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Università di Pisa

Piazza Torricelli 4 - 56126 Pisa

P. IVA 00286820501 · Codice Fiscale 80003670504

Tel. +39 050 2212056 · Fax +39 050 2212945

E-mail press@unipi.it · PEC cidic@pec.unipi.it

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Towards a Social History of Medieval Logic

John Marenbon*

Abstract

This paper explains how a social history of medieval logic might be written. After contrasting it with the Standard Approach, centred on great logicians, problems and debates, it suggests a series of questions which social historians of logic might ask: when, where, by whom, how and why was logic studied in the Middle Ages? There follows a discussion of pathways to the social history of medieval logic: enhanced doxology, institutional history, logic in relation to other disciplines and cultural comparison. Finally, an objection is considered: logic is discovered, not invented, and so social explanations are inappropriate for its history. The objection is rejected because, whether logic is discovered or invented, historians of it must explain how individual logicians came to think and write as they did, and such explanations include social factors among others.

‘The social history of logic’ is a neat phrase that trips off the tongue so easily that it seems as though it must be widely used. But in fact very few scholars have explicitly professed a wish to explore this field, and I may well have been using the phrase for the first time in connection with medieval logic when, thirteen years ago, I declared at the beginning of a chapter on the Latin tradition of logic up to 1100 that

What is most needed to illuminate the broadly human importance of the subject in this period (and in the twelfth to sixteenth centuries) is a *social history* of medieval logic, a type of study that has never until now been envisaged, let alone attempted.¹

The only published gloss on the phrase explains:

A Social History of logic seeks to explain the aims and uses of medieval logic by looking more broadly at its *social*, *cultural*, and *historical* contexts. It explores intellectual and practical cross-connections, *between* logic and politics, logic and education, logic and theology, and so on.²

I have kept the manner of this paper quite close to that of the talk on which it is based. It is not intended to be a specialized, scholarly article like the other contributions to this volume, but a general discussion, which should provoke thought about how historians of medieval logic go about their work. I am especially grateful to Julie Brumberg-Chaumont, who began exploring the same area independently from me, and with whom, thanks to a grant for promoting relations between the University of Cambridge and Paris Sciences et Lettres, I was able to develop in seminars at Cambridge and Paris, and in conversation with her, many of the ideas in the present paper.

¹ J. Marenbon, “The Latin Tradition of Logic to 1100”, in D. Gabbay – J. Woods (eds.), *Handbook of the History of Logic, II, Medieval and Renaissance Logic*, Elsevier, Amsterdam 2008, pp. 1-63, at p. 2. For some of the few mentions of ‘social history of logic’, see V. Peckhaus, “Case studies towards the establishment of a social history of logic”, *History and Philosophy of Logic* 7/2 (1986), pp. 85-186; J. Padilla-Gálvez, “Proyecto de Investigación: Fallstudien zur Begründung einer Sozialgeschichte der formalen Logik”, *Theoria* 6 (1991), p. 359; C. Rosental, *Weaving Self-Evidence. A Sociology of Logic*, Princeton U.P., Princeton 2008. A quite recent general work that claims to look at logic socially, M. Shenefelt – H. White, *If A, then B: How the World Discovered Logic*, Columbia U.P., New York 2013 is unlikely to satisfy historians.

² M. Cameron, “Methods and Methodologies: An Introduction”, in M. Cameron – J. Marenbon (eds.), *Methods*

The following pages are an attempt to expand on this gloss and to show how the project I called for might be put into practice. They begin (Sections 1-2) by explaining the contrast between the Standard Approach to the history of logic and the method of social history by setting out some simple questions, which show the character and aims of the new approach. The next section (3) describes a variety of paths, some already trodden, which lead towards or into the social history of medieval logic.

The final section (4) will address a methodological problem. A social history concerns logic as a social practice and, as such, it should investigate not just the effect of logic on other disciplines and cultural life more broadly, but also how logic was itself affected by these and other outside circumstances. Many, though, will object to such an investigation. The content of logic, they will say, is something discovered, rather than invented, and so not able to be affected, except superficially, by external influences. Twenty-five years ago, Steven Shapin gave a book a title intended, successfully, to cause scandal: *A Social History of Truth*.³ *A Social History of Logic* might shock no less. But the shock is uncalled for – so it will be argued, although the limited space means that the merest sketch of an argument can be given, a promissory note rather than a proper discussion. Much in the following pages will be relevant to all historians of logic, not just to medieval specialists. But the focus is throughout on the medieval period in the West, conceived broadly as encompassing the Greek, Latin, Arabic and Jewish traditions.

The Standard Approach to the History of Medieval Logic

Social History of Medieval Logic offers an alternative to the Standard Approach to the history of medieval logic. But many would question whether there is such a Standard Approach. Those working in the field range from scholars whose primary interest is in the links between medieval and contemporary logic all the way through to specialists in discovering, transcribing and editing texts. Yet, for all the differences in focus, there is a shared presumption about what constitutes the history of medieval logic.

First, a good deal of attention is directed towards the very few logical geniuses, whose work can be seen as transforming the subject: Avicenna, Abelard, Ockham, Buridan. Many other figures too are considered, but usually because they are claimed to have had interesting new ideas in some area of the field. Anonymous texts tend to be pushed to the side-lines, and where they are taken into account, it is normally because they contain distinctive, logically interesting material.

Second, what is discussed are for the most parts systems, techniques and problems. Historians of logic write, for instance, about syllogisms and explore the special problems raised by hypothetical syllogisms, or about the understanding of entailment, or the origins and development of supposition, or about modality, or about paradoxes, such as the Liar, or about the game of *obligationes* practised in the medieval universities. Consider, to take a fairly recent book which makes known the state of the art to a wider readership, *The Cambridge Companion to Medieval Logic*.⁴ The first part of the book is arranged historically and geographically.

and Methodologies. Aristotelian Logic East and West, 500-1500, Brill, Leiden - Boston 2011 (Investigating Medieval Philosophy 2), pp. 1-24, at pp. 22-3.

³ S. Shapin, *A Social History of Truth. Civility and Science in Seventeenth-Century England*, Univ. of Chicago Press, Chicago - London 1994.

⁴ C. Dutilh Novaes – S. Read (eds.), *The Cambridge Companion to Medieval Logic*, Cambridge U.P., Cambridge 2016 (Cambridge Companions to Philosophy).

The second is given over to topics: the *logica vetus*, supposition and properties of term, propositions, sophisms and insoluble, the syllogism and its transformations, consequence, modality and *obligationes*.

Third, scholarly interest tends to be focused on debates and innovations. Among the outstanding work in the field over the last decades has been, for instance, Christopher Martin's analysis of the different solutions given by the different twelfth-century schools—*nominales*, *parvipontani*, *porretani*—to the paradox of strict implication;⁵ the analysis (different from different scholars) of Avicenna's new approach to syllogistic;⁶ and the investigation of Buridan's logical and semantic system.⁷

Fourth, it is taken for granted that logic is a part of philosophy. That is not to say that specialists on medieval logic are unaware that logic was studied, both in the Latin and the Islamic world, by a far wider group than that of what might be called, with the customary anachronism, philosophers or students of philosophy, but rather that functionally, for the historians' and their readers' purposes, logic is placed within the bounds of philosophy. Jenny Ashworth's summary of her *Routledge Encyclopedia of Philosophy* article nicely, and unconsciously, captures the ambiguity: "Medieval logic is crucial to the understanding of medieval philosophy, for every educated person was trained in logic, as well as in grammar, and these disciplines provided techniques of analysis and a technical vocabulary that permeate philosophical, scientific and theological writing".⁸ Almost every educated medieval person was to some extent a logician, but in practice, with just a few exceptions, it is placed into the domain of historians of philosophy.⁹

The most common, and quintessential, expression of the Standard Approach is the Standard Journal-Article-on-the-History-of-Logic. The author focusses on one or perhaps two texts, usually by one of the canonical authors, which are finely analysed, the hidden subtleties and concealed pitfalls in their reasoning brought to light—the process may involve a translation into symbols or at least contemporary idiom, though the unqualified advocates of symbolic representation are a minority. Maybe the author is a more philologically inclined researcher, who has chosen a less well-known text and even perhaps edited the passages for the first time. But the presupposition remains: at the centre of the article is the logical discussion, understood indeed using the historian's skills, but seen in isolation or in a selected, restricted comparison; that, and often, especially in UK or US-based journals, the display by the author of an acuity those working in contemporary logic can recognize.

⁵ Ch. Martin "Embarrassing Arguments and Surprising Conclusions in the Development of Theories of the Conditional in the Twelfth Century", in J. Jolivet – A. de Libera (eds.), *Gilbert de Poitiers et ses contemporains*, Bibliopolis, Napoli 1987, pp. 377-401.

⁶ See A. Hasnawi – W. Hodges, "Arabic Logic up to Avicenna", in Dutilh-Novaes-Read (eds.), *Cambridge Companion* (above, n. 4), pp. 45-66 and compare with Tony Street's many publications on the question, the most recent of which is "Avicenna's Logic", in U. Rudolph (ed.), *Grundriss der Geschichte der Philosophie. Die Philosophie in der Islamischen Welt II*, Schwabe, Basel (forthcoming).

⁷ See G. Klima, *John Buridan*, Oxford U.P., New York 2009, and also John Buridan, *Summulae de Dialectica*, An annotated translation with a philosophical introduction by G. Klima, Yale U.P., New Haven - London 2001; John Buridan, *Treatise on Consequences*, translated by S. Read, Fordham U.P., New York 2015 (with a long, detailed philosophical introduction).

⁸ E. Craig (ed.), *Routledge Encyclopaedia of Philosophy*, Routledge, London – New York 1998, "Logic, Medieval" (DOI: 10.4324/9780415249126-Y033-1).

⁹ This does not mean that connections between logic and non-philosophical disciplines, such as law, are not sometimes considered: see below, Section 3.

Two points about these comments on the Standard Approach must be underlined. The first is that the characterization just given is not intended to be critical. Excellent work is being done in this manner, and the illustrative examples chosen are all of outstanding contributions to the field. But, as the following sections are intended to show, there is also another way of approaching the history of logic, which perhaps, at least considered as history, is a better one. The second point is that the contrast between the Standard Approach and social history of logic is not, of course, absolute. As Section 3 will show, a number of scholars have already, usually unselfconsciously, to some extent anticipated the methods of social history.

1. A Social History of Medieval Logic

By contrast with the Standard Approach, a social history of medieval logic does not assume a canon of outstanding logicians, a list of central problems and great innovations. Nor does it place logic as a sub-discipline of philosophy (or philosophy and theology). It starts from a list of simple questions. When, where, by whom, how and why was logic studied in the Middle Ages? These questions sketch out a whole programme for the social history of medieval logic, in a variety of different shapes. Even some very rapid and superficial comments about how each might be answered will help researchers who wish to take their first steps away from the Standard Approach.

When, where and by whom was logic studied in the Middle Ages?

At least for the Latin and Islamic worlds, there is a very simple and revealing answer to this question: always, everywhere and by everyone who received a standard higher education. This reply might need some qualification, but not very much. In Latin Europe, a tradition of studying logic runs from the time of Augustine to the seventeenth century. Although the full range of Aristotle's logic was not properly known until the thirteenth century, logic was enthusiastically studied on the basis of Boethian, other Latin texts and some of Aristotle from the ninth century, and even during the three centuries before logic did not entirely disappear, as indicated by the writings of Cassiodorus in the sixth century and Isidore in the seventh. All of Aristotle's logic was translated at an early stage into Arabic and, usually in the rethought version of Avicenna, as developed through generations of logicians, the subject was studied up to modern times and beyond. Jews educated in Arabic would have had similar exposure to logic, although they wrote little in the field.¹⁰ There is an extensive logical literature in Hebrew and one of the results of the research project around which much of the present volume is based will be to show whether logic was as ubiquitous among educated Jews in medieval Europe as among their Christian contemporaries.¹¹

The answer 'everywhere' does not imply that logic was studied in every town and village, but rather that neither in Latin Europe nor the Islamic world was study of it concentrated in just a few centres, although there were indeed just a small number of centres that were outstanding. From the twelfth century onwards, logic became a regular part of the curriculum

¹⁰ Cf. Ch. Manekin, "Propositions and Propositional Inference", in *The Cambridge History of Jewish Philosophy. From Antiquity Through the Seventeenth Century*, New York, Cambridge U.P. 2009, pp. 167-87 at pp. 167-8.

¹¹ The Greek (Byzantine) tradition is omitted from the discussion, because of the limitations at present of our (but especially my own) knowledge of it.

in madrasas and, whilst in the Latin world it flourished especially in the twelfth-century schools and the universities from the thirteenth century onwards, it had been studied in monasteries and cathedral schools before then and it continued to be studied in such non-university settings, as well as in the lesser studia set up by the Franciscans and Dominicans for friars not studying at the universities.

The answer that everyone who received a standard higher education studied logic indicates strikingly how different was the position of logic in the Middle Ages than now or more recently. Today logic is a niche subject, studied as part of Philosophy in most Anglophone and some other courses, and also by some in Mathematics and Computer Science. Not just classicists and historians, but also physicists, chemists and engineers are usually happy to admit complete ignorance of logic as a disciplined study, even though they would doubtless object if told that their positions or arguments are logically incoherent.¹² By contrast, in the Middle Ages any education past a basic one – one which, in Western Europe, would make a person ‘literate’, that is to say, able to read and write Latin – involved learning some logic. The qualification ‘standard’ is important, though, because there are some figures who were clearly highly educated, but seem never to have studied logic. One strange example is Ramon Llull (1235-1316), from a well-to-do Majorcan family, who never went to university but educated himself to a high degree in Latin and also in Arabic. He did not undergo the usual logical training but – and this may be indicative of medieval intellectual priorities – he invented his own, strange but influential logical system. A broader example is that of the considerable number of women in Latin Europe who were educated to a high level in convents or more rarely – as with Heloise in the twelfth century or Christine de Pizan in the fifteenth – outside: there is no indication that they studied logic.

This last observation could be the cue for a number of investigations in social history. Otherwise, however, the answers given so far to the initial questions do not so much begin to set out an agenda for work in social history of logic as to show the character, importance and difficulty of the task. With a single word inserted, however, so that it reads, ‘When, where and by whom was *what* logic studied in the Middle Ages?’, the question becomes one that generates programmes of work in the area. It encourages researchers to pick a particular period and geographical area and investigate what logic was studied there, where exactly (which locations, which institutions?) and by whom. Take France in the twelfth century as an example.¹³ We know that logic flourished in various schools in Paris, through most of the century. By the 1130s, these schools were many, but exactly how many? What sort of institutions were they, and who would be qualified to teach at them? How many students went to each, at what ages and for how long? How did the schools function economically, and to what extent were they just schools of logic? All these questions still need to be properly answered. Logical studies at cathedral schools outside Paris and in monasteries also continued, but we still need to find out how they were related to what was going on in Paris. We know that the logical curriculum established by the eleventh century, of Porphyry’s *Isagoge*, Aristotle’s *Categories* and *On Interpretation*,

¹² For a contrast between medieval and contemporary social attitudes to logic, see J. Brumberg-Chaumont, “Social Uses of Logic in Medieval and Modern Contexts”, *Annals of Cultural Studies* 11/4 (2020).

¹³ I pick twelfth-century France as an example here and in the next section because it is an area I know well. For more details and references, see my “Logic at the Turn of the Twelfth Century: a synthesis”, in I. Rosier-Catach (ed.), *Arts du langage et théologie aux confins des XI^e- XII^e siècle. Textes, maîtres, débats*, Brepols, Turnhout 2011, pp. 181-217 (Studia Artistarum 26) and “The Twelfth-Century Logical Schools: two research projects”, in the Introduction to the special edition of *Vivarium*, ed. by H. Hansen (forthcoming).

along with Boethius's commentaries and textbooks was at the core of logical studies until 1200, and that one new work, the *Sophistical Refutations*, became very popular in the 1130s. But there is a great deal still to be discovered about where and how much the rest of Aristotle's logic was studied. This is just one example: each different time and period will generate its own plan of research.

How was Logic Studied in the Middle Ages?

'How?' is a natural addition to 'where, when and by whom?'. It may seem that, since historians of logic who follow the Standard Approach have been reading medieval logical texts carefully and discussing what they say, they must already have made very clear the different ways in which, at various places and times in the Middle Ages, logic was studied. Yet this is far from the case. Historians of logic are usually concerned to find doctrines and arguments in the texts they consider, perhaps linking them to those in other texts, but rarely are they interested in how people went about learning logic, even at the advanced stage where teaching, learning and developing new ideas are linked together.

The case of twelfth-century Latin logic, already used as an example, illustrates this point dramatically. Many of the surviving texts are commentaries on the logical works by Porphyry, Aristotle and Boethius, which made up the curriculum. The commentaries are interrelated in complex ways: occasionally two or more manuscripts are witnesses to a single commentary, and sometimes to different versions of a single commentary; more often each commentary found in a given manuscript is not the same work as any other, but contains ideas and even passages close to those in one or more of the other commentaries. Most scholars working with this difficult material are content to pluck out the philosophically interesting ideas, and perhaps compare one such interesting discussion with another.

This approach, though, should not satisfy the social historian of logic. If their links with another could be unravelled and clarified, these manuscripts would contain the key to how the twelfth-century masters went about teaching, discussing and developing logic. But a very elaborate set of relationships has to be unearthed before this key will turn the lock. On the one hand, it seems that a good deal of work in logic went on in the give-and-take of classroom discussion; on the other hand, masters spent time preparing their commentaries and in revising the private versions they had used for lectures for publication. Detailed study and comparison between manuscripts is needed before it emerges whether a given text reflects the classroom directly, or the more individual, literary process of revision; or whether, indeed, it is a copy, or perhaps a hotch-potch, used by a second-rate master to convey ill-assimilated ideas from his own studies to a new generation of students.

Thinking about the different genres of logical texts will help further to show how logic was studied. In the twelfth-century French example, the question would be about the different roles of the authoritative texts, Boethius's commentaries, the contemporary twelfth-century commentaries and the various sorts of handbooks, some (such as Abelard's *Dialectica*) still sticking to the topics and mostly the order of the curriculum texts, others (such as Adam of Balsham's *Ars disserendi*) departing almost entirely from them.

Although this lie of the land is particular to France and the twelfth century, other places and periods present no less potentially rich and difficult to use manuscript material from which the social historian must try to unravel how logic was studied, aided also by any accounts from the time in letters or narratives which throw light on the procedures. There is also

another facet to the question ‘how?’ The discussion so far has focused, just like the Standard Approach, on logic and philosophy done at a high level. But, for the social historian of logic, the way in which elementary logic was learned is of no less interest, and in some respects it may be of more, since many more students gained a basic proficiency in the subject than went on to become its accomplished practitioners. To answer this version of the ‘How?’ question, the popular textbooks – for instance, Peter of Spain’s treatise, known as the *Summule*, in the thirteenth century universities, or *Šamsiyya* of al-Kātibī (d. 1277) – need to be examined, not just for the content, but for how they were used.¹⁴

Why Was Logic Studied in the Middle Ages?

One answer, of course, is that some people found logic fascinating, just as some people do so now and perhaps always will do. Probably this was an important motivation for most of the excellent and all the brilliant logicians of the period, but the answer does not explain how they were in a position to develop this fascination in the first place. Nor does it help to explain why the ninety per cent of students who did not thrill to logic none the less found themselves obliged to master it.

Another answer to this question is provided by chronological stories. For instance, in the Arabic tradition that story is, in outline, about why almost all of Aristotle, including his logic, was translated by the ninth century, and why al-Ġazālī declared that Avicenna’s version of Aristotle’s logic should be studied by madrasa students. In the Latin tradition, the narrative is about how the only Aristotelian texts available for centuries were logical ones. For the Hebrew tradition, a central theme will be rivalry with the logically-trained Christians. This third narrative moves in the direction of social history; the other two do not themselves belong to the social history of logic, but they help to frame the ‘why’ questions appropriate to it.

Such questions are, for example, about why the translation movement was allowed to take place and why al-Ġazālī’s prescription was so widely followed. Or about why some monks could be allowed to give so much time and intellectual energy to learning about a subject that had so little ostensibly to do with their religious vocation, or about what kept logic in its place as the main subject studied by beginning students at university, even once so many other competing disciplines were being taught.

The answers to these questions, then, concern the relationship between logic and other areas of study. They will seek to explain why, for both Christians and Muslims, it seemed to provide an important tool for reading their sacred texts, and whether it was useful for law or medicine. The answers will also need to expand their focus, to include the cultural, political and social context in which all these studies take place. From these answers, social historians can work towards their central aim: to describe and understand logic, in each place and period, as a social practice.

¹⁴ J. Brumberg (*À L’école de la logique. L’essor de la logique comme norme intellectuelle, sociale et anthropologique au XIII^e siècle*, Thèse d’habilitation, École Pratique des Hautes Études, Section des sciences religieuses, 2019, Ch. 4) has made an important beginning to this work with regard to Peter of Spain’s manual.

2. *Paths to Writing a Social History of Medieval Logic*

The previous section set out the way to writing social history of medieval logic in terms of answering a series of very broad questions in order to show the breadth of the field and its main contours, and to avoid the deeply ingrained assumptions of the Standard Approach, with its emphasis on great logicians and particular topics. There is a danger, however, that presented in this way social history of medieval logic will seem a forbiddingly vast and strange field, totally disconnected from the intensive research undertaken up until now on the logical texts. To counteract it, and to give a clearer idea of how particular research projects might be formulated, this section will suggest a number of paths towards writing a social history of medieval logic, linking them to work that has already been done.

The first path is that of *enhanced doxography*. As the name suggests, it follows and develops a method already used by a minority of historians of medieval logic. One outstanding example is Lorenzo Minio-Paluello, who worked in the mid-twentieth century. As well as editing various of the Latin translations of Aristotle, Minio-Paluello helped to catalogue all the manuscripts of the Latin Aristotle and to reconstruct the story of how Aristotelian and Boethian logic became known in the Latin West from the eighth century onwards.¹⁵ Since his time, some historians of logic, although also publishing articles in line with the Standard Approach, have given part of their time, not just to doxography in the traditional sense, establishing who were logicians when and what they wrote, and who taught whom, but to the type of extended doxography that also searches into when texts became available and in what form, and into how they were studied and, more generally, into the genres and aims of logical writers, and their different institutional cultures. Two outstanding examples over the last four decades are Sten Ebbesen, in his work on the tradition of the *Sophistical Refutations* and more generally on twelfth and thirteenth-century Latin logic,¹⁶ and Jenny Ashworth for her work on Renaissance logic.¹⁷ More recently, Khaled El-Rouyaheb has opened up a whole, mostly unknown field of Arabic logic, to fellow specialists and more general readers, in his book on the development of the field from 1200 – 1800, a study that offers many starting points for research projects following the Standard Approach, but by the precise detail in which it establishes chronology, canon, geographical location, school relationships and sources opens the way also to social history.¹⁸

None of these authors actually describes what they do as ‘social history of logic’. When I made the remark quoted above about the need for a social history of logic, I went on to say that pages I had written (where I followed this method of enhanced doxography) “could be seen as *prolegomena* to part of that enterprise”.¹⁹ I was right to be tentative and present my work as a prelude and preparation for social history, rather than an example of it, and the same may

¹⁵ See L. Minio-Paluello, *Opuscula: The Latin Aristotle*, Hakkert, Amsterdam 1972.

¹⁶ S. Ebbesen, *Commentators and Commentaries on Aristotle’s Sophistici Elenchi: a study of post-Aristotelian ancient and medieval writings on fallacies*, Brill, Leiden 1981; *Greek-Latin Philosophical Interaction. Collected Essays of Sten Ebbesen I*, Ashgate, Aldershot – Burlington 2008.

¹⁷ E.J. Ashworth, *Language and logic in the post-medieval period*, Reidel, Dordrech – Boston 1974; Ead., *Studies in Post-Medieval Semantics*, Variorum, London 1985.

¹⁸ Kh. El-Rouyaheb, *The Development of Arabic Logic (1200-1800)*, Schwabe, Basel 2019 (Medieval and Early Modern Philosophy 2).

¹⁹ Marenbon, “The Latin Tradition”, p. 2 (above, n. 1)

be true of the other work just discussed. I probably went too far, though, in saying that this type of study had never been attempted, since there are some other pathways which are not completely untrodden and, although not labelled as ‘social history’, might be seen as leading not just towards this field, but actually into it.

One of these paths is *the institutional history of logic*. Here the researcher examines the links between how logical studies evolved during a certain period in certain institutional settings and the rules and aims of those institutions. Unfortunately, the historians of schools and universities, from whom such work might be expected, usually shy away from the technicalities of the field,²⁰ although William Courtenay’s work is an honourable exception.²¹ An approach more self-consciously intended as social history of logic will be found in the remarkable chapter of Julie Brumberg-Chaumont’s completed but yet to be published *À L’école de la logique* on how logic was studied in Franciscan and Dominican *studia* in the thirteenth century.²²

Another path is the investigation of *logic in relation to other disciplines*, since by doing so historians are beginning to look at how logic fits into the practices of a society. This path is less unfamiliar than the others. Nearly a half century ago, for instance, John Murdoch published a paper which shows how logical language and techniques penetrated the natural sciences in the fourteenth century.²³ More recently, Irène Rosier-Catach has written extensively on the relation between logic and grammar in the twelfth-century Latin schools,²⁴ whilst the early tenth-century dispute between Abū Bišr Mattā ibn Yūnus about the two disciplines is a much studied, even hackneyed area for specialists in Arabic philosophy.²⁵ Any treatment of theology in the Latin world from the twelfth century to the fifteenth will be sure to involve extensive consideration of the intensive use made of logic, and there have also been studies of the use of logic in medieval legal studies.²⁶ Mostly, however, these discussions tend to be

²⁰ For example, I. Wei, *Intellectual Culture in Medieval Paris. Theologians and the University, c. 1100-1330*, Cambridge U.P., Cambridge 2012 makes a start at a social history of theology in Paris, but is cursory in his treatment of logic. More detailed studies, such as E.J. Ashworth – P. Spade, “Logic in Late Medieval Oxford”, in J. Catto – R. Evans (eds.), *The History of the University of Oxford*, Oxford U.P., Oxford 1992, pp. 35-64) tend to follow the Standard Approach, leaving it to other chapters and other scholars to look at the institutional setting (but without any special reference to logic). The wide-ranging and philosophically adventurous discussion by A. Fitzpatrick – J. Sabapathy, “Introduction: individuals and institutions in medieval scholasticism”, in the book they edited, *Individuals and Institutions in Medieval Scholasticism*, Royal Historical Society, Institute of Historical Research, University of London Press, London 2020, pp. 1-49, is an excellent starting point for thinking about the institutional side of medieval intellectual history, although it has little to say about logic in particular.

²¹ W. Courtenay, *Schools and Scholars in Fourteenth-Century England*, Princeton U.P., Princeton 1987, especially pp. 219-49.

²² Brumberg-Chaumont, *À L’École* (above, n.12), Ch. 5, “Politiques mendiante de la logique”.

²³ J. Murdoch, “From Social into Intellectual Factors: An Aspect of the Unitary Character of Late Medieval Learning”, in J. Murdoch – E. Sylla (ed.), *The Cultural Context of Medieval Learning*. Proceedings of the First International Colloquium on Philosophy, Science, and Theology in the Middle Ages (September 1973), Reidel, Dordrecht – Boston 1975, pp. 271-348 (Boston Studies in the Philosophy of Science 26).

²⁴ I. Rosier-Catach, “Abélard et les grammairiens: sur la définition du verbe et la notion d’inhérence”, in P. Lardet (ed.), *La tradition vive, Mélanges d’histoire des textes en l’honneur de Louis Holtz*, Brepols, Turnhout 2003, pp. 143-59; Ead., “Abélard et les grammairiens: sur le verbe substantif et la prédication”, *Vivarium* 41/2 (2003), pp. 175-248.

²⁵ See e.g. A. Elamrani-Jamal, *Logique aristotélicienne et grammaire arabe (étude et documents)*, Vrin, Paris 1983.

²⁶ E.g. H. Hohmann, “Logic and Rhetoric in Legal Argumentation: Some Medieval Perspectives”, *Argumentation* 12 (1998), pp. 39-55; A. Giuliani, “La logique de la controverse et le droit chez les Romanistes du XII^{ème} et du XIII^{ème} siècle”, *Studia et Documenta Historiae et Iuris* 34 (1968), pp. 223-48;

centred on how the techniques or questions of one discipline affected the practice of another (grammatical problems in twelfth-century logic, for instance, or logical analysis in natural science). As in the case of enhanced doxography, the potential for studying logic as a social practice is there, but it is not realized.

There is, however, at least one exception. In a remarkable study published more than 30 years ago, Michael Shank focuses on a central theme in the relationship between medieval logic and theology: the question of whether Aristotelian syllogistic remains valid when applied to the Trinity. Shank makes his study a genuine piece of social history of logic not just by his close attention to the institutional setting in the University of Vienna and the influence of pressures and aspirations more widely in the Church at the time, but also because he argues that it was an external factor, his failure to convince the Viennese Jews, which lead one of the leading theologians, Henry of Langenstein, to make a complete volte face in his position on the problem and abandon his previous optimism about the universal applicability of Aristotelian logic.²⁷

Cultural comparison may not, at first sight, seem to offer a pathway to the social history of logic. Cultural comparison takes place when traditions of the same discipline within different cultures are examined side by side. So, in the case of logic, the Western tradition might be compared with a tradition to which it has no links, such as the Indian one. Much of interest emerges, including evidence about whether certain questions, positions and arguments are likely to occur to people from entirely different cultural backgrounds, simply because of the shared character of human experience. This issue is relevant to the social history of logic only in a broad, and somewhat negative way. But cultural comparison of the different sub-traditions within broadly Western mediaeval logic provide an approach, oblique but revealing, to genuine social history.

The four main traditions, Greek, Latin, Arabic and Hebrew, all go back (directly or indirectly) to a common pool of sources: Aristotle's logic and the body of commentary written on it in late antiquity. The question can then be posed: why, given the same starting point, did the traditions diverge? Part of the answer may be to do with the different access each tradition had at their beginnings to the ancient source material, and part, no doubt, to the vagaries of individual genius – how different would Arabic logic have been, had Avicenna never been born! But social explanations too must have a part: the differences between the social and intellectual structures in which logic was taught must have helped to mould the discipline: why, for instance, did Latin logicians continue to comment directly on Aristotle, even when they had developed many new branches of logic, whereas usually in Arabic logic Aristotle's own texts were long forgotten? These sorts of questions, raised by cultural comparison, can sharpen the social historian of logic's picture of where to look. The cases of Latin and Arabic medieval logic are especially useful for this sort of comparison, because to a large extent they remain separate from each other: the enormous influence of Arabic texts on Latin philosophers from the thirteenth century onwards did not extend to logic, because the distinctive features of Avicennian logic, which were the basis for so many of the later developments and debates,

W. Hallaq, *Ibn Taymiyya Against the Greek Logicians*, Oxford U.P., Oxford 1993 (discusses relation of legal logic and Aristotelian logic).

²⁷ M. Shank, *'Unless You Believe, You Shall Not Understand'. Logic, University, and Society in Late Medieval Vienna*, Princeton U.P., Princeton 1988. I am grateful to Julie Burmberg-Chaumont for drawing this book to my attention.

were never transmitted to the Christian thinkers. Cultural comparison can, therefore, provide at least an important tool for social history of medieval logic, and it is a pity that specialists in the different sub-traditions, although highly interested in cross-influences (as this volume shows), are reluctant to engage in such comparative work.²⁸

3. Social Explanation and the History of Medieval Logic

Another path to writing the social history of medieval logic would be to take some doctrinal development – for instance, Avicenna’s development of a syllogistic involving both temporal and modal considerations, or the development of supposition theory among late twelfth and thirteenth-century Latin thinkers – and consider to what extent it was brought about by factors external to logic: not just the requirements of other disciplines and the pressure of widely-accepted doctrines (for example, religious ones), but also by the politics of the academic world and more widely, the desire to win patronage or gain a post, to be the victor in a battle of ideas. Historians of medieval logic have sometimes considered the first two of these factors, but not – except perhaps for the work of Shank – those in the second group.²⁹ If historians are to consider logic as a social practice in its full sense, both as one that affects wider society, outside the group of those engaged in it, and as one that is to a significant degree moulded by the society in which it takes place – then this path must be fully open. But it raises the serious methodological problem mentioned at the beginning.

It is a similar problem to that which, in the history of science, excited such opposition to the ‘Strong Programme’ advocated by David Bloor and others.³⁰ Historians of science, who were happy to accept the use of external considerations to explain scientific failures, bridled at the idea that scientific discoveries too are to be explained not just internally, by the workings of science in discovering the truth, but in significant part through non-cognitive reasons rooted in the wider social contexts in which they were made. So envisaged, discoveries begin to seem like constructions, not discoveries; and the truths they claim to reveal to be true just because and for as long as people, or the right people, hold them to be so. Such a reaction is, however, ill-considered. The extent to which science reveals the truth, and indeed what such a claim might mean, are difficult questions, but the Strong Programme need not concern them. Scientists must in their work *aim* to find the truth about the world, but historians of science must aim to find the truth about how and why scientists came to their conclusions, and their evidence will usually consist both of considerations internal to their subject and of external, social ones.

A fully social history of logic, where the work of logicians is seen as moulded by the societies in which they work, would be rather like an application of the Strong Programme to the field. It should, therefore, on proper consideration, generate no greater anxiety. But, it might be objected, extrinsic explanations, such as the Strong Programme advocates, are ill-suited to logic. There is room for extrinsic explanations of developments in the empirical

²⁸ I have attempted the sketch of a comparative account of the Latin and Arabic traditions in “Ancient Logic in the Middle Ages”, in L. Castagnoli (ed.), *The Cambridge Companion to Ancient Logic*, Cambridge U.P., Cambridge (forthcoming).

²⁹ For Shank, see above, n. 27. A well-known exercise in social history of this complete sort applied to an area of philosophy is M. Kusch, *Psychologism*, Routledge, London - New York 1995. For an example in the area of logic, see Rosental, “Logique floue” (see above, n. 1).

³⁰ Cf. B. Barnes – D. Bloor – J. Henry (eds.), *Scientific Knowledge: A Sociological Analysis*, Chicago U.P., Chicago 1996.

natural sciences, because they develop slowly, with many changes of direction. Logic seems to be different because of its unchangingness. Aristotle's syllogistic is, many hold, for the most part correct, and where it is not, human error is to blame, and Aristotle himself would recognize his faults if they were pointed out to him. Contemporary logic represents syllogistic inferences in a different way from Aristotle, but they would say it is the same system – and similarly with regard to Stoic propositional logical and medieval *consequentiae*. So, they would argue, there is no room for extrinsic explanations, such as social ones. Such explanations are not needed for the historian's central work of explaining how logicians reached their views, because their views can be explained entirely from within, as a result of their successful search for the truth.

This objection can be answered by rejecting the idea that, just because Aristotelian syllogistic can be represented by contemporary symbolisms, these logics are, where they overlap, the same. Once Aristotle's syllogistic is represented in a form completely different from Aristotle's, it ceases to be Aristotle's syllogistic. The unchangingness of logic is an illusion, the result of taking too lax an attitude to interpretation and of comparing individual areas from different times piecemeal, rather than looking holistically at the logical systems and their setting. The Standard Approach to the history of logic, which isolates individual problems, runs the constant danger of indulging this illusion. Maybe in the end the only properly historical approach to medieval logic is social history.