Aristotle's *Prior Analytics* or his *Topics*⁴. No further details were given about the supplementary texts we know to have been used by virtue of surviving manuscripts. Nor did matters alter significantly in the sixteenth century, for while Boethius ceases to be mentioned, Oxford continued to place Aristotle at the heart of the logic curriculum, albeit by means of rather vague references. The Edward VI statutes of 1549 did represent a change of emphasis, for they had a strongly humanist flavour, and indicated that the logic and rhetoric texts to be studied were Aristotle's *Sophistici Elenchi* or *Topica*, Cicero, Quintilian or Hermogenes⁵. However, these statutes were unofficial and were probably never fully implemented⁶. In the *Nova Statuta* of 1564/5, it was merely specified that in dialectic there should be lectures on Porphyry's *Isagoge* or some part of Aristotle's dialectic⁷. As McConica remarked, «... the 'statutory curriculum' of the Tudor university is in many ways a very hypothetical concept»⁸.

Seventeenth-century statutes are no more instructive, for the Laudian statutes of 1636, which remained in force until the big reforms of the nineteenth century, notably the University Reform Act of 1854, simply required an undergraduate to attend lectures on rhetoric and grammar during his first year, and to hear early morning lectures on logic dealing with Porphyry's *Isagoge* or some part of Aristotle's logic from the end of his first year until

⁴ GIBSON 1931, 234: «Logicam per tres terminos, puta, libros Peri Hermeneias vel tres libros primos *Topicorum* Boecii, aut libros *Priorum* siue *Topicorum* Aristotelis».

⁵ GIBSON 1931, 344, 358.

⁶ FLETCHER 1986, 172.

⁷ GIBSON 1931, 390: «in dialectica aut *Institutiones* Porphirii, aut Aristotelem de quacunque dialectices parte...».

⁸ MCCONICA 1986(1), 152.

graduation. However, the curriculum went far beyond logic, for the second-year undergraduate was also required to hear lectures on moral philosophy, dealing with Aristotle's *Nicomachean Ethics*, *Politics*, and *Economics*. In his last two years he had to add geometry and the Greek language. Those studying for an MA degree had to attend lectures on Aristotle's natural philosophy and on Aristotle's *Metaphysics* as well as on history, Greek, and Hebrew⁹. The degree requirements for both the BA and the MA degrees included participation in a series of disputations¹⁰, as well as oral examinations which were to emphasize the candidate's ability to express himself fluently in Latin on everyday matters¹¹. The appended *Statuta Aularia* specified that the halls should provide lectures in logic and organize disputations, declamations and the writing of themes¹². How far students were able to meet the requirement of fluent expression in Latin in all these exercises is not clear. John Potenger, who matriculated at Corpus Christi in 1664 at the age of sixteen, wrote: «At dinner and supper, it being the custom to speak latin, my words were few, till I came to a tollerable proficiency in colloquial latin»¹³, but not all students were as hard-working and serious as Potenger.

In addition to those references to Aristotle mentioned above, other statutory references have to do with the Lenten disputations for determining bachelors, that is, those about to graduate. A statute of 1586 directed that only

⁹ GRIFFITHS 1888, Tit. IV. S. i. c. 2–c. 13. (Note that references to the main body of the Laudian code are given by section rather than page number.)

¹⁰ GRIFFITHS 1888, Tit. VI. S. i. c. 1–c. 7 covers the requirements for the BA, and GRIFFITHS 1888, Tit. VI. S. ii. c. 1–c. 14 covers those for the MA.

¹¹ GRIFFITHS 1888, Tit. IX. S. ii. c. 1.

¹² GRIFFITHS 1888, 267–285, see Section III.

¹³ BINGHAM 1841, 29.

the views of Aristotle or other authors in accordance with Aristotle should be debated¹⁴, and in the Laudian statutes it was required that the determining bachelors should defend Aristotle in logic, rhetoric, politics and moral philosophy¹⁵. However, the fact that this last requirement was repeated in 1669, and again in 1670, 1671, 1672, 1673 and 1677, suggests that people needed to be reminded¹⁶. Although Aristotle remained at the heart of the official curriculum, and although one might conclude that Oxford undergraduates spent most of their time studying the works of Aristotle, there are several complicating factors.

First, it is well known that statutory provisions, such as the number of terms to be spent in residence before a degree was received, or indeed the number of terms to be devoted to logic, were often officially dispensed with, or even straightforwardly neglected, and this neglect extended to the official curriculum. In other words, if we want to know what logic was actually studied at the University of Oxford we have to look beyond the statutes to unofficial sources. Some student diaries survive, as do notebooks, with exercises, essays, lecture notes and extracts from books. There are letters, especially those of the four Fleming boys who studied at Oxford between 1678 and 1696. There are records of the textbooks which were published in Oxford,

¹⁴ GIBSON 1931, 437: «Praeterea cum authorum varietas multas peperisset in scholis dissensiones, statuerunt vel Aristotelem secundum vetera et laudabilia universitatis statuta, vel alios autores secundum Aristotelem defendendos esse, omnesque steriles et inanes quaestiones ab antiqua et vera philosophia dissidentes, a scholis excludendas et exterminandas».

¹⁵ GRIFFITHS 1888, Tit. VI. S. ii c. 9.

¹⁶ MS WOOD 276A, *Proclamations*, is a collection of printed broadsheets. Those I cite are numbered 356, 357, 361, 368, 371, and 375. The last broadsheet has a manuscript note remarking that such a page came out every year about a week before Lent began.

booksellers' catalogues showing what books were sold in Oxford, account books showing what books were bought, and wills and inventories recording what books students and college fellows owned when they died. Finally, there are two guides written for students written by Oxford men which give detailed recommendations of books which should be read. One, written about 1650 and no later than 1652, is probably by Thomas Barlow, and a large part is copied in one of John Locke's manuscripts, though only the headings are in Locke's hand¹⁷. The other, probably by Thomas Heywood, is entitled *Some Short hints at ye method of studying in the university: Nov. 1704*¹⁸. It may sound as if there is a lot of material here, but we should recognize that we are speaking of a long period for which there only a scattering of sources. Any conclusions drawn are bound to be somewhat speculative.

A second complicating factor involved changes in university organization. In the late middle ages, teaching was highly centralized. It was carried out by the regent masters, young MAs who had to spend at least two years lecturing and presiding over disputations, mainly on logical subjects, before they could go on to further studies. In the sixteenth and seventeenth centuries two important changes took place. One was the appearance of endowed chairs or professorships and lectureships which in many cases went outside the framework of the seven liberal arts and the three philosophies by introducing such subjects as Hebrew in 1546, history in 1622 and Arabic in 1636. It

¹⁷ For the edition, see DEJORDY, HARRIS 1961; for Locke's copy, see MS LOCKE e 17, 44-71. Barlow was librarian of the Bodleian from 1652 to 1660, and he also served as Provost of Queen's College and Lady Margaret Professor of Divinity.

¹⁸ MS RAWL D 40, with a second undated copy in MS RAWL D 1178. The Rev. Thomas Heywood matriculated at St John's College in 1694, received his BA in 1698, his MA in 1704, his BD in 1708, and his DD in 1714.

is tempting to think that this would have strengthened university teaching, but in fact many professors were political appointees who either did not lecture themselves or lectured in person, badly. The other, and more significant change, was the shifting of emphasis to the colleges and halls. From the end of the sixteenth century every student had to have a tutor from within his college or hall who was responsible for overseeing all his work, not to mention his moral development. Many colleges also established their own lectureships, some of which were public, and some of which were only for college members. In addition, they held their own disputations. Although there were university requirements that had to be met, including oral examinations, by the end of the seventeenth century the main teaching was carried out solely within the colleges and halls by individual tutors.

These organizational changes make it quite difficult to know what logic students were in fact taught. Although Christ Church at least had lectures on the logical works of Aristotle¹⁹, the focus was more usually on secondary sources in the form of specially written textbooks which students read with their tutors or privately. Individual colleges and individual tutors all had their own ideas about the choice of textbooks, and some students, such as George Fleming in 1689²⁰, arrived in Oxford with a number of logic texts provided by older siblings. Moreover, when we consider the breadth of the official curriculum together with the time devoted not only to what can loosely be described as classical studies but also to written and oral exercises and

¹⁹ BILL 1988, 196.

²⁰ MAGRATH 1913, 282–283.

disputations, we can see that logic could hardly take up as much time as Laud might have envisaged. Feingold writes:

. . . although the statutes stipulated that the study of logic be carried on for the last three years of the student's undergraduate course, in reality students devoted the mornings of only a year or so to a sustained study of logic — a situation created as much by the growing consensus on the merit of reducing the required technical expertise as by the need to accommodate the entire curriculum within the undergraduate course²¹.

This “privatization of the study of logic” (as Feingold has dubbed it)²² was linked with the invention of printing and the new book trade. The more books were available, and the more cheaply they could be produced, the less necessary was the dictation of approved texts along with oral commentaries on them, for students could own their own books, or pass them on to their friends and siblings, as did the Fleming brothers. On the other hand, George Fleming's remark in 1689 that his tutor at St Edmund Hall “read unto me Sanderson's and Du Treus Logicks”²³, and similar remarks by his elder brother Henry at Queen's College²⁴, suggest that a college tutor might either read aloud or deliver an informal lecture on these books. Book production also had an impact on college libraries, though this did not affect undergraduates directly. Some libraries kept old books and manuscripts, but others, such as All Souls in the 1540s, got rid of both in order to make room for new-

²¹ FEINGOLD 1997, 293.

²² FEINGOLD 1997, 293.

²³ MAGRATH 1913, 251–252.

²⁴ MAGRATH 1904, 262. Henry wrote that his tutor « reads to me once for ye most part every day, and sometimes twice, in Sandersons logick».

er printed works, and among that college's new acquisitions were the works of Aristotle in Greek and editions of Greek commentators on him²⁵.

A further complicating factor was the average student's career and aspirations, together with more general societal changes. Throughout the period we are concerned with Oxford had three distinct groups of students. The smallest group consisted of those who intended to take not only the BA degree but also the MA degree, and possibly further degrees in theology, medicine, or law. The second group consisted of those who intended to obtain at least a BA degree in order to further a career in the church or in school-teaching. The largest group consisted of those who intended to spend at least two or three years at Oxford, after which they would embark on legal studies in London at the Inns of Court, or enter some career which did not demand a university degree, or simply lead the life of a country gentleman. Over time the numbers belonging to each group varied. Around 1580 it has been estimated that perhaps only 26% of those who had matriculated (that is, officially begun their studies in the Faculty of Arts), graduated, but by the beginning of the seventeenth century at least 44% graduated²⁶. By the last decade of the seventeenth century, the number had risen to 48%²⁷. In other words, at no time did more than half the undergraduate body expect to follow a full university course of four years.

The social background of students also varied. At the beginning of the sixteenth century a large number of undergraduates were members of the re-

²⁵ KER 1986, 445, 449–450.

²⁶ MCCONICA 1986(1), 156; STONE 1974, 95.

²⁷ STONE 1974, 95.

ligious orders, and the sons of nobility and gentry were not preponderant²⁸. With the English Protestant reformation and the final suppression of the monasteries by 1540, members of religious orders disappeared, and student numbers slumped²⁹. However, an education in liberal arts was becoming increasingly valued by the nobility and the gentry, who sent their sons to university in the hope that at least some time spent there would give them a necessary polish³⁰. Moreover, by the end of the sixteenth and the early seventeenth century it was becoming expected that members of the Anglican clergy would have at least a BA degree³¹. As a result, student numbers rose again, and stayed relatively high, despite a slump in the middle of the seventeenth century, until at the end of the seventeenth century the upper-class desire for a university education for their sons diminished. Eighteenth-century Oxford and Cambridge thus declined into «fairly small training schools for the professions, mainly the Church»³².

These changes were of course accompanied by changes in the kind of curriculum thought to be suitable for undergraduates. Quickness in debate was always valued, and disputations remained an integral part of university education throughout the period, but the skills required in the late fifteenth century involved the ability to deal with elaborate semantic and logical puzzles, and to handle a variety of different kinds of inference, whereas what upper-class parents required for their sons in the later sixteenth and seven-

²⁸ EVANS 1992, 511–516.

²⁹ MCCONICA 1986(1), 153.

³⁰ MCCONICA 1986(2), 689, 722; TYACKE 1997, 2.

³¹ EVANS 1992, 538; TYACKE 1997, 2.

³² FEINGOLD 1997, 234–235.

teenth centuries had a lot more to do with the abilities to speak elegantly and persuasively, and to enrich one's discourse with literary references. Correct logical inference and the ability to distinguish truth from falsehood were still thought to provide an essential basis for discourse, but they played a background role, and were not to be themselves a main subject of discussion. Moreover, disputations were now supplemented by declamations and written themes, both of which were more literary than logical in character. In 1654 Seth Ward in his *Vindiciae Academicarum* defended the university's use of "verball Exercises" and "Disputations, Declamations and Publick Lectures" in place of scientific and practical studies. He wrote

Which of the Nobility or Gentry desire when they send their Sonnes hither, that they should be set to Chymistry, or Agriculture, or Mechanics? Their removall is from hence commonly in two or three years, to the Innes of Court, and the desire of their friends is not, that they be engaged in those experimentall things, but that their reason, and fancy, and carriage, be improved by lighter Institutions and Exercises, that they may become Rationall and Gracefull Speakers, and be of an acceptable behaviour in their Countries³³.

This passage does not mention logic, but there remained a firm belief that undergraduates needed to begin with some logic before they moved on to other matters. This Oxford attitude toward undergraduate instruction is well-captured by Clarendon's *Dialogue concerning education*. One speaker, the Bishop, remarks that those who criticize the universities «do not love Logick, nor *Latin*; and in truth I have known very few who decline the Universities, well instructed in either, of both which there is so much use in the serious

³³ WARD 1654, 49-50.

Part of human Life»³⁴. Another speaker, the Colonel, who is Clarendon's spokesman in the dialogue, makes it plain that in his view, an educated man will leave the university at the age of seventeen and spend two or three years at the Inns of Court before travelling and learning foreign languages³⁵. However, he began by speaking of what the undergraduate should learn:

And now a word to their Studies: Since they have brought with them a good Degree of understanding the *Latin* tongue, I wish they may, as soon as they come to the University, be instructed diligently in the Art of Logick, and engaged in the Forms of Disputation, and all other Exercises of the College in which they are; in which there ought to be no Difference or Respect to Quality ... And tho' I perceive this disputing Faculty is out of Credit in the Court, it is a most precious Ingredient into Wisdom, and to the more serious Part of our Life: The Art of Logick, which none of our Travellers return with, who carried it not out with them, disposes us to judge aright in any Thing; and though we do not make our Conversation in Syllogisms, and discourse in Mood and Figure, yet our Conversation and our Discourse is much the more reasonable, and the better formed, by the Experience we have had in that Art, and in which we may have spent some Time very merrily. And I must say again, this most useful Art was never well taught or learned but in the Universities: Not that a Man may not know how to make a Syllogism without going thither; but the Art it self, which is insensibly insinuated by the Custom and Observation of formal Disputations, is never attained but there, and is rarely unattained there by any who spend their Time there with any Application; I mean, so much of it as enables them to discourse reasonably, and judge of the Discourses of other Men³⁶.

2. Humanism and the New Aristotelianism

Seth Ward's reference to rational and graceful speaking brings us to the second topic, the impact of humanism, and its influence both on logic and

³⁴ CLARENDON 1727, 324. Clarendon died in 1674, and the dialogue was published posthumously, having been found among his papers.

³⁵ CLARENDON 1727, 329–331.

³⁶ CLARENDON 1727, 326.

on the new Aristotelianism. In order to understand these issues, it is necessary to distinguish between humanism as a literary movement, humanism as a scholarly movement which encouraged a new kind of Aristotelianism, and humanism as a movement that supposedly introduced a new kind of rhetorical and probabilistic logic, thus leading logicians away from Aristotelianism.

First, humanism as a literary movement was expressed by a new emphasis on the study of classical texts and literature. A variety of sources demonstrate this. For instance, if we consider John Dorne's Day Book, which is the record of an Oxford book-seller's sales in the year 1520, we see that while he sold 14 copies of *Sophistrie*, which must have been the *Libellus Sophistarum ad usum Oxoniensium*, along with a handful of related texts, he also sold 30 copies of Virgil and 44 of Terence, as well as many other classical sources³⁷. In the second part of the seventeenth century, it is clear that much of the reading students did with their tutors can loosely be described as classical studies. Thus at Christ Church in 1661/2 Locke's student H. Cleaton bought, among other works, "Roma illustrata, Suetonius, ... , Valerius Maximus, ... , Ovidii op^a, Dictionarium, Lucian"³⁸. A student at Corpus Christi, John Potenger, who matriculated in May 1664, wrote: «I did not immediately enter upon logick and philosophy, but was kept for a full year to the reading of classical authors, and making of theams in prose and verse»³⁹. In 1699/1700, again at Christ Church, Terry was assigned: "Aristotelis Ethica,

³⁷ MADAN 1885; KER 1986, 467–468.

³⁸ MS LOCKE f 11, fol. 11 v. This manuscript contains John Locke's Account Book which lists student expenses from 1661–1666. For discussion of Locke in relation to the scholastic background, see ASHWORTH 1981 and ASHWORTH 1984.

³⁹ BINGHAM 1841, 29.

Pearson in *Symbolum*, *Canticorum Hebr.*, *Cicero de Oratore*, *Homeri Odysse*, *Horatii Satyrae*"⁴⁰.

The effect of literary humanism was twofold: it drew a student's attention away from logical studies, and it affected the kind of language that was used in logic manuals. The medieval technical vocabulary used in the *Libellus Sophistarum* was replaced by a simpler, more classical language, and the *sophismata*, or puzzle cases designed to illustrate difficult logical points, disappeared completely. In Sanderson's *Logicae Artis Compendium*, we find a scattering of Greek terms and various references to Cicero. In Aldrich's *Artis Logicae Compendium*, only the bare essentials of Aristotelian logic are presented, and the language cannot be called literary or graceful, though it is certainly clear. In one way, this minimalist approach shows how the importance of logical studies had decreased, but in another way, it enabled authors to show a better grasp of what is formal about syllogistic logic.

Closely allied to literary humanism was the second type of humanism, which I call scholarly humanism⁴¹. This insisted on the publication of properly edited Greek texts, including not only Aristotle himself but ancient commentators on his works. In turn, this fed into the production of new Latin commentaries which based themselves on the original Greek, and which, like the new manuals, abandoned the *sophismata* and technical language found in many late medieval commentaries. This is doubtless at least part of what the Oxford statute of 1586 mentioned earlier had in mind when determining

⁴⁰ CCC, fol. 1ra. For discussion of the Christ Church Collections Book, see QUARRIE 1986.

⁴¹ SGARBI 2013, 27–28, misunderstood my remarks about the impact of humanism on logic in ASHWORTH 1985, XVIII–XIX, by (1) applying them only to English logic and (2) ignoring the distinction between different types of humanism.

bachelors were told to avoid “all sterile and empty questions” (*omnesque steriles et inanes quaestiones*) in their defense of Aristotle⁴². So far as Oxford was concerned, the new learning was reflected in library accessions, and in the reading of continental authors, especially from Italy and the Iberian peninsula. For instance, commentaries by the Italians Jacopo Zabarella and Giulio Pace were frequently referred to in the seventeenth century, as, less frequently, was the commentary on Aristotle’s *Organon* first published by the Jesuits of Coimbra in 1606⁴³. A summary of this work was even published in London in 1627⁴⁴; and much later, in 1689, George Fleming recorded that he had received “*Conimbrecensis Compen. Log.*” from his brother Henry⁴⁵.

The Coimbra commentary combined a literal commentary on Aristotle’s text with a question commentary dealing with specific points that arose from the text, and is important both for its scholarly references to a multitude of earlier commentators and for its exploration of philosophical issues. Equally notable for its treatment of philosophical issues was the lengthy *Logica* by the Polish Jesuit Smiglecius, first published in 1618 but published in Oxford in 1634, 1638 and 1658. This work was bought by two of John Locke’s stu-

⁴² GIBSON 1931, 437: «Praeterea cum authorum varietas multas peperisset in scholis dissensiones, statuerunt vel Aristotelem secundum vetera et laudabilia universitatis statuta, vel alios autores secundum Aristotelem defendendos esse, omnesque steriles et inanes quaestiones ab antiqua et vera philosophia dissidentes, a scholis excludendas et exterminandas». SGARBI 2013, 41, interprets this statute as being directed against Ramus alone, but MCCONICA 1979, 301, pointed out that it was “a regulation that was directed against the pursuit of scholastic subtleties as well as against Ramus”.

⁴³ For the text of the 1607 edition, see COIMBRA (1). There had been a spurious edition in 1604, probably based on lecture notes. For more details on the work of the Coimbra Jesuits, see CASALINI 2012.

⁴⁴ See COIMBRA (2).

⁴⁵ MAGRATH 1913, 280.

dents⁴⁶, by Henry Fleming before August 1679, and was handed on to George Fleming in 1689⁴⁷. The only Oxford author of a comprehensive treatment of Aristotle's *Organon* as a whole was John Case, whose *Summa veterum interpretum in universam dialecticam Aristotelis* was first published in London in 1584 and reprinted in Oxford in 1592 and 1598, as well as several times in Frankfurt⁴⁸. The work is a combination of manual and commentary, insofar as the first tract gives an overview of categorical propositions and their relationships, followed by an overview of types of argument, with an emphasis on the categorical syllogism. Each chapter has a question about the topic to be discussed in its title, and is rounded off by a sample dialogue on the issue. Undergraduate readers seem to be the target here. Subsequent tracts deal in a more detailed manner with Porphyry's *Isagoge*, the categories, demonstration, topics, and fallacies. Discussion of all the medieval additions, including obligations and *insolubilia* as well as supposition, is explicitly excluded⁴⁹. Case's logic was not the most popular or scholarly of his works, but "Casi logica" does appear in the 1613 inventory of John English, Fellow of St John's College⁵⁰, and in an anonymous inventory of 1637 or after⁵¹.

⁴⁶ MS LOCKE f 11, fol. 8 r and fol. 10 v.

⁴⁷ MAGRATH 1904, 295 and MAGRATH 1913, 276.

⁴⁸ For discussion of Case, and the rich array of sources he cites in his works, see SCHMITT 1983.

⁴⁹ CASE 1584, 294: «Lege si tantum sit tibi ocii illorum ampliaciones, restrictiones, obligatoria exponibilia, distributiva, collectiva, solubilia, insolubilia, aliaque infinita (nescio sanè quid dicam) prodigiosa portenta: tum certè intellexeris hanc nobilissimam Musam istorum sordibus nimis iamdiu contaminatum fuisse, adeoque nunc tandem purgandam esse necessariò».

⁵⁰ OUA TRANSCRIPTS, under "English". The titles in the published version of this inventory were added by the editor: see COSTIN 1946–1947, 119. The original inventories are found in

Commentaries on the individual books of the *Organon* were also read in Oxford. One continental commentary was written by the popular German author Christoph Scheibler, whose 1614 work on the *Topics* was published in Oxford in 1637 and 1653⁵², and bought by Henry Fleming before August 1680⁵³. In addition, there was some local Oxford production of commentaries in the last two decades of the sixteenth century and the first decades of the seventeenth century. Griffith (or Griffin) Powell wrote a commentary on the *Posterior Analytics* that was published in Oxford in 1594 and again in 1631, as well as on the European continent, and a commentary on the *Sophistici Elenchi* published in Oxford in 1598 and again in 1664. The titles of his works included the claim that Aristotle's text was "clearly expounded through questions and replies" (... *per quaestiones et responsiones perspicuè exponuntur*), which suggests an interest in undergraduate teaching. John Flavel wrote a *Tractatus de Demonstratione* that was published in Oxford in 1619, 1624 and 1651. Both Powell and Flavel acknowledged their debt to Italian authors such as Zabarella and Pace.

The list of books recommended to students, attributed to Thomas Barlow, included the commentaries by the Coimbra Jesuits and by Smiglecius, while among the books recommended on particular logical topics were

OUA HYP.\B\10-HYP.\B\20, which contain the Chancellor's Court Inventories. Not all have been transcribed.

⁵¹ OUA TRANSCRIPTS, under "Anonymous".

⁵² As well as the *Liber Commentariorum Topicorum*, Scheibler wrote *Philosophia Compendiosa* (1618) and *Introductio Logicae* (1618), both of which were later published in Oxford. The latter work was among the books owned by John Hutton: see note 68 below.

⁵³ MAGRATH 1904, 323.

Scheibler on the *Topics*, and the works by Powell and Flavel⁵⁴. In 1661/2 one of John Locke's students bought works by both Powell and Flavel⁵⁵, and in about 1670 Edward Bernard owned Flavel on demonstration and Powell "in *Analytica et Elencha*"⁵⁶. There is thus evidence that students were exposed to at least some commentaries during the seventeenth century, and there is also evidence that they read Aristotle's *Organon*⁵⁷. Indeed, they were often exhorted to do so in Greek⁵⁸. Nonetheless, the overwhelming impression is that the average student, especially those who were not intending to complete the degree course, focused on manuals of logic, and in the early eighteenth century the Christ Church Collections Book, which includes a record of the books assigned to individual undergraduates from 1699 to 1717, mentions Aristotle's logic only three times, with one reference to his *Categories* in 1703/4 and two to the whole *Organon* in 1714⁵⁹. On the other hand, the manuals of Sanderson and Wallis were assigned to first year students several times up to 1717, and after that, when assignments to individual students were no longer made, the manual by Aldrich remained a set text for the first class well into the second half of the eighteenth century⁶⁰. It was in these manuals that Aristotle continued to dominate, as will be seen in the final section of this paper when we compare the manual used in early sixteenth cen-

⁵⁴ DEJORDY, FLETCHER 1961, 1.

⁵⁵ MS LOCKE f 11, fol. 10 v.

⁵⁶ MS LAT. MISC. f 7, fol. 30 r.

⁵⁷ In 1689 George Fleming wrote «I myself read Aristotles Organon»: MAGRATH 1913, 251–252.

⁵⁸ FEINGOLD 1997, 299, but cf. *ibid.*, 260–261 on the deterioration of Greek studies in the latter part of the seventeenth century.

⁵⁹ CCC, (1703/4) fol. 4va «Arist.de Cat.»; (1714), fol. 18vb and fol. 19ra.

⁶⁰ For more details and references, see the final section below.

ture Oxford, namely the *Libellus Sophistarum*, with the manuals that were used in the seventeenth and early eighteenth centuries.

But we now need to consider whether there was a special logical humanism, that introduced a new kind of rhetorical and probabilistic logic, with special emphasis on informal argumentation⁶¹. It is certainly true that those writers who are most usually labelled as humanist logicians were read. Here I have in mind particularly Rudolph Agricola, Philipp Melanchthon, Johannes Caesarius, and later, Petrus Ramus (or Pierre de la Ramée). The information about Oxford for much of the sixteenth century is rather scanty, but John Dorne's Day Book shows that he sold one copy each of Agricola and Caesarius⁶². His best-seller among humanist logicians, with 17 copies sold, was George of Trebizond, whose short text was often used as a supplement to Agricola. We know that Agricola was particularly popular at Cambridge, followed by Melanchthon and then Caesarius⁶³, and there is no reason to suppose that Oxford was entirely different⁶⁴. Indeed, in 1527 lectures on Melanchthon's logic were required⁶⁵. Another example is provided by the diaries of the Carnsew brothers. In 1572 they bought Caesarius and Melanchthon, and in 1574 one of them began studying Agricola⁶⁶.

However, one can question how far these authors did introduce a new kind of logic. Agricola is the most revolutionary here, insofar as he largely

⁶¹ For a full discussion of this issue, see ASHWORTH 2008, 630–643, and ASHWORTH 2010.

⁶² See MADAN 1885.

⁶³ See ASHWORTH 1991, 229, for information and references.

⁶⁴ For more information about Oxford book ownership and use in the early sixteenth century, see LEEDHAM-GREEN 1999 and TRAPP 1999.

⁶⁵ FLETCHER 1986, 179.

⁶⁶ See MCCONICA 1986(2), 698–699.

confined himself to the discussion of the part of logic called invention, or how to produce and organize the material for arguments, and he also ascribed elements of rhetoric to logic, including the rhetorical topics, but most especially method. This was to become a very important subject of discussion, though in later textbooks it was routinely combined with discussions of scientific method. But there is little evidence of a particularly strong interest in informal argumentation as such. Moreover, both a look at Caesarius's popular *Dialectica* and the logical works of Melanchthon show that both of them believed in the importance of giving a succinct account of the main elements of Aristotelian logic. This is quite clear in John Seton's popular logic of 1545, the first logical work to be published in England after the last printing of the *Libellus Sophistarum* in 1530, and reprinted a number of times. Seton praised Agricola, but he also praised Melanchthon and his aim was to present Aristotelian logic in a way that could be absorbed by undergraduates. How far the text was used at Oxford is more difficult to determine, but it appears in the 1578 inventory of an Oxford bookseller⁶⁷, and in the 1653 inventory of John Hutton, a fellow of New College⁶⁸. As late as 1682 James Wilding, who studied first at St Mary Hall and then at Merton college, owned a copy of "Johan-

⁶⁷ See MCONICA 1986(2), 707.

⁶⁸ OUA TRANSCRIPTS, under "Hutton". In order of appearance, the logic texts Hutton owned include: Scheibleri Logica, Pacius in Aristotelis Organon, Burgersdicii Logica, Eustachii Quadripartita Philosophia, Sandersoni Logica, Fasciculus preceptorum Logicorum, and Iohannis Setoni Dialectica. "Lullii opera" and "Rami Aristoteles" also appear. Eustace of St Paul had included logic in his *Summa Philosophiae Quadripartita*, but was not usually cited for his logic. Franco Burgersdijk, whose *Institutionum Logicarum libri duo* was frequently published in Cambridge, was more popular in Oxford for his other works.

nis Setonii Dialect: Ars.” along with “Sandersoni Logica” and Aristotle’s Organon (or a summary of it)⁶⁹.

The logic of Petrus Ramus was well known in the latter part of the sixteenth century, but it was considerably less popular at Oxford than at Cambridge, and a number of good arguments were produced against his rather random simplifications. Ramist logic was certainly not absorbed into the standard curriculum in Oxford, though both Sanderson and Aldrich did discuss him very briefly⁷⁰, and there is evidence that students and others owned his works. In the 1613 inventory of John English we find “Ramus, Logick”, “Rami Logica” and “Ramus Logica”⁷¹. In the 1652 inventory of Thomas Cole of University College we find “Rami Dialectica” and in the 1653 inventory of John Hutton of New College we find “Rami Aristoteles”⁷². There is also evidence of the use of Ramist style diagrams, especially through the *Praecepta doctrinae Logicae* by Johannes Stierius which consisted entirely of such diagrams. This work was published in Oxford in 1667, 1671 and 1678, and in 1678 Henry Fleming took a copy to Queen’s College⁷³. However, there is little evidence that Ramus was taken seriously.

A number of rather sweeping claims about humanist logic have been made in the literature. Speaking of John Case’s logic, McConica wrote:

⁶⁹ DUFF 1885, 267 («The Names of my books 1682 ... Johannis Setonii Dialect: Ars Arist: Organ: Summa. Sanders: Logica ...»).

⁷⁰ SANDERSON 1985, *Appendix Posterior*, cap. 4, “De Historiâ Logice”, 121–122; ALDRICH 1691, “Conclusio”, sig. G 2 v–sig. G 3 r. I refer to the longer version, found in Cambridge University Library, Syn. 7.69.3.

⁷¹ OUA TRANSCRIPTS, under “English”.

⁷² OUA TRANSCRIPTS, under those names.

⁷³ MAGRATH 1904, 251.

It was intended for the undergraduate and was entirely in the rhetorical tradition we have described, training the beginner in the logic of persuasive discourse⁷⁴.

Similarly, speaking of seventeenth-century Oxford, Feingold wrote:

Not only did the humanists dispense with much of the previous specialized and technical formal logic and its attendant speculative grammar, but they contrived a new harmonious balance in the trivium by consolidating language, eloquence, and logic under the unified banner of the art of discourse. An important consequence of this reorientation of the trivium was to remove demonstrative reason from the domain of logic, as being unfit to accommodate the primary function of discourse, namely persuasion, and to substitute probabilistic reason⁷⁵.

Three points need to be made here. First, it is true that the authors of the new manuals did follow prominent humanists in introducing sections on method, both in the sense of organizing discourse, but also in the sense of scientific method as discussed by Zabarella. Second, where persuasion is concerned, it should be remembered that a distinction can be drawn between persuasion by demagogery and persuasion by means of well-presented valid arguments with true premises. The latter kind was still valued, at least by Lord Herbert of Cherbury who in his autobiography reflected on the logic he had studied at Oxford in the final years of the sixteenth century, and wrote that while he rejected “the subtleties of logic”,

I approve much those parts of logic which teach men to deduce their proofs from firm and undoubted principles, and show men to distinguish betwixt truth and falsehood, and help them to discover fallacies, sophisms, and that which the schoolmen call vicious argumentations ...⁷⁶.

⁷⁴ MCCONICA, 1986(2), 714.

⁷⁵ FEINGOLD 1997, 280–281.

⁷⁶ LEE 1907, 26.

Thirdly, we have to realize that there are two senses of ‘probable’. So-called dialectical or topical syllogisms were probabilistic, not in the modern sense of producing a conclusion that was highly supported by the premises, even though the conclusion could be false when the premises were true, but in the medieval sense that the premises were not necessary truths, though they were still part of a valid argument. John Rainold’s Oxford lectures on Aristotle’s *Rhetoric*, given between 1572 and 1578, are relevant here. He wrote:

Aristotle teaches the same rules of constructing both a probable and a necessary argument ... Since the same argument can be both necessary and probable, the distinction is irrelevant to the art of discourse⁷⁷.

It seems clear that he is using the medieval sense of probable here and that he views the syllogism as a formal structure. In general, I know of little evidence that close attention was paid to arguments that were probable in the modern sense, though some authors, including Melanchthon, did touch on this issue⁷⁸.

3. Overview of Some Logic Manuals

The difference between the manuals used in Oxford in the early sixteenth century and those used at the beginning of the eighteenth century is startling. Of the fifteen tracts in the *Libellus Sophistarum ad usum Oxoniensium* only the first dealt with Aristotelian logic, but the manuals of Robert Sander-

⁷⁷ RAINOLDS 1986, 219.

⁷⁸ See ASHWORTH 2008 and ASHWORTH 2010.

son, John Wallis and Henry Aldrich, to mention just three, were almost entirely devoted to an outline of Aristotelian logic, including categories, propositions, syllogistic, topics and fallacies. Such standard late medieval topics such as *insolubilia* and *obligationes* had disappeared, leaving only occasional remnants such as supposition theory which was still discussed by Sanderson⁷⁹, and was briefly mentioned by Wallis, though his parenthetical note about the terminology of supposition theory, to the effect that he would say nothing about the purity of the Latin (*ut de puritate Latinitatis nihil dicam*)⁸⁰, suggests the strong influence of literary humanism.

I will start by considering the early period in more detail. No new works seem to have been written in Oxford (or Cambridge, for that matter) after about 1410,⁸¹ and apart from the loose collection of much earlier works found in the *Libellus Sophistarum*, the only significant English publication in the late fifteenth and early sixteenth centuries was the *Logica* published in Oxford by Theoderic Rood in 1483⁸². Like the *Libellus Sophistarum*, this contained some earlier English texts, notably Roger Swyneshed's work on *insolubilia* and Thomas Bradwardine's work on Proportions, but it also contained much of Paul of Venice's *Logica Parva*, as well as long extracts from John Buridan's *Summulae Logicales*. It does not seem to have been reprinted, and the most

⁷⁹ SANDERSON 1985, 75–82, followed by a chapter on ampliation and restriction (82–86) which were also part of supposition theory.

⁸⁰ WALLIS 1687, 108–109. This discussion comes at the end of Part 2, chapter 9 (105–109), which is mainly devoted to exclusive, exceptive, and reduplicative propositions, another medieval remnant.

⁸¹ See ASHWORTH, SPADE 1992 for more details of logic at Oxford in the late fourteenth and early fifteenth centuries.

⁸² See ASHWORTH 1978 for a description of this text, copies of which are still owned by Merton College, Oxford and New College, Oxford.

important text for our purposes is the Oxford version of the *Libellus Sophistarum*, which was published in England six times between 1499 and 1530, as well as in France, Cologne, and Seville⁸³. Curiously enough, there is also a manuscript copy of a printed version of the work, found in the Bodleian Library Oxford, that seems to be in a seventeenth-century hand⁸⁴. So far as the contents are concerned, it contains a variety of short tracts which have not been carefully organized and integrated by a single hand in the way that the tracts found in the 1483 *Logica* were. The first tract, usually described as the *Summule*, though this title is not found in the printed texts, gives a complete but sketchy summary of standard Aristotelian logic, starting with terms and ending with the syllogism. The other fourteen tracts cover various standard topics of medieval logic such as consequences, *insolubilia*, *obligationes*, and proofs of terms, along with some scientific topics such as proportions. It is not at all clear how effectively this material could have been used in teaching, for understanding much of it requires considerable sophistication, and given that the text shows no sign of careful revision to meet contemporary needs or to reflect the current logical pursuits of those using it in teaching, it casts a very poor light on the academic programme of early sixteenth century Oxford.

The next logic text to be printed in England, John Seton's *Dialectica* of 1545, is more encouraging, even if we do not know how much it was used in Oxford. Seton explained in his introduction that he had written the work because of the absence of a suitable text for the instruction of the young, and in

⁸³ For details of these editions, see ASHWORTH 1999, 385.

⁸⁴ MS RAWL D 1059.

the hope of making Aristotle more accessible to them⁸⁵. He felt that Aristotle himself was too difficult, while Agricola had deliberately restricted himself to the subject of invention, and Melanchthon's style was not suitable for elementary teaching. In the first edition of his work Seton dealt only with that part of dialectic called judgment, though in later editions a brief fourth book on invention, based on Agricola's first book, was added. Annotations by Peter Carter were also added in 1568, and the work was frequently printed up to 1639. Despite the obvious humanist influences of Agricola and others, Seton included the bulk of traditional Aristotelian logic from the categories to the syllogism, and he retained the medieval doctrine of the supposition of terms, although in a considerably truncated form⁸⁶.

The next important development came when, between 1613 and 1628, a series of manuals by English authors was published. Four of them, Samuel Smith,⁸⁷ Edward Brerewood⁸⁸, Richard Crakanthorpe⁸⁹, and Christopher

⁸⁵ SETON 1545, sig. A ii v.

⁸⁶ SETON 1545, sig. E iiii r-sig. E v v.

⁸⁷ Samuel Smith, *Aditus ad logicam* was published in 1613 (probably not at Oxford) and was reprinted in Oxford in 1615, 1617, 1618, 1634, 1639, 1649, 1656, and 1684. There were also three London printings in 1621, 1627, and 1633. Henry Fleming took it to Queen's with him in 1678 (MAGRATH 1904, 251) and later handed it to George (MAGRATH 1913, 275).

⁸⁸ Edward Brerewood wrote *Elementa Logica*, published in London in 1614 and several times subsequently, and printed in Oxford in 1657, 1668 and 1684. His *Tractatus quidem logici de praedicabilibus et praedicamentis* appeared at Oxford in 1628 and was reprinted in 1631, 1637 and 1659. Henry Fleming took a copy to Queen's in 1678 (MAGRATH 1904, 251) and later handed it to George (MAGRATH 1913, 274).

⁸⁹ Richard Crakanthorpe published his *Logicae libri quinque* in London in 1622. It appeared again in 1641, and was printed in Oxford in 1670 and 1677. It was bought by Henry Fleming before August 19, 1679 (MAGRATH 1904, 295).

Airay⁹⁰, achieved fair popularity, but by far the most popular of all was Robert Sanderson, a fellow of Lincoln College and, from 1608, the lecturer in logic there. His *Logicae Artis Compendium* was first printed in 1615, and was reprinted many times. Indeed, there was an *editio nova emendata* as late as 1841⁹¹. In 1661–2 Locke’s students purchased works by Smith, Airay, and Sanderson⁹², and all five authors appear in the correspondence of the Fleming brothers⁹³, as did the Jesuit, Philip Du Trieu, whose *Manuductio ad logicam* of 1614 was published in Oxford in 1662 and 1678. It had been described as “a short, & a rationall Systeme of Logicke” by Thomas Barlow⁹⁴. The Locke manuscripts contain notes taken from Du Trieu’s logic, though probably not in Locke’s own hand⁹⁵, and in 1689 George Fleming wrote:

At my first arrival my chief studies was Logick, for the obtaining of which my Tutor read unto me Sanderson’s and Du Treus Logicks, over & aboue which I myself read Aristotles Organon and Chrackanthorps Logick with others of the same subject which my Brother furnished me with⁹⁶.

Earlier, in 1678, Henry Fleming’s tutor at Queen’s College had focused only on Sanderson’s logic, for Henry wrote: «My tutor reads to me once for ye

⁹⁰ Christopher Airay’s *Fasciculus Praeceptorum Logicorum* was published anonymously in Oxford in 1628 and was reprinted in 1633, 1637 and 1660. George Fleming received it from Henry (MAGRATH 1913, 277).

⁹¹ For bibliographical details see ASHWORTH 1985, XIII, and for references to him in a variety of Oxford sources, see ASHWORTH 1985, XIV–XVI. In 1696, Roger Fleming passed “Sanderson Logick” to his brother James (MAGRATH 1924, 215).

⁹² MS LOCKE f 11, fols. 10v, 11v.

⁹³ See the previous notes.

⁹⁴ DEJORDY, HARRIS 1961, 1. Barlow’s reference is to the 1641 edition. He does not mention Sanderson among his recommended authors of logic texts, nor does his list include other standard manuals.

⁹⁵ MS LOCKE f 33, fols. 8r–25r.

⁹⁶ MAGRATH 1913, 251–252.

most part every day, and sometimes twice, in Sandersons logick, which book is all he reads to me as yet»⁹⁷. This choice by Henry's tutor would have given Henry a full overview of Aristotelian logic, along with glances at some other material. Part One of Sanderson's *Logicae Artis Compendium* is devoted almost entirely to predicables and categories. Part two takes up propositions and their relations of contradiction, equivalence, and so on, as well as the various types of proposition, categorical, modal and hypothetical. Sanderson also inserts brief discussions of the medieval doctrines of supposition and exponentials. In Part three, after some brief remarks on consequences, he discusses categorical, hypothetical, demonstrative, dialectical, and sophistical syllogisms, the last two allowing him to give an account of topics and fallacies, and he ends with two brief chapters on method. His list of arguments includes both dilemma and *sorites*, although, as had become standard usage, the latter is not presented as the classical heap argument but as the medieval chain argument "From the first to the last"⁹⁸. Leaving aside Sanderson's lengthy appendices on various matters, and his gestures toward medieval logic, the organization and contents of his work, including the references to dilemma and *sorites*, are perfectly standard for the seventeenth-century Oxford manual. Indeed, if something was seen to be missing, it could be added, and so we find that the 1662 Oxford edition of Du Trieu's logic added a discussion of demonstration, probably by Thomas Tully⁹⁹, and a short piece by Gassendi.

⁹⁷ MAGRATH 1904, 262.

⁹⁸ For more on these arguments, see NUCHELMANS 1991, especially 111–112.

⁹⁹ SGARBI 2013, 208.

In the last three decades of the seventeenth century four other important manuals by Oxford authors were published, thanks to an initiative by John Fell, then Dean of Christ Church and vice-chancellor. In 1668, he was instrumental in getting permission to set up a press in the Sheldonian theatre which would publish books under the auspices of Oxford University, which already held a licence to print, but had no means to do so¹⁰⁰. This new press then published four Latin logic texts by leading Oxford men. The *Artis rationis libri tres* by Obadiah Walker published in 1673 received only one edition¹⁰¹, but in the same year John Fell himself published his *Grammatica rationis sive institutiones logicae*, and this was republished in 1675, 1685, and 1697. A subsequent Dean of Christ Church, Henry Aldrich, was to publish two slightly different versions of his *Artis logicae compendium* in 1691¹⁰², both of which were republished the following year, and which continued to be published in one or other of the versions into the nineteenth century. Finally, John Wallis's *Institutio logicae* was published at the Sheldonian theatre in 1687, and went into its fifth edition as late as 1729. Fell and Aldrich, and, to a lesser extent, Wallis, were prominent for their clear presentation of syllogistic as a formal system, and their recognition of the fourth figure, but otherwise they all fall squarely into the standard pattern set by Sanderson, though Aldrich is much more succinct than the other authors, and his arrangement of material

¹⁰⁰ For more details see PHILIP, MORGAN 1997, 681, and BEDDARD 1997, 844.

¹⁰¹ Unfortunately, unlike all the other texts published in England that I cite, it is not available in *Early English Books On Line*. I have used copies in the British Library and the University Library, Cambridge.

¹⁰² Both the versions published in 1691, one longer than the other, have identical titles and place of publication. I used the longer version, found in Cambridge University Library, Syn. 7.69.3.

is somewhat different in the shorter and longer versions of his book. The less influential Walker is the only one who stands apart, for he was a disciple of Willam of Ockham, whose *Summa Totius Logicae* he was instrumental in publishing in Oxford in 1675. Accordingly, his text contains some of the more strictly medieval material, notably a full chapter on supposition theory¹⁰³. Moreover, he uses the medieval definition of the major term of a syllogism as that which appears in the first premise, rather than as the predicate of the conclusion, and he therefore rejects the notion of a fourth figure, replacing it by the indirect modes of the first figure¹⁰⁴.

Some of these seventeenth-century manuals continued to be used in the first part of the eighteenth century. In the Christ Church Collections Book, which began in 1699, we find that Aldrich's logic predominates, being the only one recommended from 1717 on, when assignments were made to the first class as a whole, though earlier, when assignments were made to individual students, it had been joined by Sanderson twice in 1703–4, again in 1712 and 1715–16¹⁰⁵, by Smith twice in 1714¹⁰⁶, and by Wallis several times in 1713 and 1714¹⁰⁷. Some hint of things to come, however, is provided by several early references to John Locke's *An Essay Concerning Human Understanding*, and es-

¹⁰³ WALKER 1673, 45–52. He also discusses exponible propositions at some length: see *ibid.*, 59–63.

¹⁰⁴ WALKER 1673, 80–81. For discussion of these issues, see ASHWORTH 2008, 616–618.

¹⁰⁵ CCC, fols. 4ra, 4rb, 13vb, 25vb. Anonymous references to “Artis. log. compend.” (1706–7), fol. 9va–vb, are presumably also to Sanderson, as on fol. 10vb (1708–9) we find “Ald. Log.” three times.

¹⁰⁶ CCC, fols. 19ra, 21ra.

¹⁰⁷ CCC, fols. 15vb, 16va, 18rb, 19va.

pecially by the assignment in 1714 of the third book, which is devoted to words and language¹⁰⁸.

A much fuller indication of what might have been read at the beginning of the eighteenth century, or at least what Thomas Heywood believed should be read, is found in Heywood's *Some Short hints at ye method of studying in the university: Nov. 1704*. I shall quote the complete recommendations for logic:

1. Preface to Mons Le Clercs *Ars Ratiocinandi*. 2. Scholastic Logic. Sanderson or Aristotle himself. Wallis Du Trieu Stierius & Smith with Brerewoods *Elementa* may be read as Comments on Sanderson. Burgersdicius Herebord Cracanthorp Alstedius &c either read or occasionally consulted. 3. For Disputations Vallius and Smiglecius. 4. For an Insight into y^e antient Socratic or Platonic Method of Disputing, Mr Le Clercs last Chapt. de Socrat. disputat. Methodo in his *Ars Ratiocin.* & for Example of it see Platos first and 2^a Alcibiades & other Dialogues of his about Definit. Divis. &c. may not be useless. 5. For y^e new Logic *Ars Cogitandi* Colberti *Logica* Cartesius de *Methodo Du Hamel de Mente humanâ*. 6. For y^e better understanding of Tullies & other Classic Authors Arguing Miltons Logic¹⁰⁹.

This list has a number of interesting features. First, it contains Aristotle himself, and it recommends the important Aristotelian commentary by Smiglecius, albeit only for the subject of disputation. Second, among Oxford manuals of the seventeenth century, it gives priority to Sanderson, but also mentions Brerewood, Crakanthorpe, Smith, and Wallis, as well as Du Trieu. Third, the references to Plato and Cicero suggest the influence of literary hu-

¹⁰⁸ CCC: in 1702–3 there is one assignment of “Lock’s Essays” (fol. 2vb) and two of “Lock” (fol.3rb); in 1706–7 there is one of “Lock” (fol. 8rb); in 1712 there are two of “Lock’s Essay on Hum. Underst.” (fol. 13vb); and in 1714 there is one assignment of “3rd book of Lock” (fol. 17ra), followed by one of “Lock’s 1st book (fol. 17rb).

¹⁰⁹ From my own transcription of MS RAWL D 1178, fol. 2r. The title of the copy in this manuscript is *Some Short Hints at a Method of Study in the University for the first eight years*. Titles and dates of the works cited can be found in RISSE 1965.

manism. Fourth, and perhaps most importantly, there are references to the “new logic” of Descartes and others, including the authors of *Ars cogitandi*, which is the Latin translation of the Port-Royal logic, published in London four times between 1674 and 1687. Heywood’s list, along with the references to Locke in the Christ Church Collections Book, points us toward the big changes that took place in the eighteenth century, notably the development of what is often called “facultative logic”, with its focus on mental operations rather than the formal structures that ensure the validity of arguments¹¹⁰. But that is another story, which cannot be told here.

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¹¹⁰ See BUICKEROOD 1985 and YOLTON 1986. Facultative logic should not be confused with the common seventeenth-century usage of the much earlier distinction between three acts of mind to serve as an organizing principle for logic, whereby one begins with simple apprehension as productive of terms and signification, before moving to judgment as productive of propositions, and discourse as productive of arguments. For some brief discussion and references see ASHWORTH 1985, XLI–XLII.

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