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The Impact of Aristotelian Logic on Medieval Latin and Jewish South-European Cultures: Placing and Re-scaling Logical Knowledge

Julie Brumberg-Chaumont

Abstract
This paper seeks to address the problem of the cultural impact of logic in Latin and Hebrew contexts by offering a social and spatialized history of logic during the 13th century. This approach is liable to put an end to the idea that medieval Latin logical culture was a monolithic reality, targeted by the umbrella term of "Latin scholasticism". The pluralization of Latin educational cultures is explored in terms of history of disciplines, places of knowledge, periods, institutions, self-representation, social value, educational impact and practitioners. The first part of this paper shows how the diffusion of Aristotelian cultures was quite limited in Christian Europe before the beginning of the 13th century, and remained so untill the end of the 13th cent. The second part specifically turns to the history of logic. A first section offers an overview of the first developments of Hebrew logic. The next one describes the weaknesses of the teaching of logic in Latin southern Europe. The third section highlights some original features of the teaching of the *Tractatus*. The last section shows how the development of Dominican 'schools of logic' in southern provinces contributed to a first 'meridionalization' of the Aristotelian logical culture. The conclusion suggests possible revisions of some aspects of the standard narrative about the history of Latin-Hebrew interactions in the field of logic.

Introduction[1]

Comparative studies mean approaching medieval philosophy, or logic, in terms of doctrinal history, but also intellectual history, cultural history, the history of schools (and universities), the

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history of education (where non-institutionalized places of teaching are also to be considered), the sociology of education, spatial history, and the social history of philosophical knowledge. These various perspectives imply differences in methods, documents and sources. They are probably to be combined if one wants to build a robustly contextualized history of logic where logical practices and theories, as well as theories of these theories and practices, are scrutinized.[2] These approaches are to be adapted according to the topic considered and the effect targeted, depending on different scales of inquiry, and on the spaces and places considered. Both aspects are, obviously, closely connected. Important questions to be addressed are: who and how many? (students, books, translations, masters, schools, classes, etc.), this being handled as from quantitative and qualitative points of view) and where?, this being understood from geographical, social, disciplinary, textual, and institutional points of view.

These kinds of questions can offer new insights into some of the problems at hand in the project "The Impact of Aristotelian Logic on Medieval Jewish Culture" when considering the history of Latin logic, namely the relationship (or non-relationship) between European Jews and Christians, as heirs and practitioners of Aristotelian logic in teaching, learning and debating.

In the context of the IIAS project "The Reception and Impact of Aristotelian Logic on Medieval Jewish Culture", conducted by Charles Manekin and Yehuda Halper in 2019, one benefit to be expected from a spatialized, social approach to the history of logic could be to put an end to the idea that medieval Latin logical culture, to which the history of Jewish logical culture was compared, would be a monolithic reality, in terms of history of disciplines, places of knowledge, periods, institutions, self-representation, social value, educational impact and practitioners.

Some clarifications about the terminology are needed.

I consider in this contribution "logic" as the discipline of logic, i.e. a knowledge typically distinct from grammar and rhetoric in the Latin tradition, taught as such in schools. This 'Aristotelian logic' was mostly embodied in the Aristotelian *Organon*, especially from the 13th century on.[3] The restricted definition of logic here adopted, however, does not mean that the inquiry in the history of logic can legitimately be limited to the study of 12th-century schools of dialectics, Mendicant *studia artium* (schools of logic), Faculties of Arts or art curriculum in universities, or to the Aristotelian corpus alone. This is especially true if one aims at understanding a variety of uses and practices of logic over the course of history, within different cultural contexts.

The delimitation of what counts as "logical practices" is another, far more complex issue. One unproblematic logical practice is, obviously, the teaching of logic itself. Three other practices can be considered: the formalized conduct of proofs and demonstrations in a very large panel of sciences and disciplines (including logic itself as a science); the "logicalization" of authoritative texts (especially the Aristotelian corpus, but also, for instance, the Bible where a logical form is found)[4] on which medieval teaching was based; eventually the practice of disputes. Here, as

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[2] For more on my approach in the history of logic see J. Brumberg-Chaumont, *À l'école de la logique. L'essor d'une norme intellectuelle, sociale et anthropologique au XIIIᵉ siècle*, Habilitation thesis, EPHE, Paris, 2019, chapter 1 (forthcoming book under the same title); J. Brumberg-Chaumont – C. Rosental, *Logical Skills. Social-Historical Perspectives*, Springer, Berlin 2021. See also John Marenbon's contribution to the present volume.

[3] On the ambiguous term "logic" and the provisional use of a restricted sense of "logic", see C. Manekin, "Logic in Medieval Jewish Culture", in Freudenthal (ed.), *Science in Medieval Jewish Cultures,* Cambridge U.P., Cambridge 2011, pp. 113-35, part. p. 113. His approach to logic in the last section of the paper, dedicated to the explicit use of logic in religious texts, is larger than the one here targeted.

[4] A similar idea is found in the Hebrew tradition, for the Torah, and even more the Talmud, as shown by Charles Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 133 sqq.

argued elsewhere, I would follow the distinction between different kinds of disputes, already made by Olga Weijers.[5] On the one hand, there is the practice of public dispute, which is 'logical' only in the broad sense that it uses logical argumentation, a broad sense that can also concern the mere use of argumentation in a variety of disciplines. On the other hand, we observe the practice of university disputes. This practice is 'logical' in a strong sense, that is, because it consciously follows a rigid, syllogistic form, based upon a formal logical training, generally obtained at a propaedeutic level in higher education. In a university dispute, arguments pro and contra did not respond one to another, as in a simple dialogue (or an Aristotelian dialectical setting described in the *Topics*), but they were organized in two parallel defences of each contradictory proposition. The conclusion was the collective establishment of truth, not the victory of one of the adversaries. Medieval authors themselves described disputations as a "syllogistic superstructure". University disputations belonged to what I have proposed to call 'logician practices', as opposed to mere logical practices.[6] The two other practices, when they imply a formalized use of logic, often formulated in meta-logical terms, can also qualify as 'logician practices' (formalized proofs, syllogisation of authoritative texts). Those different aspects of logical practices will not be addressed in this paper, and would required further inquiry.[7] The main focus here is more general, that is, the development of a logical culture gained through the formal or informal teaching dedicated to the Aristotelian logical corpus, at the beginning of the Golden Age of Latin scholasticism, the 13th century and the beginning of the 14th century.

The first part of this paper offers general reflections about the notion of a 'surrounding majority Latin Christian scholastic culture' among which Jewish southern intellectual communities were living. It introduces important differences about disciplines, actors, spaces, texts and periods, differences which are at risk of being blurred by the umbrella expression "Latin scholasticism". It shows how the diffusion of Aristotelian or "Neoaristotelian"[8] cultures was very low in Christian Europe before the beginning of the 13th century, and how it remained quite so till the end of the 13th century (and sometimes beyond) in southern schools and universities, except for the Mendicant schools, a few exceptions, like Toulouse, and a very restricted circle of internationally-circulated elite of scholars and theologians.

The second part specifically turns to the history of logic, as distinct from philosophy. A first section offers a brief overview of the first developments in the history of Hebrew logic. The following one describes the weaknesses of the teaching of logic in Latin southern Europe. It shows some differences between, on the one hand, north Italy, where a teaching

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[5]   See O. Weijers, *In the Search of Truth, A History of Disputation Techniques from Antiquity to Early Modern Times*, Turnhout, Brepols 2013, pp. 82-84 (see also pp. 121-2).

[6]   See J. Brumberg-Chaumont, "The Rise of Logical Skills and the 13th Century Origins of the Logical Man", in Brumberg-Chaumont – Rosental (eds.), *Logical Skills. Social-Historical Perspectives* (above, n. 2), pp. 91-120 (§ 6.3.1). On medieval disputes as scientific disputes in the search of truth, with a typical argumentative organization, see J. Brumberg-Chaumont, "Disputational theories and practices of knowledge during the 13th century", in A.M. Marquez (ed.), *Revisiting Medieval Dialectic*, forthcoming.

[7]   More on logical and 'logician' practices and on disputes as 'super syllogistic structures' in J. Brumberg-Chaumont, *À l'école de la logique* (above, n. 2), chapter 3. For a synthetic presentation of the topic, see Ead., "The Rise of Logical Skills" (above, n. 6). On some social uses of logic, see Ead., "Social Uses of Logic in Medieval and Modern Contexts", *Roczniki Kulturoznawcze* (*Annals of Cultural Studies*) XI/4 (2020), pp. 117-49.

[8]   I borrow this use of the term "Neoaristotelian" from Ch. Manekin, "Proposition and Propositional Inference in Medieval Hebrew Logic", in S. Nadler – T. Rudavsky (eds.), *Cambridge History of Medieval Jewish Philosophy*, Cambridge U.P., Cambridge 2009, pp. 167-87, part. p. 167.

of logic did develop in the 1290s, and gained institutionalization during the first decades of the 14th century in Bologna (and later on, Padua), and, on the other hand, the Midi, where the teaching of "arts" (mainly logic), remained quite low, with the exception of Toulouse (with a development also from the end of the 1290s only). The third section insists on one original feature of the teaching of logic in southern schools, namely the early institutionalization of the teaching of *Tractatus*, which often goes along with the adoption of a 'truncated' version of the *Tractatus* as un introduction to Aristotle's logic (especially the *logica vetus*). The last section shows the precocious and incredibly high development of a set of Dominican schools of logic (*studia artium*) in southern provinces, some of them specifically dedicated to the *Tractatus*, as early as from the 1250s, and later on, for other Mendicant Orders. These schools contributed to a first 'meridionalization' of the Aristotelian logical culture and probably influenced the first developments in the universities of Toulouse and Bologna. The conclusion suggests possible revisions of some aspects of the standard narrative about the history of Latin-Hebrew interactions in the field of logic.

1. "The Impact of Aristotelian Logic on Medieval Jewish Cultures": What about the Impact of Aristotelian Logic on the "surrounding" "Latin" Medieval Christian "majority" Culture[9]?

1.1 A pluralization of "Latin Scholasticism"

Scholastic Latin culture is generally thought of as a homogeneous milieu in which Jewish intellectuals lived. They did so initially quite in isolation from Latin Scholasticism, turned as they were towards Arabic and Arab-Judaic philosophical sources and standards, with some qualifications: the development of a "Hebrew scholasticism" at the end of the Middle Ages, the specificities of the Italian case, with numerous Hebrew-to-Latin translations and the intermediary role of vernacular language, and the contrast with medicine, where the number of Hebrew-to-Latin translations was even greater than for those from Arabic during the 14th century[10].

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[9] See G. Freudenthal, "Arabic into Hebrew. The Emergence of the Translation Movement in Twelfth-Century Provence and Jewish-Christian Polemics", in D. Freidenreich – M. Goldstein (eds.), *Beyond Religious Borders*, Univ. of Pennsylvania Press, Philadelphia 2012, pp. 123-43, part. p. 127.

[10] See G. Freudenthal, "Arabic and Latin Cultures as Resources for the Hebrew Translation Movement. Comparative Considerations, Both Quantitative and Qualitative", in Freudenthal (ed.), *Science in Medieval Jewish Cultures* (above, n. 3), pp. 74-105; see also, for a general presentation, A. Fidora – R. Fontaine – G. Freudenthal – H.J. Hames – Y. Schwartz, "Latin-into-Hebrew: Introducing a Neglected Chapter in European Cultural History", in R. Fontaine – G. Freudenthal (eds.), *Latin-into-Hebrew: Texts and Studies*, Vol. 1: *Studies*, Brill, Leiden-Boston 2013 (Studies in Jewish History and Culture 39/1), p. 9. See Ch. Manekin, "The ambiguous Impact of Christian Scholasticism on Jewish Philosophy in the Late Middle Ages", in A. Musco (ed.), *Universalità della ragione*, Vol. 1, Officina di Studi Medievali, Palermo 2012 (Biblioteca dell'Officina di Studi Medievali 14/1-3), pp. 215-230, with a critical discussion of the "Pines hypothesis", p. 216 sqq., and a general inquiry about the possible explanations regarding the very restricted impact Latin Scholasticism has long had on Jewish thought. For the translations of Aristotle's works in Italian libraries, see G. Tamani – M. Zonta (ed.), *Aristoteles Hebraicus. Versioni, commenti e compendi del Corpus Aristotelicum nei manoscritti ebraici delle biblioteche italiane*, Venezia, Supernova, 1997, esp. "Prima parte" by M. Zonta, pp. 13-56, for a general overview of the translation movement for Aristotelian works, beyond the sole Italian libraries. See also G. Tamani, "Il *Corpus Aristotelicum* nella tradizione ebraica', in G. Fiaccadori (ed.), *Autori classici in lingue del vicino et medio oriente*. Atti del VI, VII e VIII seminario sul tema: "Recupero di testi classici attraverso recezioni in lingue del Vicino e Medio Oriente", Ist. Poligrafico e Zecca dello Stato, Roma 1990, pp. 33-41. For Italian Hebrew scholasticism and the works by Judan Messer Leon in the 15th century (about the half devoted to logic), see M. Zonta, "Scholastic commentaries in Hebrew: some notes about Judah Messer Leon",

However, the general presupposition conveniently covered by the umbrella expression "Latin Scholasticism" is to be revised, on different grounds. There might have existed, to some degree and in some respect, a growing homogenization of Latin intellectual and educational cultures, especially from the end of the 13th century on, when the influence of the scholastic Parisian model gained southern spaces. But the history of European Latin intellectual life and education is far from homogeneous, when a diversity of spaces, times, disciplines (within the realm of 'profane' sciences), institutions and actors is taken into account.

The contexts in which Jewish intellectuals in northern Spain, Provence and Italy respectively lived and worked are often clearly distinguished one from another, when philosophical influences and acculturations are discussed with respect to Latin scholasticism. The same goes for northern Jewish communities, indifferent or hostile, generally speaking, to philosophical influences[11].

However, the discrepancies one can observe between northern and southern philosophical educations and cultures in the Latin world is hardly discussed, no more than is taken into account the diversity of situations displayed by the three above-mentioned southern spaces from the point of view of the penetration of philosophical culture and education within Latin culture. The only significant exception is constituted by discussions about the "Italian exception", which would explain the "Jewish Italian exception"[12] and a "double-track acculturation" process,[13] a discussion that also extends to the notion of a "Romanic Belt", to be taken into account for the history of philosophical Latin-Hebrew interactions.[14] Oral philosophical exchanges through the medium of the vernacular language are indeed envisaged.[15]

From a chronological point of view, very important distinctions have not been sufficiently taken into account. The 12th-century schools, multiplied in the North of France and in England, were mainly schools of dialectic and theology, where sciences were also cultivated, with a few centres of intellectual activities and translations in the South. The 13th-century age of the universities, with less than ten important institutions in a restricted number of countries, displayed a strong Parisian (and Oxonian) domination in arts, philosophy and theology, and very different educational patterns in southern universities. This period is to be distinguished from the much more developed, complex and multi-centred university world developed after the second half of the 14th century (and even more during the 15th century), following the Parisian model in Eastern and Central Europe, with dozens of new universities spread all over Europe.

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in G. Fioravanti *et al.* (eds.), *Il commento filosofico nell' occidente latino (secoli XIII-XV)*, Brepols, Turnhout 2002, pp. 379-400. For the history of books possessed by Italian Jews in the 16th century, where books of philosophy and sciences (medicine) are still represented, see S. Baruchson-Arbib, *La Culture livresque des juifs d'Italie à la fin de la Renaissance*, CNRS Éditions, Paris 2001. For the idea of a non-textual transmission of the core notions of Latin scholasticism among Jews see C. Sirat, "En vision globale: les juifs médiévaux et les livres latins", in P. Lardet (ed.), *La Traduction vive*, Turnhout, Brepols 2003, pp. 15-33; see also Ead., " Les traducteurs juifs à la cour des rois de Sicile et de Naples", in G. Contamine (ed.) *Traductions et traducteurs au Moyen Age,* Actes du colloque international du CNRS organisé à Paris les 26-28 mai 1986, CNRS Éditions, Paris 1989, pp. 169-91.

[11] Freudenthal, "Arabic and Latin Cultures as Resources" (above, n. 10).

[12] Freudenthal, "Arabic and Latin Cultures as Resources" (above, n. 10), p. 96 sqq.; p. 99.

[13] Freudenthal, "Arabic into Hebrew" (above, n. 9), p. 129.

[14] See Y. Schwartz, "Imagined Classrooms? Revisiting Hillel of Verona's Autobiographical Records", in A. Speer – T. Jeschke (eds.), *Schüler und Meister*, De Gruyter, Berlin-New York 2016 (Miscellanea Mediaevalia 39), pp. 483-502 for the use of this notion in the history of the Hebrew-Latin interactions regarding philosophy.

[15] See Sirat, "Les traducteurs juifs à la cour des rois de Sicile et de Naples" (above, n. 10).

The diverse paths followed by the tradition of the quadrivium, targeted under the name of "science" in modern scholarship, and by that of Aristotelian/Arabic philosophical texts, diffused much later, is often neglected. The same goes for the different routes and chronologies followed by the circulation of works composed by Arabic philosophers, and only later on, by that of the Aristotelian corpus. The very slow and complex genesis of the very notion of 'philosophy' as a constituted, self-contained discipline based upon a clearly delimited 'Aristotelian' corpus in the Latin world is not considered.

A variety of actors and institutions, be it court translators and intellectuals, teachers in schools, religious elites, local clergy, university masters, or members of Mendicant Orders, whether "ordinary friars", teachers (*lectores*) or theologians, is not envisaged clearly. A robust social history of Jewish practitioners,[16] "consumers" and facilitators of philosophy (who would certainly not all be called "philosophers" by historians of philosophy)[17] has been for instance proposed by Saperstein, in a paper where the Latin equivalent is partially reduced to an economically-privileged group of Mendicant Friars who did not have to care for their living.[18]

1.2. Various interconnected factors

These different aspects interact closely in various ways in the Latin context, depending on the periods, the disciplines and the social circles and institutions taken into account.

Turning to spatial and social considerations, the "majority culture" is for instance described as "the same" in France and in Provence by Gad Freudenthal, when possible Latin philosophical influences on Jewish medieval intellectual circles are considered.[19] What is indeed comparable in European intellectual elite at large is a tentative domination of a clerical Latin culture, much under a Parisian influence. But scholastic culture can hardly be described as the culture of the "majority" in southern spaces, even if only intellectual and religious elites are taken into account. The level of Latin instruction was sometimes quite low, as in Spain; meridional and Italian models of education were long not orientated toward logic, philosophy and sciences (distinct from medicine), whether in schools or, later, in universities, while theology was just not taught in southern universities before the mid-14th century.

Even in Italy, which led the way among southern spaces regarding the teaching of philosophy, the "return" of philosophy in Italy, after seven hundred years of "absence", is to be dated from 1295, with the arrival of Gentile da Cingoli from Paris in Bologna, according to Gianfranco Fioravanti, who considered philosophy as "dead" in Italy before that.[20] When Judah Romano asserted that his idea, with the translations he produced during the 1320s (from Albert the Great, Thomas Aquinas, Giles of Rome, etc.), was to defend the existence of a wisdom among Christian people, he was maybe not reflecting only a cultural sense of superiority attached to Arabic

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[16] Preachers included, as in the case of Jacob Anatoli, and, for the 15th-century, a "syllogistic" preaching in Spain, see M. Saperstein, "The Social and Cultural Context: Thirteen to Fifteen Centuries", in D. Frank – O. Meaman (eds.), *History of Jewish Philosophy*, Routledge, London 1996, pp. 235-74, part. p. 241.

[17] Saperstein, "The Social and Cultural Context" (above, n. 16), p. 245.

[18] *Ibid*., p. 237.

[19] See Freudenthal, "Arabic into Hebrew" (above, n. 9), p. 128.

[20] G. Fioravanti, "Morte et rinascita della flosofia. Da Parigi a Bologna", in C. Casagrande – G. Fioravanti (eds.), *La filosofia in Italia al tempo di Dante*, Il Mulino, Bologna 2016, p. 11-24. Same idea, based on a restricted definition of what can count as 'philosophy' in the Christian Latin context, in the introduction, written together with C. Casagrande.

culture,[21] but also the reality of a long under-developed teaching of philosophy and logic in Italy. To this effect, although the testimony of the highly learned (Castilian?) "priest" met by Jacob b. Ruben around 1170 in Gascogne, a priest who taught him a lot on philosophical and theological topics, may well be historically documented[22], it is not at all representative of the local majority Latin Christian culture, not only for the 12th century, but also for the best part of the 13th century. This can be ascertained from what we know of the absence of a teaching in arts in Provence and Spain at that time, and of the poor level of instruction in meridional clergy, especially in Spain, before the 14th century.[23] The "priest" must have been a highly-learned, ordained cleric, maybe an advanced student, or a master in theology, who probably gained the bulk of his theological and philosophical education in some Parisian or northern school. This was where the "rationalization of theology", evoked by Gad Freudenthal,[24] had begun since the 11th century, while theology as a discipline distinct from biblical exegesis was in the process of being built in the 12th century. The hypothesis that the priest might have also benefited from the new Arabic-Latin translation movement dedicated to Aristotelian and Arabic texts can not be excluded, but with the proviso that the Toledo movement was mainly restricted to translation, not teaching activities, as shown by Charles Burnett.[25]

Admittedly, the idea of a homogeneous European "majority" philosophically-learned culture can be grounded on the existence of an 'international' elite of Christian intellectuals, constituted mainly by clerics, philosophically-trained within a theological context, but also by a few independent scholars dedicated to the pursuit of science and philosophy, an elite who circulated widely in Europe for training, as well as for a variety of other occupations.

As distinguished from the sciences of the quadrivium, cultivated and taught all along the 12th century in Latin Europe, where a strong penetration of Arabic science was felt,[26] the 12th-century translations of works composed by Aristotle (whether from Greek or Arabic) and by Arabic philosophers, the "*Corpus arabo-latinum*" identified by Burnett (distinguished from the 13th-century *Corpus vetustius*)[27] had no significant impact on Latin philosophical culture and teaching before the end of the 12th century – not to speak of a large-scale diffusion, for which we have to await the university teaching of natural philosophy, began only after the first decades of the 13th century. Although sometimes translated in Latin from the Greek as early as the second

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[21] See G. Freudenthal, "Arabic and Latin Cultures as Resources" (above, n. 10), p. 93; Saperstein, "The Social and Cultural Context"(above, n. 16), p. 239.

[22] See Freudenthal, "Arabic into Hebrew" (above, n. 9), p. 130 sqq.

[23] See A. Rucquoi, "Éducation et société dans la péninsule ibérique médiévale", *Histoire de l'Éducation* 69 (1996), pp. 3-36; Ead., "La Formation intellectuelle du clergé de Castille à la fin du Moyen Âge", in *Clerc séculier au Moyen Âge.* Actes des congrès de la Société des historiens médiévistes de l'enseignement supérieur public, 22[c] congrès (Amiens 1991), Publication de la Sorbonne, Paris 1993, pp. 249-62.

[24] See Freudenthal, "Arabic into Hebrew" (above, n. 9), p. 134.

[25] Ch. Burnett, "The institutional context of Arabic-Latin translations of the Middle Ages: a reassessment of the 'school of Toledo'", in O. Weijers (ed.), *Vocabulary of Teaching and research between Middle Ages and Renaissance*, Turnhout, Brepols 1995, pp. 214-55.

[26] See I. Caiazzo, "Teaching the *Quadrivium* in Twelfth-Century Schools", in C. Giraud (ed.), *A Companion to Twelfth Century Schools*, Brill, Leiden–Boston 2020, pp. 180-202, esp. p. 184, p. 198-9 and p. 202 for the influence of Arabic sciences. Significantly enough, there is no specific chapter dedicated to the 12th-century teaching of philosophy in this volume, but only *trivium*, *quadrivium*, medicine, law and theology.

[27] See Ch. Burnett, "The Arabo-Latin Aristotle", in A.M.I. Oppenraay – R. Fontaine (eds.), *The Letter before the Spirit: the Importance of Text Editions for the Study of the Reception of Aristotle*, Brill, Leiden-Boston 2012 (Aristoteles Semitico-Latinus 22), pp. 95-107.

quarter of the 12th century, in the translations prepared by James of Venice, with an acceleration from the 1160s with the translation movement from the Arabic in Toledo, works in Greek and Arabic philosophy were diffused only much after they were available in Latin.

During the best part of the 12th century, even in Northern schools, the philosophical culture was essentially nourished by Aristotelian logic, or "dialectic" as it was called by then. It was complemented with a series of philosophical insights drawn form a diversity of non-Aristotelian sources, many of them taken from Plato (*Timeus*), Christian writers, rhetoricians and authors belonging to the late ancient Latin Neoplatonic tradition.[28] There was only a partial knowledge of Aristotle's works and ideas, often transmitted through the Salernitan channel.[29]

The diffusion of the Aristotelian or "Neoaristotelian" (including Neoplatonic elements) philosophy began first through the works written by Arabic authors, with only a partial, mediated knowledge of Aristotle's natural philosophy, known by excerpts. This can be seen in the works composed by Dominicus Gundissalinus, who contributed to a lot the propagation of Arabic philosophy: again, a "chronological gap" existed between the availability of the Toledo translations and their actual use.[30]

A direct access to some of Aristotle's full texts came only later on, with authors belonging to the next generation, like Alfred of Sareshill (commentary on the *Meteorologica* ca. 1200-1210) or John Blund (*De Anima*, 1200). Aristotelian and Neoaristotelian doctrines were partially known and diffused from the end of the 12th on, as for instance in Alain of Lille, Alexander Necquam and Raoul of Longchamp.[31]

The turn of the 13th century also witnessed an evolution in the signification of the term "philosophy". During the High Middle Ages, and still in the 12th century, "philosophy" used to target a variety of intellectual endeavours, including Christian wisdom or monastic meditation[32] – or even a range of secular disciplines, including the *quadrivium*, as in the case for philosophy "in the broad sense" in the classifications offered by Gundissalinus. At the beginning of the 13th century, it gained a specialized sense, to designate Aristotle's natural philosophy (including metaphysics), to the exclusion not only of the quadrivium, but also of the trivium, logic included, even though logic still represented by then the best part of the Aristotelian corpus known and

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[28] See for instance, on the issue of ideas, I. Caiazzo, "Sur la distinction sénéchienne *Ideo/eidos* au XIIe siècle", *Chora* 3-4 (2005-2006), pp. 91-116.

[29] See D. Jacquart, "Aristotelian Thought in Salerno", in P. Dronke (ed.), *A History of Twelfth-Century Western Philosophy*, Cambridge U.P., Cambridge 1988, pp. 407-28.

[30] See N. Polloni, "Aristotle in Toledo: Gundissalinus, the Arab and Gerard of Cremona's Translations", in Ch. Burnett – P. Mantas-España (ed.), *Ex Oriente Lux*, London, 2016, p. 147-186.

[31] See, for instance, the case of the Liber de causis, I. Caiazzo, "La première réception du *Liber de Causis* en Occident (XII-XIIIe siècles)", in D. Calma (ed.), *Reading Proclus and the Book of Causes*, vol. 1, Brill, Leiden-Boston 2019, pp. 46-69. Alfred of Sareshill is also considered in this contribution; see also Ead., "Discussions sur les quatre éléments chez Alain de Lille et Raoul de Longchamp", in J.-L. Solère *et al.* (ed.), *Alain de Lille, le Docteur Universel. Philosophie, théologie et literature*, Brepols, Turnhout 2005, pp. 145-67. Alain of Lille and Raoul of Longchamp have lived and taught in the South of France.

[32] For the ancient sources of this idea, see G. Madec, "*Verus philosophus est amator Dei.* Saint Ambroise, saint Augustin et la philosophie", *Revue des Sciences Philosophiques et Théologiques* 61 (1977), pp. 549-66. See a recent discussion by G. Fioravanti, "Come scompaverono i filosofi in Occidente", in A. Bertolacci – A. Paravicini Bagliani – M. Bertagna (eds.), *La Filosofia fra Antichità ed Età Moderna. Saggi in memoria di Francesco Del Punta*, Edizioni del Galluzzo, Pisa 2017, pp. 72-99. For the monk-philosopher according to Abelard, see Ch. Grellard, "La place de l'Éthique et la figure du moine-philosophe", Collège de France, Symposium "Philosopher au XIIe siècle", org. A. de Libera, 30 May 2017.

taught in schools. This created a series of new approaches to the divisions of knowledge, in which the classification of the Toledo translations by Gerard of Cremona and his disciples, namely the division between trivium, quadrivium, and philosophy, has probably played a part.[33] It was this restricted sense of "philosophy", exclusive to logic, i.e. the "natural philosophy" developed by Aristotle and his commentators, which was targeted by the condemnations of 1210 and in the interdictions in the program of studies decided in 1215.[34]

The same sense of "philosophy" was used in the Mendicant system of education, where we find, throughout the Middle Ages, classes in logic, called *studia artium*, or *studia logicae*, entirely distinct from the classes dedicated of natural philosophy, called studia philosophiae or studia naturarum, as we shall see below.

During the first decades of the 13th century, Aristotelian and Arabic philosophical texts, as well as Maimonides's *Guide*,[35] were read and used, but not directly taught, by theologians at Paris. After the suspension of the condemnations, the full rediscovery and teaching of natural philosophy begun in Paris at the Faculty of Arts during the 1250s,[36] with a marginalization of the teaching of the quadrivium.[37] Aristotle's natural philosophy was probably already intensely taught from the 1230s at the University of Oxford, where no ban on natural philosophy existed, and where the complete *Corpus vetustius* of Aristotle's works on natural philosophy (mainly constituted by 12th-century Arabic and Greek translations) was first gathered and heavily glossed, as can be read in the "Oxford gloss".[38] Before the 1250s, many university masters from the early 13th century displayed only a very partial knowledge of the Aristotelian corpus in natural philosophy, sometimes only derived from collections such as *Auctoritates*, a phenomenon that can be observed as late as in logical commentaries produced at the Faculty of Arts in Paris around 1250.[39]

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[33] See Ch. Burnett, "The Coherence of the Arabic-Latin Translation Program in Toledo in the Twelffh Century", *Science in Context* 14/1-2 (2001), pp. 249-88, esp. p. 259. Charles Burnett insists on this change of signification in *philosophia*, and sees it as the consequence of the impossibility ti fit the topics addressed by philosophy in the pre-existing traditional program of education (contrary to the trivium and the quadrivium). He also points out the connection with the Parisian condemnations (*ibid*., p. 262).

[34] H. Denifle – E. Châtelain, *Chartularium Universitatis Parisiensis* I, Paris 1889, n°11, p. 70; n°20, pp. 78-79.

[35] Translated in Latin as early as in the 1230s, see C. Lopez Alcade, "Maimonides's First Reception in Latin Philosophy", *Mediterranea* (2019), pp. 35-56, for a recent synthesis.

[36] On the slow penetration of natural philosophy in Paris before the 1250s, see L. Bianchi, *Censure et Liberté intellectuelle à l'université de Paris (XIIIᵉ-XIVᵉ siècles)*, Les Belles Lettres, Paris 1999 (Âne d'or 9) Paris, pp. 117-18.

[37] See O. Weijers – L. Holtz, (eds.), *L'Enseignement des disciplines à la Faculté des Arts (Paris et Oxford, XIIIᵉ-XIVᵉ siècles)*, Brepols, Turnhout 1997; O. Weijers – L. Holtz (ed.), *Les débuts de l'enseignement universitaire à Paris*, *1200-1245 enviro*n, Documents, études et répertoires publiés par l'Institut de recherche et d'histoire des textes, Paris 2013.

[38] See Ch. Burnett, "Aristotelian Natural Philosophy in Great Britain, a Preliminary Survey of the Manuscript Evidence", in J. Marenbon (ed.), *Aristotle in Britain*, Brepols, Turnhout 1996, pp. 21–49. For a recent synthesis on the *Oxford gloss* or *Glossa Anglicana*, see E. Kuhry, "Vers une edition électronique de la glose d'Oxford", *Humanités numériques* 2 (2020), *varia* (online); Ead., "The Compilatio de libris naturabilis Aristotelis (*Compendium philosophie*): Evidence for the Early Reception of the *Glossa anglicana* and of Adam of Buckfield's Commentaries", *Recherches de Théologie et de Philosophie Médiévales* 86/2 (2019), pp. 283-313.

[39] See D. Piché, *Le problème des universaux à la Faculté des Arts de Paris entre 1230 et 1260*,Vrin, Paris 2005 (Sic et Non), p. 249. For the presence of *Auctoritates* before the *Auctoritates* chosen to be edited by Jacqueline Hamesse, i.e. the version from around 1267 (see J. Hamesse, *Auctoritates Aristotelis. Un Florilege Medieval Étude Historique Et Édition Critique*, Publications Universitaires – Peeters, Paris – Louvain, 1974), see J. Long (about Robert Fishacre), "The reception and use of Aristotle by the early English Dominicans", in Marenbon (ed.), *Aristotle in Britain during the Middle Ages,* Brepols, Turnhout 1996 (Rencontres de Philosophie Médiévale 5), pp. 51-56. For the same phenomenon in John Pagus,

The teaching of dialectic and of the recently-born theology, as a systematized, rational knowledge of the truths of faith, together with the study of quadrivium, and with an approach to philosophy mainly derived from non-Aristotelian texts, was the rule during the 12th century, mainly in northern schools. Later on, the simultaneous high cultivation of Aristotelian logic and philosophy, together with theology, was indeed observed, but only from the mid-13th century on at the University of Paris, as well as at Oxford, one or two decades earlier.

Some scholars might consider the hypothesis that meridional universities had tried, during the first part of the 13th century, to compete with the by-then lagging behind University of Paris, by offering a new teaching in natural philosophy, as in Naples (university created in 1224) or in Toulouse (university created in 1229). But the hypothesis remains quite undocumented.[40] The available testimonies rather indicate that the project, if it ever existed, must have had a limited effect on the actual teaching of philosophy, as distinguished from translating and reading activities. The existence of a teaching of philosophy is not clearly documented in the Neapolitan studium before the identification of the few Aristotelian commentaries redacted by Peter of Ireland during the 1260s — the same master with whom Moses of Salerno had stimulating philosophical discussions, together with Nicholas of Giovinazzo, who is not to be identified with his Dominican homonym.[41] The Parisian ban against the teaching of philosophy was repeated in Toulouse as early as 1245, before any serious teaching of Aristotelian philosophy had been yet organized. The full renaissance of the teaching of arts was to wait until the new program at the Faculty of Arts of Toulouse, at the turn of the 14th century, but with a minor stress put on natural philosophy and ethics with respect to logic (and grammar).[42] In Montpellier, the minimal teaching of philosophy that existed there was transmitted among physicians in an "autodidatic" fashion, by an autonomous, direct reading of texts, or through an "oral transmission" according to Geneviève Dumas.[43] As for Iberian universities, despite a movement of "philosophical heresy"

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the great master at the Faculty of Arts in the 1230s, see H. Hansen, *John Pagus on Aristotle's Categories, A study and Edition of the Rationes super Praedicamenta Aristotelis*, Leuven U.P., Leuven 2012, pp. 32*-40*.

[40] See Bianchi, *Censure et Liberté intellectuelle* (above, n. 36), pp. 102-9.

[41] See G. Freudenthal, "Arabic and Latin Cultures" (above, n. 10), p. 86. For the identity of Nicholas, see C. Rigo, "Per un' identificazione del "sapiente Cristiano" Nicola da Giovinazzo, collaboratore di Rabbi Mošeh ben šelomoh da Salerno", *Archivum Fratrum Praedicatorum* 69 (1999), pp. 61-146, and the comments on this paper by E. Panella on his website (<http://www.e-theca.net/emiliopanella/nomen2/nicola.htm>). About Moses of Salerno's philosophical activities, essentially based on a reflection and commentary on Maimonides, and his contribution to the diffusion of a philosophical and logical vocabulary among Italian Jews, see below n. 63.

[42] The new statutes of the Faculty of Arts, redacted between 1298 and 1305 (see J. Verger, "Le cadre institutionnel de l'essor institutionnel : les statuts de Toulouse", in *Église et culture en France méridionale: XIIe-XIVe siècle*, Centre d'études historiques de Fanjeaux, Toulouse – Fanjeaux 2000 (Cahiers de Fanjeaux 35), p. 51-71, esp. p. 67, note 2), are clearly detrimental to philosophy with respect to logic (or grammar), since the former is generally taught in less important types of classes (the "extraordinary classes") and only once over the whole curriculum (see M. Fournier, *Statuts et Privilèges des universités françaises depuis leurs fondations jusqu'en 1789*, L. Larose et Forcel, Paris 1890, 1re partie, p. 465, n. 542; J. Patow, *The Art Course at Medieval Universities with special References to Grammar and Rhetoric*, Campaign 1910, p. 96 sqq.). For the teaching of arts in Toulouse, see also J. Verger – G. Hahn, "Remarques sur l'enseignement des arts dans les universités du Midi à la fin du Moyen Âge", *Annales du Midi* 91/144 (1979), pp. 355-81.

[43] G. Dumas, *Santé et société à Montpellier à la fin du Moyen Âge*, Brill, Leiden – Boston 2015 (The Medieval Mediterranean 102), p. 62 and p. 36. For the teaching of arts at Montpellier see J. Verger, "Les statuts de l'université de médecine de Montpellier", in D. Le Blévec (ed.), *L'université de médecine de Montpellier et son rayonnement (XIIIe-XVe siècles)*, Brepols, Turnhout 2004, pp. 13-28; J. Verger, "*Locus Montispessulani, aptus valde pro studio*, Montpellier parmi les universités médiévales", in *L'université de Montpellier, ses maîtres et ses étudiants depuis sept siècles 1289-1989*,

identified by Adeline Rucquoi at Palencia during the 1230s, the teaching of "arts", not to speak of philosophy, remained very low before the 14th century in Palencia or Salamanca. Philosophy is not mentioned (but logic is) when various disciplines are enumerated in 1254 at Salamanca.[44]

Meanwhile, the patterns of the circulation of students shows the very low presence of meridional student in the university of Paris,[45] which means that it is not the case southern students would have diffused the philosophical culture gained in Paris when turning back home. This also means that the masters in arts who were indeed present at the Montpellier University of medicine,[46] must have originated from the North. Italian students, well identified in the University of Paris, even as early as at its foundation, did not go to the Faculty of Arts, but studied theology and law.[47] All in all, student circulation was not as 'European' as it has once been thought: it did not contribute much to the homogenization of scholastic culture or to the 'meridionalization' of the typically logical and philosophical culture gained in the Faculties of Arts in universities of the Parisian type.[48]

1.3. Final remarks

Some elite, philosophically-learned internationalized theologians were probably those with whom most of the philosophical exchanges and debates between Jews and Christian occurred in the context of religious controversies, in additions to converts. They are to be distinguished from lower layers of religious secular hierarchy, where only a basic knowledge of Latin for liturgy was to be expected, as well as from "ordinary" Mendicant friars, dedicated to local preaching and confessing. They are also to be distinguished from the much more numerous representatives of other types of local educated elites in southern areas, whether they received a specialized education in "applied rhetoric" (ars dictaminis, the art of writing letters), mathematics, or notary, or a basic, general education, mostly based upon grammar and rhetoric.

Montpellier 1995, pp. 21-5. See also A. Gouron, "Signification et portée de la bulle du 26 octobre 1289", in *L'université de Montpellier, ses maîtres et ses étudiants depuis sept siècles, 1289-1989*, Actes du 61ᵉ congrès de la Fédération historique du Languedoc méditerranéen et du Roussillon (Faculté de médecine de Montpellier les 23 et 24 octobre 1989), La Fédération, Montpellier 1995, pp. 12-26, esp. p. 24. These works make it clear that studies in arts were not required for graduating in medicine.

[44] See A. Rucquoi, "La double vie de l'université de Palencia (c. 1180-c.1250)", *Studia Gratiana* 29 (1998), pp. 723-748 (halshs-00530783) (p. 17 sqq. for the "philosophical heresy"); A. Rucquoi, "Reyes y universidades en la penisula iberica (siglo XIII)", in *The foundation of the University of Salamanca and the rise of European universities in the 13th century*, Special Issue, *Revista de Historia de las Universidades* 21/1 (2018), pp. 15-39, p. 23 sqq. for the 1254 regulation in Salamanca (the paper covers all the Iberian universities of the time).

[45] J. Verger, "Les étudiants méridionaux à Paris au Moyen Âge: quelques remarques", *Annales du Midi* 102/189-190 (1990), pp. 359-66 ; Id., "Le recrutement géographique des universités françaises au début du XVᵉ siècle d'après les suppliques de 1403", in J. Verger, *Les universités françaises au Moyen Âge*, Brill, Leiden-New York-Köln 1995 (Education and Society in the Middle Ages and Renaissance 7), pp. 122-73. See also W. Courtenay, *Parisian Scholars in the Early Fourteenth Century. A Social Portrait*, Cambridge U.P., Cambridge 1999 (Cambridge Studies in Medieval Life and Thought 4), who says that the result of his investigation, based upon the computus of the year 1229-1330, is confirmed by others studies, some of them focused on previous or later periods, p. 119 sqq.: 75% of the students come from the North of Europe, and even 100% for the Faculty of Arts.

[46] G. Dumas, *Santé et société à Montpellier* (above, n. 43), p. 61.

[47] See N. Gorochov, "Le milieu universitaire à Paris dans la première moitié du XIIIᵉ siècle", in Weijers-Holtz (eds.), *Les débuts de l'enseignement universitaire à Paris* (above, n. 37), pp. 49-64; Ead., *Naissance de l'Université, Les écoles de Paris d'Innocent III à Thomas d'Aquin (v. 1200-v. 1245)*, Champion, Paris 2012, p. 91 sqq., p. 105 and p. 71.

[48] More on the topic of the teaching of arts in southern schools and universities will be said when specifically addressing the teaching of logic in the next paragraph.

Instead of a "surrounding" "majority" "Latin" culture, as far as a specifically Aristotelian/Neoaristotelian philosophical culture in meridional and Italian spaces is concerned, it would be more accurate to speak of a tentatively dominant standard or norm, conveyed by an extremely restricted Latinized international clerical elite, trained according to the Parisian model. This dominant culture is to be distinguished from the various cultures displayed by local southern Latinized not-philosophically/logically/theologically trained intellectual elites; from the sometimes poorly Latinized local clergy, and from the lay, Italian intellectual elites, sometimes using vernacular (even if Latinized) in intellectual exchanges. To the many puzzling elements tentatively explained by recent scholarship about the issue of Latin-Hebrew philosophical interactions,[49] one could thus add the fact that the only place where the philosophical culture developed at a high level during the 13th century, that is, the North of Europe, with the numerous pre-existing 12th-century schools and the development of the University of Paris, was the area where no serious penetration of this culture was observed among Jewish intellectual circles. This lack of philosophical interest clearly distinguishes this community from the new cultural paths followed, outside purely religious concerns, by southern Jewish intellectual circles, beginning with Provence as early as the mid-12th century — although initially with a neat preoccupation with moral and spiritual issues within Jewish thought — and only later on, with a properly philosophical and scientific, "alien" kind of interest.[50] The North of Europe was also the area where the level of persecutions and religious controversies was high, contrary to the (relatively) less aggressive attitude of Christian authorities towards Jews in southern Europe, where, as emphasized by Gad Freudenthal and Charles Manekin,[51] argumentation-based, more open-minded polemics occurred between Jews and Christian (as opposed to authority-based, aggressively conducted disputes in French contexts). This rational dimension would have contributed to the need for a philosophical and logical culture, with a special role devoted to the rationalist polemics against Jewish religion, conducted by converts such as Petrus Alfonsi at the beginning of the 12th century,[52] and with an emphasis on the explicit logical, even "syllogistic" argumentation in the Jewish polemists' texts.[53]

Among the various actors represented in the history of the development of an Aristotelian scholastic culture, Mendicant Orders, especially the Dominicans, seem to have been the only ones to have heavily contributed to a general spread of logic and philosophy in the South of Europe during the 13th century. The dynamics followed by the development of Mendicant schools (*studia*) for the specialized teaching for grammar, logic and philosophy over Europe is clearly distinct from the one displayed by universities, where divergent educational and intellectual models were followed in the European universities born during the 13th century. They were either based upon the "Parisian model" (a "juvenile" university of masters, with a dominant Faculty of Arts and with, for Paris, Oxford and Cambridge, a Faculty of Theology), or upon a "Bolognese model" (a "mature" university of students, dedicated to Law or Medicine, without Faculty of Theology, and a simple curriculum in arts, not a Faculty of Arts), or they were more

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[49] See the three explananda posited by Freudenthal, "Arabic into Hebrew" (above, n. 9).

[50] See G. Freudenthal, "Transfert culturel à Lunel au milieu du XIIe siècle: Qu'est-ce qui a motivé les premières traductions provençale de l'Arabe en Hebreu?", in D. Iancou-Agou – É. Nicolas (eds.), *Des Tibbonides à Maïmonide: Rayonnement des Juifs andalous en Pays d'Oc médiéval*, Les Éditions du Cerf, Paris 2009, pp. 95-108.

[51] See Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 127 and p. 129.

[52] See Freudenthal, "Arabic into Hebrew" (above, n. 9), p. 129, p. 130 sqq.

[53] See Joseph Qimhi's arguments against Christian faith in the *Book of the Covenant*, according to Gad Freudenthal, "Arabic into Hebrew" (above, n. 9), p. 133.

or less in between, with various possible combinations, as exemplified by the University of Toulouse. In the Bolognese model, the university teaching of "arts", not to speak of philosophy, was long a marginal reality, with the exception of rhetoric. On the contrary, despite the existence of variations from one province to another, the Mendicant *studia* dedicated to profane sciences quite uniformly spread all over Europe the same Aristotelian program of studies during the second half of the 13th century. Not by chance, the Dominicans very early targeted southern provinces, that is the provinces of Spain (then Aragon, as a distinct province), Provence and, for Italy, Lombardy and Rome (then Naples, as a distinct province),[54] where logical and philosophical education was by then virtually non-existent in schools and universities.

2. History of Logic in Hebrew and Latin Contexts

This part of the paper concentrates specifically on logic. As I have tried to establish elsewhere, the history of logic can indeed partially be written as distinct from the history of philosophy.[55] Since this historical and methodological claim is not the main argument in the present contribution, only two series of elements are offered in support of this proposition.

The first is the fact that the Aristotelian logical corpus, although not in its entirety and not in one block, has been known to the Latin West long before texts belonging to natural philosophy or ethic. The study of logic in schools of dialectics has informed right from the beginning the formulation of a speculative, rational and systematized approach to matters of faith which would eventually be labelled "theology" in the 12th century and be conceived as a "science" in the 13th century. This happened well before philosophy as an autonomous discipline was built in the context of Latin schools and universities.[56]

The second argument is the central and multi-located presence of logic in the Latin system of education, especially the one developed within the Parisian model. Logic, during the

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[54] More on the topic of Mendicant logical education and on the "Parisian model" below. For a general, detailed study, see J. Brumberg-Chaumont, "Les débuts de l'enseignement de la logique dans les studia dominicains et franciscains en Italie: une organisation précoce et innovante", in J. Chandelier – A. Robert (eds.), *Les savoirs dans les ordres mendiants (XIIIᵉ-XVᵉ s)*, École française de Rome, Roma (forthcoming).

[55] The logical dimension of the study of medicine will not be addressed here. It did exist, through different channels, but was not universally spread in the medical tradition, especially during the 13th century. In a study dedicated to two different approaches to medical learning and teaching, McVaught has indeed shown the differences, in the first half of the 13th century, between a master trained in arts in Paris, where references to Aristotelian logic and philosophy abound (Gilbertus Anglicus), and a master trained in Montpellier with no previous training in arts, where philosophical references are almost inexistent (Gerard of Berry): see R.M. McVaught, "Medecine and arts in thirteenth century Paris", in S.E. Young (ed.), *Crossing Boundaries at Medieval Universities*, Brill, Leiden – Boston 2011, p. 189-211. Charles Manekin has insisted on the idea that one motivation for Hebrew translations of Peter of Spain's *Tractatus* probably was the scholastic examination, based on disputation, that Jewish physicians had to pass under Latin and Jewish authorities: see Manekin "Logic in Medieval Jewish Culture" (above, n. 3), p. 128. A portion of the history of logic in the Middle Ages could also be conducted in connection to the history of law. Practices of formal disputations were very high and a "juridical logic" developed, which gave rise to specific manuals of "juridical logic". Aristotelian logic gained more and more influence, with the constitution of a "science of law", following the model of the *Posterior Analytics*, as any other university discipline. All these elements are unfortunately to be set aside here (for more detail and bibliography, see Brumberg-Chaumont, *À l'école de la logique* [above, n. 2], chapter 4). The topic has been addressed by O. Weijers, "Between Logic and Law: the loci logicales of the jurists", in O. Weijers, *Études sur la Faculté des arts dans les universités médiévales, recueil d'articles*, Brepols, Turnhout 2011, pp. 399-409.

[56] See A. de Libera, "Faculté des arts ou Faculté de philosophie?", in Weijers-Holtz (eds.), *L'enseignement des disciplines*, pp. 429-44.

13th century, was the main discipline in propaedeutic higher education. As we shall see more in details below, logic almost alone constituted (with some theoretical grammar) the content of the program of the BA in universities under the influence of Paris. Logic was also learned, in the same manner as "positive grammar", at a pre or para-university level. In addition, logic was taught is special schools created by Mendicant Orders, the *studia artium*, distinct, as seen, from schools of philosophy (*studia philosophiae*, *studia naturarum*), a net of logical schools which spread much more numerously than schools of philosophy all over Europe, and which was frequented by a wider circle of Friars, beyond the sole elite of lecturers and theologians of the Orders. In southern universities, logic was long privileged over natural philosophy, when the teaching of "arts" actually began, even timidly, often with a curriculum and teachers of its own. Eventually, logic was not subjected to ecclesiastical condemnations, as opposed to philosophy.[57] This means that, in the same manner as grammar, logic, Aristotelian as it may be, had been long "naturalized" in Latin Christian culture – a similar phenomenon existed in Islamic religious thought, beginning with al-Ġazālī, and, in some ways, in the Jewish context, where the early 14th-century ban of the study of philosophy at a young age seemed to have not concerned logic.[58]

2.1. The history of Hebrew logic: a brief overview

Only a brief reminder about the knowledge of logic in Jewish intellectual circles is provided here, essentially based upon the researches conducted by Charles Manekin. It only takes into account the most popular texts and the beginnings of the story.

A relatively strong Aristotelian logical culture was present already in the thirteenth century, mainly through the translation, transmission and reading activities surrounding the logical works by Maimonides, al-Fārābī, Averroes and al-Ġazālī in Jewish intellectual circles in Provence[59], Spain and Italy. Generally speaking, Aristotle's logical works were not translated as such, except for some fragments[60].

Hebrew translations of al-Fārābī's logical works seem to have existed in the late 12th century, during the initial translation movement of Arabic and Judeo-Arabic philosophical texts

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[57] See Bianchi, *Censure et liberté intellectuelle* (above, n. 36), pp. 113-16. Luca Bianchi emphasizes the special status of logic, promoted by the ban on natural philosophy, p. 97.

[58] See C. Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 122. Jacob Anatoli defends his enterprise of translating Averroes's commentaries on logic in his preface, where, as shown by Jean-Pierre Rothschild, it is described as useful for "researching the truth in God, analysing biblical and talmudic texts, sharpening the mind and for one's defence in controversies", (J.-P. Rothschild, "Motivations et méthodes des traductions en Hebreu du milieu du XIIe siècle à la fin du XVᵉ siècle", in *Traductions et traducteurs au Moyen Âge* [above, n. 10], p. 292, see also p. 289). However, he specifies that logic should not be studied at a yound age (p. 289). Jean-Pierre Rothschild evokes a "naturalisation" of logic, among non-Jewish texts, due to its usefulness in intellectual debates and in controversies, and distinguishes this case for that of philosophical texts (p. 301-202).

[59] On the topic of Provençal logic, see C. Manekin, "The Study of Logic and its Cultural Impact Among Jews of the Midi (12th-14th C.)/ Tribute to Mauro Zonta", Symposium "L'Europe de la logique, les traditions aristotéliciennes médiévales et modernes en contexts", org. A. de Libera, A. Romano et J. Brumberg-Chaumont (Paris, Collège de France, 15 mai 2018). The written version of this paper is to be published in the forthcoming book: J. Brumberg-Chaumont (ed.), *L'Europe de la logique, les traditions aristotéliciennes médiévales et modernes en contexts*, Brepols (coll. *Studia artistarum*).

[60] See M. Zonta, "Il *Corpus Aristotelicum* nella litteratura ebraica medievale: tavola sinottica", in Tamani – Zonta (eds.), *Aristoteles Hebraicus* (above, n. 10), pp. 29-56.

into Hebrew[61]. This element is consistent with the role traditionally bestowed on logic in the philosophical training of Jewish authors in the Muslim world[62]. Al-Fārābī's works on logic were recommended by Maimonides himself, to the exclusion of all others, to his Provençal translator Samuel Ibn Tibbon[63], who translated philosophical and medical texts, but none of logic. Among the various translations of al-Fārābī's logical works, we note that the translation of the Short *Book of the Syllogisms* by Moses Ibn Tibbon, Samuel's son, dates from 1255, a year before his Hebrew translation of the *Treatise on the Art of Logic* — Logical terms in the Hebrew version — ascribed to Maimonides. By the end of the 13th century, all available logical texts by al-Fārābī seem to have been translated into Hebrew, mainly logical chapters of general introductions, such as the *Enumeration of the sciences* (well represented in the manuscript tradition), general introductions to logic or treatises on some specific parts of logic.

Very popular also were the Hebrew translations of the commentaries by Averroes on the *Isagoge* and on the four first books of the *Organon*, whose translation was complete in 1232 at Naples, by Jacob Anatoli. Averroes' logic is also represented in the logical part of an encyclopaedic work translated from Arabic to Hebrew by the author himself in Italy in 1246, Judah ben Solomon ha-Kohen: it is devoted to the first five books of the *Organon*. Eventually, at the end of the 13th century, we find al-Ġazālī's *Logica*, whose manuscript diffusion comes just after that of the *Logical Terms* and of the middle commentaries by Averroes on the first treatises of the *Organon*[64]. It was commented upon, by Moses of Narbonne, among others[65].

The movement also concerns Judeo-Arabic logic with, as mentioned, the Hebrew translation of the logical treatise ascribed to Maimonides, the *Treatise on the Art of Logic* or *Logical Terms* (1256), by Moses Ibn Tibbon, some fifty years after the translation of the *Guide Of the Perplexed* (1206). Al-Fārābī's logical ideas were also transmitted by the Maimonidian logical work. A summary of logic, derived from al-Fārābī, was included in Samuel's commentary on the Ecclesiates in 1213. Al-Fārābī's logic was also transmitted trough the *Glossary of Unusual Terms* that the translator of the *Guide of the Perplexed*, Samuel Ibn Tibbon, added to his revised translation in 1216 — a text where the influence of Averroes' logic is also felt[66]. These two Maimonidian logical texts were to serve as a propaedeutic for the teaching of science in Jewish circles for centuries. The treatise *Logical Terms* is copied in more than eighty manuscripts; it was translated into Hebrew several times and served as an introduction to logic, with an intensive use attested from the end of the thirteenth century, and the production of commentaries from the middle of the fourteenth century on.[67]

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[61] C. Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 115, p. 118. See the table of these very early translation in M. Zonta, "Medieval Hebrew Translations of Philosophical and Scientific Texts. A Chronological Table", in *Science in Medieval Jewish Cultures* (above, n. 2), pp. 2-73, p. 24 (items 48 and 49), and p. 25-26 for the following ones (items 58-80).

[62] Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 116.

[63] *Ibid*., p. 117.

[64] *Ibid*., p. 122.

[65] *Ibid*., p. 123.

[66] Moses of Salerno wrote a Hebrew-Italian philosophical glossary based on this text, in the context of his oral discussions about the Latin and Hebrew translations of Maimonides's *Guide* with Niccolo da Giovinazzo and Neapolitan Dominicans, conducted in vernacular: see C. Sirat, " Les traducteurs juifs à la cour des rois de Sicile et de Naples" (above, n. 10), p. 176. The text was edited by G. Sermoneta, *Un glossario filosofico ebraico-italiano del XIII secolo*, Edizioni dell'Ateneo, Roma 1969 (Lessico intellettuale europeo 1).

[67] Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 120

As seen, Aristotle's logical works were generally not themselves translated into Hebrew, a point which distinguishes logic from philosophy. The study of logic seems to follow a division into, on the one hand, an elementary branch, based on the al-Fārābī and al-Ġazālī's compendia and abridgments, mixed with elements drawn from the middle commentaries and treatises by Averroes, and, on the other hand, a more advanced philosophical activity, with the super-commentaries to Averroes, initiated by Gersonides, in a later tradition.

Among Latin-Hebrew translations, we find Hebrew translations and adaptations of the *Tractatus* of Peter of Spain (5 translations, 2 commentaries, 1 abbreviation):[68] this textual tradition represents half of all the medieval Latin-Hebrew translations in the field of science and philosophy (up to 32 manuscripts for the translation prepared at the end of the 14th century).[69] Among the earliest works, we find an anonymous adaptation, transmitted in several manuscripts, and an adaptation of a commentary in 1320 by Hezekiah bar Ḥalafta.[70] This series of translations/adaptations seems to have been motivated in various ways: by the fact that Jewish physicians had to conduct scholastic disputes in order to pass the exams and be authorized to work; by the belief in the usefulness of logic for understanding Scripture; by the need to be proficient in logic in order to conduct religious disputes with the Christians; or by a sheer intellectual interest dedicated to the new logic developed by Latin logicians (properties of terms, obligations, sophismata, etc.).[71] This last point is probably to be qualified in view of the fact that the first part of the *Tractatus*, where only the first treatises of the *Organon* were echoed, to the exclusion of terminist theories, was represented in their Hebrew versions.[72] In the same manner as in the Latin tradition, Jewish translator-adaptors indeed favoured a 'truncated' version of the *Tractatus*[73] – a truncated version officially adopted in the Mendicant system of education (1321, or before) and in Italian universities (Bologna, first quarter of the 14th century, Florence 1387), and followed by many 13th-century commentaries produced in the Midi and in Italy, as we shall see below. Hezekiah bar Ḥalafta's gloss seems to be close to the 13th-century Latin gloss *Cum a facilioribus,*[74] an anonymous commentary on the seven first tracts of the *Tractatus*, transmitted in two manuscripts,[75] and produced around Toulouse.[76] Judah Romano

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[68] See Ch. Manekin, "The Ambiguous Impact if Christian Scholasticism", p. 219.

[69] See Ch. Manekin, "Scholastic Logic and the Jews", *Bulletin de philosophie médiévale* 41 (1999), pp. 123-47, esp. p. 127.

[70] See Ch. Manekin, "Scholastic Logic and the Jews" (above, n. 69). On Hezekiah bar Ḥalafta's commentary, see the paper by the late Mauro Zonta, "Medieval Judaic Logic and the Scholastic One in the 14th-15th Centuries Provence and Italy: A Comparison of the Logical Works by Rav Hezekiah bar Halafta (first Half of the 14th Century) and Rav Judah Messer Leon (Second Half of the 15th Century)", *Studia Humana* 6/2 (2017), pp. 37-45. A draft of this paper was presented at the first symposium of the "Europe de la logique" project, "L'Europe de la Logique" cf. *supra*, n. 59.

[71] Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), pp. 128-39; Id., "Scholastic Logic and the Jews" (above, n. 69).

[72] Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 130.

[73] See C. Manekin, "When the Jews Learned Logic from the Pope: Three Medieval Hebrew Translations of the *Tractatus* of Peter of Spain", *Science in Context* 10 (1997), pp. 395-430. The paper by Mauro Zonta ("Medieval Judaic Logic and the Scholastic One in the 14th-15th Centuries Provence and Italy"), where two introductory works on logic related to the content of the *Tractatus* are compared, offers a comparative table (pp. 38-40): the typical concepts of terminist logic (supposition, appellation, restriction, etc.) are absent. For the Latin version of the 'truncated' *Tractatus*, see Brumberg-Chaumont, *À l'école de la logique* (above, n. 2), chapter 4, and below § 2.3.

[74] See Manekin, "Scholastic Logic and the Jews" (above, n. 69), p. 126.

[75] See L.M. de Rijk (ed.) in Peter of Spain, *Tractatus*, Van Gorcum, Assen 1967, pp. XCV-XCVI.

[76] See L.M. de Rijk, "On the genuine Text of Peter of Spain's *Summule logicales* (conclusion)", *Vivarium* 8/1 (1970), pp. 10-55, esp. pp. 18-19.

also translated logical commentaries and treatises by the Augustinian theologians Giles of Rome and Angelo of Camerino, as well as by Thomas Aquinas.[77]

Apart from a few indications that seem, in general, to make logic the first stage of the study of secular sciences, undertaken at a mature age after solid religious studies, we lack precise information about the modalities of the teaching of logic in European Jewish circles. However, we can observe the spread of the phenomenon of logical translations throughout the 'Romanic belt', the frequent allusions to the educational uses of logic in prologues of logical works, the cultural impact of logic, especially in the field of religious controversy and biblical commentaries,[78] as well as the large number of preserved manuscripts. All these elements point to the use of logical texts for teaching purposes, and not simply to some isolated activity of a few translators and scholars.[79]

2.2. Contrasted models of Latin education: the "Parisian logical model" of education and the "shadowy" teaching of logic in the South of Europe (Spain, Provence, Italy)

Logic received a dominant place in the nascent University of Paris. A "Parisian logical model"[80] of education was designed in the Faculty of Arts where thousands of north-European students converged. The constitution of the "Parisian logical model" resulted from a dramatic restriction in the range of courses on offer. It was the result of the "non-promotion" of "literary", grammatical and rhetorical disciplines taught in the Parisian schools at the beginning of the 13th century, as well as from the introduction of the notion of "academic heresy" into the history of the university, which meant a ban on the teaching of natural philosophy at the Faculty of arts. Logic (in association with theoretical grammar) was promoted alone[81] among compulsory, graduating subjects during the years 1215-1230. The period witnessed an ecclesiastical takeover in the organization of the content of the teaching in the Faculty of Arts, which was rather a "Faculty of Logic" (and grammar). The domination of logic can be observed in the official programs, as well as in the "student guides" from this period, where logic represented 75%, or more, of the topic to be covered for graduation.[82] Logic still represented 90% of the undergraduate program, the BA, for the rest of the Middle Ages, after the systematic introduction of the teaching of natural philosophy at the Faculty of Arts, from the 1250s onwards, as can be observed in the 1252 and the 1255 programs at the Faculty

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[77] Manekin, "Logic in Medieval Jewish Culture" (above, n. 3), p. 131.

[78] *Ibid.*, p. 128, p. 129, p. 133 sqq.

[79] See Saperstein, "The Social and Cultural Context" (above, n. 16); Schwartz, "Imagined Classrooms?" (above, n. 14).

[80] For more detail on the 'Parisian logical model' of education see Brumberg-Chaumont, *À l'école de la logique* (above, n. 2), chapter 3. For a synthetic presentation of the topic, see Ead., "The Rise of Logical Skills" (above, n. 6), pp. 91-120.

[81] Luca Bianchi has insisted upon the "triumph of logic" and the "blessing" of the Aristotelian *Organon* by the papal legate, Robert of Courson, in 1215, and by the papal bull *Parens scientiarum*, in 1231 – cf. Bianchi, *Censure et Liberté intellectuelle* (above, n. 36), p. 97.

[82] See H. Denifle – E. Châtelain, *Chartularium Universitatis Parisiensis I* (above, n. 34), p. 78 (1215), and p. 138 (1231). For student guides, see Cl. Lafleur (with J. Carrier), *Le 'Guide de l'Étudiant' d'un maître anonyme de la faculté des arts de Paris au XIIIᵉ siècle*, Faculté de philosophie, Université Laval, Quebec – Montréal 1992, p. 15; Cl. Lafleur, "Les 'Guides de l'Étudiant' de la faculté des arts de l'université de Paris au XIIIᵉ siècle", in M. Hoenen – J. Schneider – G. Wieland (eds.), *Philosophy and Learning. Universities in the Middle Ages*, Brill, Leiden – New-York – Köln 1995, pp. 137-77, esp. pp. 147-8 and note 26; Id., "Un instrument de révision destiné aux candidats à la licence de la Faculté des arts de Paris, le *Compendium artium liberalium* (vers 1250 ?)", *Documenti e studi sulla tradizione filosofica medievale* 5/2 (1994), pp. 129-203.

of Arts. Topics in natural philosophy were rather compulsory for gaining the grades of License and Master.[83] In addition, the university teaching of logic at the Faculty of Arts represented only a part of medieval logical education. Below the Faculty of Arts, elementary logic and "terminist logic", based on the *Tractatus* from the end of the 13th century on, were taught at a para-university or pre-university level, equivalent to a secondary level today. Above it, a disciplinary teaching of Aristotelian logic was organized by Mendicant bachelors and masters in the Faculty of Theology.[84]

By contrast with the Parisian logical model of education, alternative educational models were followed in southern Europe. Many studies have shown that no southern educational model, whether in southern and northern Italy, Spain, or Provence, was traditionally concerned with the teaching of logic, either because the network of schools likely to provide a basic education seems to have been so poorly developed that it has left few traces before the 14th century, as in the Midi and in Spain, or because the content of teaching in cathedral, urban, private or communal schools was long mainly concerned with grammar and rhetoric, as can massively be observed in Italy. The teaching of logic in central Italy has even been characterized as "shadowy" before the mid-13th century by Ronald Witt,[85] a situation indeed confirmed by the general features of the "Italian model" of education described by Carla Frova, where logic is generally absent.[86] The diagnosis is confirmed by the detailed, masterful study offered by Robert Black about Tuscany communal schools.[87] Exactly the same qualification, namely "shadowy" ("fantomatique" in French), was independently retained by Geneviève Dumas for the teaching of arts in Montpellier,[88] in a context where "arts" meant logic in the Montpellier statutes,[89] as distinct from grammar, but also from philosophy, mentioned separately from arts in later periods.[90]

Jacques Verger has emphasized the low rates of enrolment in arts at Montpellier and other southern universities, in contrast to northern institutions. He has also underlined the lack of connection between arts and higher faculties, even if a link did exist with medicine from the 14th century in the case of Montpellier (but nothing to be compared with Bologna or Padua). He has also underlined the absence of very young students, who were the basic audience of the Faculties of Arts in the Parisian model.[91] Adeline Rucquoi has shown how the teaching of arts and logic remained weak in Spain, where grammar dominated the educational effort in basic education which, although not absent from the preceding periods, only really developed from the 14th century onwards. The evidence of a teaching in arts, which essentially meant logic,

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[83] See O. Weijers, "Les règles d'examen dans les universités médiévales", in Hoenen-Schneider-Wieland (eds.), *Philosophy and Learning* (above, n. 82), pp. 201-23.

[84] More about those two aspects of the teaching of logic in the two next paragraphs.

[85] R. Witt, *The Two Latin Culture and the Foundation of Renaissance Humanism in Medieval Italy*, Cambridge U.P., Cambridge, 2012, p. 406.

[86] See C. Frova, "Écoles et universités en Italie (XIᵉ-XIVᵉ siècle)", in I. Heullant-Donat (eds.), *Cultures italiennes (XIIᵉ-XVᵉ siècle)*, Les Éditions du Cerf, Paris 2000, pp. 53-85, p. 55 sqq. The study of grammar, rhetoric, the study of classical texts, and as well as some applied mathematics were the basis of education.

[87] R. Black, *Education and Society in Florentine Tuscany, Teachers, Pupils and Schools, 1250-1500*, vol. I, Brill, Leiden – Boston 2007, pp. 537-43.

[88] G. Dumas, *Santé et société à Montpellier* (above, n. 43), p. 32.

[89] *Cartulaire de l'université de Montpellier*, tome I, ed. A. Germain, Montpellier 1890, p. 191; see J. Verger, "Les statuts de l'université de médecine de Montpellier" (above, n. 34), pp. 13-28

[90] See Verger – Hahn, "Remarques" (above, n. 42), p. 362.

[91] Verger, "Les statuts de l'université de médecine de Montpellier" (above, n. 34), esp. pp. 20-21; Id., "*Locus Montispessulani, aptus valde pro studio*" (above, n. 43), pp. 29-32.

remained weak in the University of Salamanca during the 13ᵗʰ century. In the University of Palencia, which was first founded on the Bolognese model, then a second time (ca 1219/1220), more or less according to the Parisian model, "logic" was mentioned in the 1220 Bull along with law and theology, but it seems that the term "logic" (*loyca*), as was often the case also in Italy, referred to rhetoric, that is the ars dictaminis for which a manual was there written.[92]

Differences are to be underlined, beyond the common absence of a logical propaedeutic education, especially between meridional spaces, on the one hand, and north Italy on the other hand.

As Jacques Verger and Georges Hahn have pointed out, the overall picture remains negative for the Midi,[93] with the (relative) exception of Toulouse. The transplantation of the Parisian model of education in arts there took the form of a system based on grammar, endowed with some pedagogical and institutional autonomy, and on logic, to which the "arts" were often identified,[94] sometimes complemented with (natural) philosophy. The Parisian model, which had originally been conceived as a propaedeutic for the study of theology, did not take for want of being adapted to local needs, that is to say, essentially to schools of law. The teaching of arts and logic in the southern centres, whether or not remotely organised on the Parisian statutory model, such as Toulouse, Palencia, Salamanca, Naples or Montpellier, was very modest in the 13ᵗʰ century, and often remained so in the following century, and even declined during the 15ᵗʰ century in the Midi.

Only in Toulouse are there more tangible traces of a teaching in arts, with a strong emphasis on logic, but not before the very end of the 13ᵗʰ century.[95] The university was created in 1229 more or less according to the Parisian model. The beginnings of the teaching of "arts", where "arts" seemed to signify, once again, "logic",[96] especially since the teaching of grammar was detached from that of the arts, were quite slow. The new statutes of the university of Toulouse, redacted between 1298 and 1305, obviously favoured logic to the detriment of natural philosophy, as already mentioned. Logic is taught on the basis of a four-year cycle with several lessons per cycle for each treatise. The system implies that, over four years, the student will have followed twice ordinary classes and twice extraordinary classes (delivered by the bachelor) for each treatise of the *logica nova*, four times extraordinary lectures on the *logica vetus*, and four times classes on other 'complementary' logical treatises during the four summer terms. As for the *Tractatus*, they are studied twice a year, perhaps every year over four years.[97] The works composed during the 1290s by the important Toulouse master of arts William Arnaud, only dedicated to logic (*ars vetus*, some treatises of the ars nova, the *Tractatus*), to the best of our knowledge, could be seen as slightly anticipating this program.[98]

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[92] On these various points, see Rucquoi, "Éducation et société dans la péninsule ibérique médiévale" (above, n. 23); Ead., "La Formation intellectuelle du clergé de Castille" (above, n. 23); Ead., "La double vie de l'université de Palencia" (above, n. 44); Ead., "Reyes y universidades" (above, n. 44).

[93] Verger – Hahn, "Remarques" (above, n. 42).

[94] Verger and Hahn say that "arts" were "synonymous with 'logic'" in meridional universities, Verger – Hahn, "Remarques" (above, n. 42), p. 361.

[95] See Verger – Hahn, "Remarques" (above, n. 42); J. Verger, "Le cadre institutionnel de l'essor" (above, n. 42).

[96] See the "logicians" mentioned as equivalent to masters of arts, Denifle et Châtelain, *Chartularium* I 72, p. 130.

[97] See Fournier, *Statuts et Privilèges des universités* (above, n. 42), p. 465, n. 542; Patow, *The Art Course at Medieval Universities* (above, n. 42), p. 96 sqq.

[98] See L.M. De Rijk, "On the Genuine Text of Peter of Spain's *Summule logicales* Part IV The *Lectura Tractatuum* by Guilelmus Arnaldi, Master of Arts at Toulouse (1235-1244)", *Vivarium* 7 (1969), pp. 120-62. For a brief overview dedicated to the location of William's activity during the 1290s, as established by R.A. Gauthier, some bibliographical elements, and a discussion of William's semantic ideas, see J. Brumberg-Chaumont, "William Arnaud", in

The University of Toulouse does not, however, fully comply with the Parisian model. Beyond the teaching of grammar as separate from the Faculty of Arts, we can mention the numerical weakness of the Faculty of Arts, which reached a maximum of 35% of the students in the 14th century (against 75% to 80% in Paris), but also the low percentage of masters of arts who went to the higher faculties, and of students in the higher faculties who possessed a master in arts, as the statistics offered by Jacques Verger and Georges Hahn for the 14th century clearly illustrate.[99]

The poor scholastic reality of logic in the Midi (and in Toulouse before the 1290s) cannot be overshadowed by the few Montpellier, Neapolitan or Toulouse logical productions that the history of logic has identified under the name of Robertus Anglicus (commentaries on the *Tractatus*) and Peter of Ireland (commentary on the *Peri hermeneias*), by the Spanish origins of the compilation known as the *Tractatus* by Peter of Spain, or, by the southern origins of a great number of anonymous commentaries to the *Tractatus* from the 13th century, although the latter can provide some interesting avenues of reflection, as we shall see below.

By contrast with meridional universities, according to Jacques Verger and Georges Hahn, the strong disciplinary and intellectual connection between Aristotelian philosophy and the faculty of medicine, where the arts curriculum was hosted, combined with a political context favourable to the development of professional opportunities for students in arts, eventually bore fruit in Italy,[100] with a significant and brilliant development of the teaching in arts. Yet the institutionalization of the teaching of logic did not happen before the first quarter of the 14th century, with very few traces of the teaching of logic during the 13th century,[101] as shown by Alfonso Maierù.[102] Even when the Parisian model of a solid propaedeutic logical education began to take hold of the Italian universities during the 14th century, with a significant influence of Parisian modist doctrines,[103] important differences kept on being observed, such as the absence of the famous "Lent disputations" for the "determination", emphasized by Alfonso Maierù[104] (since there was no Faculty of arts, hence no "determination" for the BA), as well as the existence of distinct professors of logic,[105] and even, later on, of "doctors of logic" in the same manner as doctors of grammar, medicine, and philosophy.[106]

H. Lagerlund (ed.), *Encyclopaedia of Medieval Philosophy, Philosophy between 500 and 1500*, Springer, Dordrecht – Heidelberg - London - New-York 2011, p. 1393-1395; Ead., "The Role of Discrete Terms in the Theory of the Properties of Terms", *Vivarium* 51 (2013), pp. 169-203.

[99] Verger – Hahn, "Remarques" (above, n. 42), p. 368, p. 370.

[100] As seen, the intellectual alliance between philosophy and medicine had indeed little effect on the local development of the arts in Montpellier.

[101] A. Maierù, "I Commenti Bolognesi al *Tractatus* di Pietro Ispano", in D. Buzzetti *et al.* (eds.), *L'insegnamento della Logica a Bologna nel XIV secolo*, Presso l'Istituto per la storia dell'Università, Bologna 1992, pp. 497-543, esp. p. 499.

[102] See A. Maierù, *University Training in Medieval Europe*, trad. D.N. Pryds, Brill, Leiden [etc] 1994 (Education and Society in the Middle Ages and Renaissance 3), p. 94, p. 119, note 15. For the thin traces of the teaching of logic during the 13th century and the first part of the 14th century in Padua, see N. Siraisi, *Arts and Sciences at Padoua. The Studium of Padua before 1350*, Pontifical Institute of Mediaeval Studies, Toronto 1973 (Studies and Texts 25), p. 61.

[103] See Buzzetti *et al.* (eds.), *L'insegnamento della Logica a Bologna nel XIV secolo* (above, n. 101).

[104] Maierù, *University Training* (above, n. 102), p. XIII, pp. 128-129.

[105] See N. Siraisi, *Taddeo Alderotti and his Pupils: Two generations of Italian Medical Learning*, Princeton U.P., Princeton 1981, p. 6 sqq. for the 13th century and M. Grabmann, *Gentile da Cingoli, ein italienischer Aristoteleserklärer aus der Zeit Dantes*, Verlag der Bayerischen Akademie der Wissenschaften, München 1941 (Bayerische Adademie der Wissenschaften 9), pp. 12-13, for Gentile da Cingoli as a professor of logic hired for "ordinary classes".

[106] See A. Malagola, *Statuti delle università e dei collegi della studio bolognese*, G. Ferraguti, Bologna 1888, p. 247, p. 288, p. 287, p. 305, etc. See also Maierù, *University Training* (above, n. 102), p. 63, note 106, p. 75.

Another important difference is the hold that English logic took on the teaching of logic in Italy from the second half of the 14th century on,[107] where some doctrines and texts traditionally included Aristotelian logic, such as the *Sophistic Elenchi* or the *Prior Analytics*, came to be neglected.

2.3. The institutionalization of elementary logic and the "truncated" version of the Tractatus in southern schools and universities

Another important difference, which applies also to schools and universities from the Midi, is the institutionalization of the teaching of elementary logic, as embodied in the *Tractatus*, something that never existed in the original Parisian model. The treatises belonging to the *logica modernorum* and, later, the *Tractatus* (with first traces in the 1270s and a first Parisian commentary composed around 1280),[108] were taught in Paris at a para or pre-university level, at least until John Buridan's innovative introduction of the *Tractatus* in the Parisian curriculum (in the1320s); they never entered official programs of the Faculty of Arts.[109]

This institutional innovation is first found in Toulouse around 1300, as previously hinted at when the new program of the Faculty of Arts and the commentary on the *Tractatus* by William Arnaud have been pointed out. It was adopted by Italian universities, in Bologna[110], around the first quarter of the 14th century, and in Florence (1387).[111] A significant number of commentaries on the *Tractatus*, beginning with the now lost commentary, by Gentile da Cingoli, has been composed in a Bolognese context, as shown by Alfonso Maierù.[112]

The *Tractatus* seemed at have been redacted[113], and taught early during the 13th century in meridional schools, as shown by the existence of numerous 13th-century commentaries on the *Tractatus* where southern cities are mentioned. This is the case for the two versions of the commentary ascribed to Robertus Anglicus (Montpellier),[114] the important commentary "*Omnes homines*",[115] the "Salamantine Gloss" (Salamanca),[116] the commentary '*Cum a facilioribus*' (Toulouse),[117] and the glosses preserved in the manuscript Ivrea, Bibl. Cap. 79 (Toulouse).[118]

The program in Toulouse mentions no chapter limitation, while William Arnaud's commentary is concerned with the whole *Tractatus*. But the official programs in Bologna

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[107] See A. Maierù (ed.), *English Logic in Italy, in the 14th and 15th Century*, Bibliopolis, Napoli 1982.

[108] See de Rijk, "On the Genuine Text… (conclusion)" (above, n. 76), p. 38; L.M. de Rijk (ed.), *Peter of Spain. Tractatus called afterwards summule logicales* (above, n. 75), p. XCVI; L.M. de Rijk, "On the Genuine Text of Peter of Spain's *Summule logicales* II: Simon of Faversham (d. 1306) as a Commentator of the Tracts I-V of the Summule", Vivarium 6/2 (1968), p. 69-101.

[109] H.A.G. Braakhuis, "*Logica modernorum* as a discipline at the faculty of Arts of Paris in the Thirteenth Century", in Weijers-Holtz, *L'Enseignement des disciplines* (above, n. 37), pp. 128-45

[110] Maierù, *University Training* (above, n. 102), p. 113.

[111] A. Gherardi, *Statuti della università e studio fiorentino anno MCCCLXXXVII*, Firenze 1881, p. 65-66.

[112] Maierù, "I Commenti Bolognesi al *Tractatus* di Pietro Ispano" (above, n. 101).

[113] De Rijk (ed.), *Peter of Spain, Tractatus*, Introduction, pp. LX-LXI.

[114] See I. Rosier-Catach – S. Ebbesen, "Robertus Anglicus on Peter of Spain", in I. Angelli – P. Pérez-Ilzarbe (eds.), *Medieval and Renaissance Logic in Spain*, Olms, Hildesheim [etc] 2000, pp. 60-95, pp. 70-71; See I. Rosier-Catach – S. Ebbesen, "Two Roberts and Peter of Spain", *Cahiers de l'Institut du Moyen Âge Grec et Latin* 67 (1997), pp. 200-88.

[115] See de Rijk, "On the Genuine Text… (conclusion)" (above, 76), p. 37 for the meridional origins.

[116] De Rijk, "On the genuine Text… (conclusion)" (above, n. 76), pp. 41 sqq.

[117] See de Rijk (ed.), *Tractatus*, p. XCV-XCVI; de Rijk, "On the Genuine text… (conclusion)" (above, n. 76), pp. 18-19.

[118] See de Rijk, "On the Genuine text… (conclusion)" (above, n. 76), p. 25.

and Florence universities, the 'Dominican program" studied below, as well as a great number of preserved commentaries from southern provenence show the adoption of a "truncated" version of the *Tractatus*,[119] where only the five, six or seven first chapters are treated, focussing on the traditional ars vetus and the theory of the fallacies, and neglecting the chapters dedicated to the properties of terms (chapters 8 to 12). For earlier periods, the adoption of a truncated version includes, for the 13th century, the Bolognese gloss '*Quia omnis nostra*',[120] the Ivrea gloss, the commentary '*Cum a facilioribus*', and the commentary contained in the manuscript Rome, Biblioteca Vallicelliana, B, *misc*. 63, connected to the Ivrea gloss,[121] and all the Bolognese commentaries studied by Alfonso Maierù (most of them from the 14th century).[122] We can also mention the shortened versions for the commentary "Omnes homines" and the 'Salamantine gloss', as transmitted by a significant part of the manuscript tradition of these texts.[123]

The use of a truncated version of the *Tractatus* is coherent with the very genesis of the *Tractatus*. The first part of it (tracts 1 to 7), the one deprived from terminist theories, except for a short development on supposition, is a recycled version of a pre-existing Parisian gloss, the *Summule antiquorum.*[124]

The series of elements adduced in the two preceding paragraphs shows how an institutional and pedagogical distance, in addition to cultural differences, separates the development of the teaching of logic in southern spaces from the Parisian logic model, even when the latter began to be partially followed, as in the case of Toulouse. Jacques Verger has suggested the possible influence in the latter process of the Mendicant Orders, who would have sought to "implement from scratch in the Midi an original institution [that is: the Faculty of Arts], with a Parisian appearance".[125] Three Mendicant friars (a Dominican, a Franciscan and a Carmelite) indeed presided over the commission responsible for the above-mentioned reform of the studies at the Faculty of Arts at the end of the 13th century. A strong emphasis put on the teaching of logic among arts, separately from grammar and from philosophy, and a strong institutionalization of the teaching of the *Tractatus* do characterize Mendicant history of propaedeutic higher education. It is quite probable that the Mendicant system of education inspired the way the institutionalization of logic took place in universities such as Toulouse or Bologna at the end of the 13th century.

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[119] This truncated version was also the rule in Paris, as testified by the commentary ascribed to Simon of Faversham (1280s): this non-terminist use of the *Tractatus* was dictated by the modism to which commentators of the time belonged, as shown by C. Marmo, "L'introduction à la logique d'après quelques commentaires modistes aux *Tractatus*", paper delivered at the Collège de France, Symposium "Europe de la Logique" (cf. *supra*. n. 59); written version to be published in the forthcoming book Brumberg-Chaumont (ed.), *L'Europe de la Logique* (above, n. 59). The modist motivation met a pre-existing pedagogical motivation, where the truncated version of the *Tractatus* was used as an elementary introduction to the reading of Aristotle's texts, especially the *logica vetus*. For more details, see Brumberg-Chaumont, *À l'école de la logique* (above, n. 2), chapter 4.

[120] See de Rijk, "On the Genuine Text… (conclusion)" (above, 76), pp. 28 sqq.

[121] *Ibid*., pp. 19 sqq.

[122] Maierù, "I Commenti Bolognesi al *Tractatus* di Pietro Ispano" (above, n. 101). The one by Blaise of Parma has been edited: Blaise de Parme, *Quaestiones super Tractatus logice Magistri Petri Hispani*, ed. J. Biard. et al., Paris, 2001.

[123] de Rijk, "On the Genuine Text… (conclusion)", 1970, p. 41 sqq.

[124] See L.M. de Rijk, "On the Genuine Text of Peter of Spain's *Summule logicales* I", *Vivarium* 6/1 (1968), pp. 1-36, esp. p. 6. The second, terminist part was also redacted by Peter of Spain by recycling a preexisting manual.

[125] Verger, "Le cadre institutionnel de l'essor" (above, n. 42), p. 63.

2.4. Mendicant schools of Logic and the 'meridionalization' of the teaching of logic

Schools of logic (*studia artium*)[126] were created by the Dominicans as early as the 1250s in Provence and Spain. Their creation in each Province was made compulsory by the General Chapter as early as 1259[127] (the equivalent, general regulation for schools of philosophy only came in 1305). They multiplied at an incredible pace. We can number 21 schools of logic in the Province of Spain at the end of the 13th century, for a total of 43 convents in the Province, just to take one very significant example. There were 10 to 12 schools of logic each year in the province of Provence during the last quarter of the 13th century. The first school of logic we know of in the province of Rome (which by then covered the best part of Italy) is mentioned in 1269. In addition to this provincial level of logical training, a theological teaching of logic was organized, even in the studia generalia of the Order, where managers, teachers and theologians of the Order were trained. The most influential commentaries from the 13th century on the *Organon*, composed by Albert the Great, Thomas Aquinas, Giles of Rome and John Duns Scotus, were produced in this theological context, and the same goes for William of Ockham's *Sum of Logic*.

The 1305 General Chapter established that attending a three-year training of logic was compulsory,[128] before access to training in philosophy was authorized and, only then, access to a school of theology. A rigid and compulsory study program was set up, which made logic the gateway to any political or academic career in the Order. This system of progression had no equivalent at the university.

In each province, schools dedicated to logic were twice or three times more numerous with respect to schools of philosophy, generally created one or two decades afterwards, where the number of students was also lower than in schools of logic. A number of friars were send to study logic, before a selection of them (around 30% maximum), were admitted to follow a higher training in theology, most of the time through following classes in philosophy. The others were sent back to their convent to their pastoral duties. This phenomenon means that logical education was deemed useful for confessing and preaching, and was spread among a much larger

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[126] We focus here on Dominican studia, for the sake of brevity, but also because the institutional documentation is far richer. A similar development is found, although later on, in the Franciscan studia. Full bibliographical references on Mendicant teaching of logic are be found in Brumberg-Chaumont, "Les débuts de l'enseignement de la logique" (above, n. 54); Ead., *À l'école de la logique* (above, n. 2), chapter 4. For a synthetic presentation, see Ead., "The Rise of Logical Skills" (above, n. 6). A superficial presentation of the few elements which can be gathered about the Augustinian teaching of logic at the end of the 13th century is found in ead., "'*Logica hominis in via*': anthropologie, philosophie et pratiques de la logique chez Gilles de Rome", *Quaestio* 20 (2020), pp. 227-52. A general survey is offered by A. Maierù, *University Training* (above, n. 102). For general presentations of Dominican and Franciscan systems of education, secular sciences included, see M. Mulchahey, *'First the Bow is Bent in Study'. Dominican Education before 1350*, Pontifical Institute for Medieval Studies, Toronto 1998; B. Roest, *A History of Franciscan Education (c. 1210-1517)*, Brill, Leiden – Boston 2000; N. Senovak, *The Poor and the Perfect, The Rise of Learning in the Franciscan Order, 1209-1310*, Cornell U.P., Ithaca NY – London 2012; *Le Scuole degli Ordini Medicanti (secoli XIII-XIV)*, Accademia Tudertina, Todi 1978 (Convegni del Centro di Studi sulla Spiritualità Medievale 17); *Studio et studia: le scuole degli ordini mendicanti tra XIII e XIV secolo*, Centro italiano di studi sull'alto Medioevo, Spoleto 2002 (Atti della Società studi francescani NS 12); W.J. Courtenay *et al.* (ed.), *Philosophy and Theology in the Studia of the Religious Orders and at the Papal and Royal Courts*, Brepols, Turnhout 2012.

[127] B.M. Reichert, *Acta capitulorum generalium Ordinis Praedicatorum* I (1220-1303), in Domo Generalitia, Romae 1898 (*Monumenta Ordinis Fratrum Praedicatorum historica* 3), p. 99.

[128] B.M. Reichert, *Acta capitulorum generalium Ordinis Praedicatorum* II (1304-1378), in Domo Generalitia, Romae 1899 (*Monumenta Ordinis Fratrum Praedicatorum historica* 4), p. 12 sqq.

social group, in close contact with local populations, than the very restricted elite of teachers and theologians.

The teaching of the *Tractatus* is attested as early as in 1279 in the province of Lombardy.[129] Special classes dedicated to the *Tractatus*, together with the *logica vetus*, distinct from classes dedicated to the *logica nova*, were created in the province of Rome at the end of the 13th century. The truncated version of the *Tractatus* was mentioned in the official 'Dominican program' in 1321,[130] where it was to be taught first (together with the *Posterior Analytics*), in the same manner as in the Bologna program. This truncated version was the one adopted by the *Rationes tractatuum* redacted by the Dominican Philip of Ferrara (1335),[131] a text written in order to guide other Dominican teachers of logic. The *Tractatus* were obviously used as an introduction to Aristotle's logic; it was sometimes associated to an elementary level of logical teaching in the convent school. They were even used, in association with the *logica vetus*, in "summer schools" organized in order to test the logical abilities of students who would be authorized to follow more advanced classes in logic, as testified by Franciscan regulation in Tuscany.[132]

The development of the Mendicant system of education operated a significant 'meridionalization' of the Parisian logic model, thanks to the creation of a tight network of logical schools in the Midi and in Italy, and then, at the beginning of the 14th century, by influencing the institutionalization of the teaching of logic in southern universities, especially in Italy and in Toulouse. Mendicant schools provided a homogeneous European diffusion of the Parisian logical model, in a radicalised, systematised and expanded version. It included a specialized training in logic for a portion of 'ordinary' Friars, dedicated to pastoral care, well before the development of a university education for secular parochial clergy ever begun,[133] and meant a rigid, compulsory curriculum beginning with logic for the elite of convent teachers (*lectores*) and theologians in the Orders.

Conclusion

Comparing Hebrew and Latin study of logic in the South of Europe, we can offer the following series of observations.

The penetration of the study of logic, in the same manner as that of philosophy, was non-existent in northern Jewish intellectual communities, despite a strongly-developed network of northern Latin schools (and later universities), where logic was intensively studied.

The penetration of the study of logic (and philosophy), was significant in Provence, Spain and Italy in Jewish intellectual circles. Even if probably very limited, regarding the number of

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[129] T. Kaeppeli, "*Acta Capitulorum Provinciae Lombardiae (1254-1293) et Lombardiae Inferioris (1309-1312)*", *Archivum Fratrum Praedicatorum* 11 (1941), pp. 138-72, p. 156.

[130] See C. Douais, *Les Frères prêcheurs en Gascogne au XIIIe et au XIVe siècle : chapitres, couvents et notices*, Paris 1885, p. 167.

[131] See A. Maierù, "I Commenti Bolognesi al *Tractatus* di Pietro Ispano" (above, n. 101), pp. 500-1; Id., *University Training* (above, n. 102), pp. 14-15.

[132] C. Cenci, *L'ordine francescano e il diritto. Testi legislativi dei secolI XIII-XIV*, Goldbach, Keip 1998, p. 169*. More on the teaching of the *Tractatus* in mendicant schools in Brumberg-Chaumont, "Les débuts de l'enseignement de la logique" (above, n. 54); Ead., *À l'école de la logique* (above, n. 2), chapter 4.

[133] For a first quantitative study of university education in the parochial clergy, see F.D. Logan, *University education of the parochial clergy in Medieval England, the Lincoln Diocese, c. 1300-c. 1350*, Pontifical Institute of Mediaeval Studies, Toronto 2014 (Studies and texts 188).

people involved, this phenomenon can be considered as significant with regard to the intellectual community concerned. The cultural impact of logic, the historical testimonies and the amount of manuscripts preserved seem to make it clear that logic was not just translated, but also read, transmitted and taught, although in a non-institutionalized way.

The general historical significance of this phenomenon must be understood in the context of the relative "logical desert", observed in the surrounding Latin scholarly culture till the end of the 13ᵗʰ century, and sometimes beyond, except for the development of Mendicant schools of logic from the mid-13ᵗʰ century on. As seen, logical education was poor enough for the presence of logic to be described by some scholars as "shadowy" in Italy and Provence, even in places doted with important universities: Bologna, Padua, Montpellier. This element can bring new light on the idea that Jewish logical, scientific and philosophical tradition developed in "vase clos", as emphasized by various scholars, presupposing that there was a scholastic Latin environment to which Jewish intellectuals would be voluntarily indifferent for a series of reasons connected to their own history and culture. The present contribution wants to suggest that the explanation could also lie in the fact that this scholastic environment just did not exist in the South of Europe during the 13ᵗʰ century, as far as a properly Aristotelian logical culture is concerned. This was the case either because the development of the teaching of arts was almost non-existent, as was also inexistent the teaching of theology outside Mendicant studia in southern universities, or because this teaching was slowly institutionalized, there being no Faculty of Arts in the Bolognese university model, or, again, because the "transplantation" of the Parisian model did not really take or developed in a weaker form, as in Toulouse and in some Spanish universities. It could also be so because a teaching in arts did exist, but was mostly orientated towards grammar and rhetoric, following a traditional, Roman model of education, or complying with specific needs in civil society, as in the case of 'applied' rhetoric (*ars dictaminis*) in Italian universities and schools. Only a very restricted international elite of university-trained intellectuals, many of them Mendicant teachers and theologians, did master the intricacies of logical knowledge.

The "Italian model", which has been adduced, on a cultural basis (a strong lay culture, a multi-linguistic environment, a lower degree of exclusion towards Jews, etc.), in order to partially explain the stronger impact of Latin scholasticism on Hebrew intellectual circle in Italy, may also have played a part on the educational dimension of the issue here considered. Despite being traditionally grammatically-and-rhetorically-orientated, and initially poorly sensitive to logical instruction, Italy was the first, among southern spaces, where the teaching of logic began to develop at a high level, around the end of the 1290s at Bologna. The impact of Latin scholasticism on Jewish thought seems to have been especially high in the field of logic, since the translations and adaptations of Peter of Spain's *Tractatus*, that was by then (that is, at the beginning of the 14ᵗʰ century) the basic manual of elementary logical education in Europe (except for England), are more numerous than any other book translated from Latin to Hebrew in the field of philosophy.

By contrast, a strong teaching of "arts", which means "logic" in Mendicant context, developed, first among Dominicans, and then among Franciscans, in southern provinces. For decades, Mendicant studia alone spread the "Parisian logical model of education" and contributed, till the end of the 13ᵗʰ century, and beyond, to its meridionalization.

It is thus quite possible that the perspective taken on Jewish and Christian philosophical interaction would have to be reversed, with respect to standard narratives: Hebrew intellectual circles may well have been the only places where a vivid Aristotelian logical culture existed in the South of Europe, when the Dominican authorities decided to create schools of logic, first in Provence and in Spain, as early as in the 1250s, then two decades afterwards in Italy.

This hypothesis would partially reverse or, at least, contribute to qualify the idea that some Jewish intellectuals would have voluntarily ignored Latin philosophy or, on the contrary, felt the necessity to catch up with the philosophical and logical learning they observed in their Christian counterparts. In the same manner, the sheer existence of such a thing as a strong Latin teaching in Medicine (as opposed to philosophy) in southern universities, in Montpellier, Bologna and Padua, could be taken into account, when contrasting the penetration of Latin medical science with that of Latin philosophy, for which such a pedagogical development did not occur till the beginning of the 14ᵗʰ and long remained incomparable to that of medicine. The 13ᵗʰ-century development of Mendicant schools of theology and logic (and, later on, of philosophy) certainly reflected the need to educate an army of preachers as religious fighters against local heresies, especially in view of the very low educational level of the secular clergy. Yet the presence of logically educated Jewish intellectual communities might have even played a role, even if very limited, in the motivation of the early development of Dominican provincial schools of logic in Spain and in Provence.