

[History of Logic from Aristotle to Gödel \(www.historyoflogic.com\)](http://www.historyoflogic.com)

by Raul Corazzon | e-mail: rc@ontology.co

Writings of E. J. Ashworth on the History of Logic. Sixth Part: Articles from 2006 to 2021

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1. Ashworth, Earline Jennifer. 2006. "Logic Teaching at the University of Prague around 1400 A. D." In *History of Universities. Vol. XXI/1*, edited by Feingold, Mordechai, 211-221. New York: Oxford University Press.
Review of: *Logica modernorum in Prague about 1400. The Sophistria disputation 'Quoniam quatuor' (MS Cracow, Jagiellonian Library 686, ff. 1ra-79rb), with a partial reconstruction of Thomas of Cleves' Logica* - Edition with an Introduction and Appendices by Egbert P. Bos, Leiden, Brill, 2004.
"This book is largely (45-432) an edition of a *Sophistria* text that represents logic teaching at the University of Prague around 1400 A.D. While the anonymous author shows few signs of intellectual distinction, both the topics chosen for discussion and the large number of direct references to other logicians make the work a valuable source for those interested in the undergraduate curriculum of the late middle ages. The editor, E.P. Bos, has done an excellent job of presenting the Latin text in as perspicuous a fashion as possible, and has provided the reader with an analysis (8-10) of the somewhat haphazard way in which the Prague master presented his sequences of arguments. However, in order to understand the text, or to glean from it anything about university teaching, one needs a good deal more than that. While Bos does provide some basic information about the logicians referred to (11-21), he tells the reader very little about Prague or its curriculum, and his brief list (28-32) of some of the views expressed in the text sheds little light. On page 28 he writes, 'I shall discuss these views in more detail later in the introduction', but unfortunately the promised amplification is never provided. Nor is it clear why some of the views were listed. For instance, the division of singular terms into three types (29-30), including the vague individual (*individuum vagum*), such as 'this human being', is merely the standard interpretation, found in Albert the Great and many later commentators, of a remark by Porphyry in his *Isagoge*. In what follows, I shall provide some context for the *Sophistria* text, before attempting to resolve the issue of its nature and purpose." (p. 211)
2. ———. 2007. "Metaphor and the Logicians from Aristotle to Cajetan." *Vivarium* no. 45:311-327.
"In this paper I shall sketch an answer to a series of questions about the treatment of metaphor by medieval logicians. One question is linguistic: are the words "translatio" and "transumptio" synonyms of the word "metaphora"? Three other questions concern analogy and equivocation. First, is metaphor a type of equivocation? Second, is metaphor a type of analogy and if so, what type? Is it linked with analogy in the Greek sense of a similarity between two proportions or relations, or with analogy in the new medieval sense of being said *secundum prius et posterius* because of some attribution? Third, how many acts of imposition are required for the production of analogical terms and metaphors? This last issue is particularly important, given that words are said to be used *proprie* only when used in accordance with an act of imposition, and that metaphors are normally said to be taken *improprie*. I will take up these questions in the context of three sets of texts. I will start with some remarks about the texts of Aristotle and their reception in the Middle Ages.
Secondly, I will look at *translatio* and *transumptio* in ancient grammar and rhetoric. Finally, I will look at medieval logic texts, especially commentaries on the *Sophistical Refutations*.
My study will show how ancient traditions in logic, grammar and rhetoric were interwoven and used to tackle specifically medieval problems. Aristotle played a

prominent role in the story, but not primarily because of his explicit discussions of metaphor in his *Poetics* and *Rhetoric*. Stoic thinkers contributed the theory of tropes or figures of speech; and Neoplatonic commentators such as Porphyry influenced Boethius's discussion of equivocation and metaphor.

The thirteenth century theory of analogy itself grew out of the interweaving of problems in Christian theology, Aristotelian metaphysics and Aristotelian logic, but was enriched by the long Greek and Arabic tradition of analysing ambiguous terms as being said *secundum prius et posterius*. The resulting syntheses, especially in late thirteenth and early fourteenth century British logicians, show a skilful use of whatever parts of ancient traditions seemed relevant to the particular interests and doctrines of the author in question." (pp. 311-312)

3. ———. 2008. "Developments in the Fifteenth and Sixteenth Centuries." In *Mediaeval and Renaissance Logic*, edited by Gabbay, Dov and Woods, John, 609-644. Amsterdam: Elsevier.
Handbook of the history of logic: Vol. 2.
"To understand the significance of these developments for the logician, we have to consider three questions. First, how much of the medieval logic described in the previous chapters survived? Second, insofar as medieval logic survived, were there any interesting new development in it? Third, does humanist logic offer an interesting alternative to medieval logic?
In Part One of this chapter I shall consider the first two questions in the context of a historical overview in which I trace developments in logic from the later middle ages thorough to 1606, the year in which the Jesuits of Coimbra published their great commentary on Aristotle's logical works, the *Commentarii Conimbricenses in Dialecticam Aristotelis*. I shall begin by considering the Aristotelian logical corpus, the six books of the *Organon*, and the production of commentaries on this work. I shall the examine the fate of the specifically medieval contributions to logic. Finally, I shall discuss the textbook tradition, and the ways in which textbooks changes and developed during the sixteenth century. I shall argue that the medieval tradition in logic co-existed for some time with the new humanism, that sixteenth century is dominated by Aristotelianism, and that what emerged at the end of the sixteenth century was not so much a humanist logic as a simplified Aristotelian logic.
In Part Two of this chapter, I shall ask whether the claims made about humanist logic and its novel contributions to probabilistic and informal logic have nay foundation. I shall argue that insofar as there is any principled discussion of such matters, it is to be found among writers in the Aristotelian tradition." (p. 610)
4. ———. 2009. "Le syllogisme topique au XVI siècle: Nifo, Melanchthon et Fonseca." In *Les lieux de l'argumentation. Histoire du syllogisme topique d'Aristote à Leibniz*, edited by Biard, Joël and Mariani Zini, Fosca, 409-423. Turnhout: Brepols.
"Examiner l'argumentation topique, les règles de validité du syllogisme topique, les rapports entre l'analytique, la dialectique et la rhétorique soulève deux problèmes. Tout d'abord, il y a une difficulté de vocabulaire. Dans son *Introductio in dialecticam Aristotelis* de 1560, le jésuite Francisco de Toledo parle du *sylogismus dialecticus seu topicus*, mais en général les logiciens des XVe et XVIe siècles parlaient du syllogisme dialectique et non du syllogisme topique (1). Ensuite, il y a une divergence entre d'un côté l'argumentation, le syllogisme, et les règles de validité auxquels s'intéressent les logiciens, d'un autre côté les arguments informels, les techniques de la persuasion et les stratégies non-déductives auxquels s'intéressent les rhétoriciens (2). Afin d'étudier les rapports entre ces deux groupes, et la place des arguments informels dans la logique, s'il y en a, nous devons aborder la notion de forme logique, non par le biais d'un examen du syllogisme dialectique, mais par le biais d'un examen des notions de conséquence, d'argumentation, et de syllogisme en général. Nous allons découvrir que, pour comprendre les rapports entre la logique et la rhétorique, l'enthymème est beaucoup plus important que le syllogisme dialectique.

Les auteurs de petits manuels humanistes et ramistes ne nous offrent pas de discussion approfondie et détaillée de ces notions. Seuls les aristotéliens s'en occupaient, et pour cette raison, nous allons examiner trois auteurs qui étaient certes influencés par l'humanisme, mais qui travaillaient dans un cadre aristotélien enrichi par la logique médiévale. L'italien Agostino Nifo (ca. 1470-1538) a publié sa *Dialectica ludicra* en 1520 (3). Il connaissait très bien la logique médiévale, mais il connaissait aussi bien les commentateurs grecs, et je ferai référence à ses propres commentaires sur les *Premiers Analytiques* et sur les *Topiques* d'Aristote (4). L'allemand Philippe Melanchthon (1497-1560) a publié son premier manuel de logique, *Compendiaria dialectices ratio* en 1520, et son dernier, *Erotemata dialectices* en 1547 (5). Il manifeste l'influence de l'humanisme par ses exemples et ses simplifications. Le jésuite portugais Pedro da Fonseca (1528-1599) a publié ses *Institutiones dialecticae* en 1564 (6). Chez lui aussi l'influence humaniste est manifeste, surtout par ses références aux commentateurs grecs et son vocabulaire plus classique que médiéval.

Mon exposé se divisera en deux moments. À titre d'introduction, nous examinerons les trois notions clés de conséquence, d'argumentation, et de syllogisme. Ensuite, nous examinerons les textes de Nifo, Melanchthon et Fonseca à la lumière de ces trois notions. (7)" (pp. 409-410)

(1) Francisco de Toledo [Franciscus Toletus], *Introductio in dialecticam Aristotelis*, dans *Opera omnia philosophica I-III*, Cologne 1615-1616 ; réimpr. Hildesheim, Georg Olms, 1985, p. 74b. Dans une édition de Jean Versor [Johannes Versor], *Petrus Hispanus. Summulae logicales cum Versorii Parisiensis clarissima expositione*, Venise, 1572, réimpr. Hildesheim, New York, Georg Olms, 1981, f° 138 v, on trouve le titre "De syllogismo Topico seu probabili", mais dans le texte Versor parle du syllogisme dialectique. Voir aussi Robert Sanderson, *Logicae artis Compendium*, ed. E. J. Ashworth, Bologna, Editrice CLUEB, 1985, p. 179: "Syllogismus Topicus, qui & Dialecticus stricte, est qui ex probabilibus vel quasi probabilibus parit probabilem opinionem conclusionis". Pour deux sources médiévales, voir Gilles de Rome [Aegidius Romanus], *Super libros Posteriorum Analyticorum*, Venise, 1488; réimpr. Frankfurt, Minerva G.M.B.H., 1967, sign. a 5rb : "sillogismus topicus [...] non est necessarius, sed est ut in pluribus"; et Guillaume d'Ockham, *Summa logicae*, ed. P. Boehner, G. Gal et S. Brown, St. Bonaventure, N.Y., St. Bonaventure University, 1974, p. 359: "Syllogismus topicus est syllogismus ex probabilibus".

(2) Pour plus de détails, voir E. Jennifer Ashworth, "Developments in the Fifteenth and Sixteenth Centuries", in D. M. Gabbay & J. Woods (eds.), *Handbook of the History of Logic 2. Mediaeval and Renaissance Logic*, Amsterdam-Boston, Elsevier, 2008, p. 609-643.

(3) Agostino Nifo [Augustinus Niphus], *Dialectica ludicra tyrunculis atque veteranis utillima peripatheticis consona : iunioribus sophisticanribus contraria*, Venetiis, 1521.

(4) Agostino Nifo [Augustinus Niphus], *Super libros Priorum Aristotelis*, Venetiis, 1554; et Agostino Nifo [Augustinus Niphus], *Commentaria in octo libros Topicorum Aristotelis*, Parisiis, 1542.

(5) Philippe Melanchthon, *Compendiaria dialectices ratio*, dans *Opera. Corpus reformatorum XX*, Brunsvigae, 1854; réimpr. New York et Frankfurt am Main, 1963; Philippe Melanchthon, *Erotemata dialectices*, dans *Opera. Corpus reformatorum XIII*, Halis Saxonum, 1846; réimpr. New York et Frankfurt am Main, 1963.

(6) Pedro da Fonseca [Petrus Fonseca], *Instituições dialécticas. Institutionum dialecticarum libri octo*, ed. J. Ferreira Gomes, Universidade de Coimbra, 1964.

(7) Pour quelques textes, voir l'annexe. [pp. 424-430]

5. ———. 2009. "The Problem of Religious Language: What Can we Learn from Twelfth-Century Discussions?" *Paradigmi. Rivista di Critica Filosofica* no. 27:141-152.

"This paper discusses a recent book by Luisa Valente, *Logique et théologie: Les écoles parisiennes entre 1150 et 1220*, [Paris: Vrin, 2008] in which she gives a rich account of how twelfth and early thirteenth-century Parisian theologians attempted to solve the problems of religious language by appeal to the notions of propriety and translatio. Words had a proper signification when used in accordance with their original meaning, whereas translatio involved a semantic shift from the proper sense to a new extended sense. However, words used in this way were equivocal, and towards the end of the period theologians tried to save the univocity of at least some of the words we apply to both God and creatures. Their efforts form the background to the new thirteenth-century theory of analogy, a theory to which some contemporary philosophers of religion have returned."

6. ———. 2010. "Terminist Logic." In *The Cambridge History of Medieval Philosophy. Vol I*, edited by Pasnau, Robert and Dyke, Christina van, 146-158. Cambridge: Cambridge University Press.

"Terminist logic is a specifically medieval development.(1) It is named from its focus on terms as the basic unit of logical analysis, and so it includes both supposition theory, together with its ramifications,(2) and the treatment of syncategorematic terms. It also includes other areas of investigation not directly linked with Aristotelian texts, notably obligations, consequences, and insolubles (see Chapters to, 13, and 14).

Logic was at the heart of the arts curriculum, for it provided the techniques of analysis and much of the vocabulary found in philosophical, scientific, and theological writing. Moreover, it trained students for participation in the disputations that were a central feature of medieval instruction, and whose structure, with arguments for and against a thesis, followed by a resolution, is reflected in many written works. This practical application affected the way in which logic developed. While medieval thinkers had a clear idea of argumentation as involving formal structures, they were not interested in the development of formal systems, and they did not see logic as in any way akin to mathematics.

Logic involved the study of natural language, albeit a natural language (Latin) that was often regimented to make formal points, and it had a straightforwardly cognitive orientation. The purpose of logic was to separate the true from the false by means of argument, and to lead from known premises to a previously unknown conclusion. In this process, the avoidance of error was crucial, so there was a heavy emphasis on the making of distinctions and on the detection of fallacies. The procedures involved often have the appearance of being ad hoc, and modern attempts to draw precise parallels between medieval theories as a whole and the results of contemporary symbolic logic are generally doomed to failure, even though there are many fruitful partial correlations.

The core of the logic curriculum was provided by the works of Aristotle with supplements from Boethius, Porphyry, and the anonymous author of the *Liber sex principiorum* (about the last six categories), once attributed to Gilbert of Poitiers. The *logica vetus*, or Old Logic, included Porphyry's *Isagoge*, Aristotle's *Categories* and *De interpretatione*, and the *Liber sex principiorum*. During the twelfth century the *logica nova*, or New Logic, was rediscovered. It included the rest of the *Organon*, namely Aristotle's *Topics*, *Sophistical Refutations*, *Prior Analytics* and *Posterior Analytics*. Boethius's discussion of *Topics*, or ways of finding material for arguments, was also part of the curriculum, though in the fourteenth century his *De differentiis topicis* was largely replaced by the account of *Topics* given by Peter of Spain in his *Tractatus*. Together these works provided a basis for the study of types of predication, the analysis of simple categorical propositions and their relations of inference and equivalence, the analysis of modal propositions, categorical and modal syllogisms, fallacies, dialectical *Topics*, and scientific reasoning as captured in the demonstrative syllogism. The texts were lectured on and were the subject of detailed commentaries. Nonetheless, a need was felt for simplified introductions to the material and for the discussion of issues that were at best only hinted at by Aristotle." (pp. 146-147).

- (1) Most of the literature dealing with terminist logic is in the form of articles and book chapters. Two bibliographical guides are E. J. Ashworth, *The Tradition of Medieval Logic and Speculative Grammar from Anselm to the End of the Seventeenth Century. A Bibliography from 1836 Onwards* (Toronto: Pontifical Institute of Mediaeval Studies, 1978), and Fabienne Pironet, *The Tradition of Medieval Logic and Speculative Grammar from Anselm to the End of the Seventeenth Century. A Bibliography (1977-1994)* (Turnhout: Brepols, 1997). The classic source of material is L. M. de Rijk, *Logica Modernorum A Contribution to the History of Early Terminist Logic* (Assen: Van Gorcum, 1962-7) vol. I: *On Twelfth-Century Theories of Fallacy*, and vol. II: *The Origin and Early Development of the Theory of Supposition*. Translations of various texts are found in N. Kretzmann and E. Stump (eds.) : *Cambridge Translations of Medieval Philosophical Texts*, vol. I: *Logic and the Philosophy of Language* (Cambridge: Cambridge University Press, 1988). Useful discussions are provided by P. Osmund Lewry, "Grammar, Logic and Rhetoric 1220-1320," in J. Catto, (ed.) *The History of University of Oxford*, vol. I: *The Early Oxford Schools* (Oxford: Clarendon Press: 1984) 401-33, and by N. Kretzmann et al. (eds.) *The Cambridge History of Later Medieval Philosophy: From the Rediscovery of Aristotle to the Disintegration of Scholasticism. 1100-1600* (Cambridge: Cambridge University Press, 1982).
- (2) Not all of these ramifications will be discussed below. I shall omit the discussions of non-referring terms and of relations.
7. ———. 2011. "The Scope of Logic: Soto and Fonseca on Dialectic and Informal Arguments." In *Methods and Methodologies. Aristotelian Logic East and West, 500-1500*, edited by Cameron, Margaret and Marenbon, John, 127-147. Leiden: Brill.
- "...I have chosen to examine two sixteenth-century Iberian scholastics, the Spaniard Domingo de Soto (1494-1560) and the Portuguese Petrus Fonseca (1528-1599), in order to see whether the changes in logical method brought about by the supposed influence of humanism are apparent. For Soto, I shall use the second edition of his *Summulae*, printed in 1539/40, because this was the version that was reprinted in Salamanca eight times, and that most successfully introduced Spaniards to earlier sixteenth-century Parisian teachings.(4) Soto's preface (f. ii r-v) shows that he had responded to humanism by simplifying and reorganizing the text of the first edition, and by removing many sophismata. However, he retained much medieval material including supposition, consequences, *exponibilia*, *insolubilia* and *obligationes*. For Fonseca, I shall use his popular *Institutionum dialecticarum libri octo*, which was first published in Lisbon in 1564.(5) The last of its fifty three editions appeared in Lyon in 1625. It follows Aristotle's *Organon*, taking up material from the *Categories*, *Perihermenias*, *Prior* and *Posterior Analytics*, *Topics* and *Sophistici Elenchi* in turn, but as well as many classical references, it also contains some material about *exponibilia*, consequences and supposition." (pp. 127-128)
- (4) Domingo de Soto, *Aeditio Secunda Summularum*, Salamanca, 1539-1540. Note that the foliation is often inaccurate. I am grateful to Angel d'Ors for providing me with photographs of this edition.
- (5) Petrus Fonseca, *Instituições Dialécticas. Institutionum dialecticarum libri octo*, Introdução, estabelecimento do texto, tradução e notas de Joaquim Ferreira Gomes, 2 vols, Coimbra, Universidade de Coimbra, 1964.
- (6) For further discussion of both textbooks, see Ashworth, *Changes in logic textbooks from 1500 to 1650: the new Aristotelianism*, 1988, esp. 81-84.
8. ———. 2013. "Analogy and Metaphor from Thomas Aquinas to Duns Scotus and Walter Burley." In *Later Medieval Metaphysics. Ontology, Language, and Logic*, edited by Bolyard, Charles and Keele, Rondo, 223-248. Bronx, NY: Fordham University Press.
- "In the history of Aristotelianism and Thomism people often speak about *analogia entis*, the analogy of being, (1) or what, following Giorgio Pini and Silvia Donati, I shall call metaphysical analogy. (2) In fact, this notion was foreign to Aristotle, and for Thomas Aquinas analogy, under that name, was semantic analogy. (3) It

belonged to the theory of language, since it was regarded as a type of equivocation, the medieval name for homonymy. Metaphor too was closely related to equivocation, although, unlike analogy, it was an improper use of language, and produced by usage rather than imposition. In the second half of the thirteenth century logicians began to worry about how semantic analogy could be produced by imposition, and how analogical terms could be related to concepts. If a single term is used in different but related senses, does this come about through one original act of imposition, or through two related acts? If there are two acts, can we speak of a single term? If there is just one act, what of the concept or concepts to which that term is subordinated? Can there be a single concept which conveys related senses, and if not, how can the relationship between two concepts be captured by a single act of imposition? As a result of such worries some thinkers, especially John Duns Scotus, abandoned semantic analogy. What was called analogy was now metaphysical analogy, and, at the linguistic level, metaphor replaced semantic analogy. It is the history of these developments that I shall discuss in this essay, and in so doing, I shall show something of the interplay between logic, metaphysics, and philosophy of mind." (p. 223)

(1) For the analogy of being see Pierre Aubenque, "Sur la naissance de la doctrine pseudo-aristotélicienne de l'analogie de l'être," *Les études philosophiques* 3/4 (1989): 291-304; Alain de Libera, "Les sources gréco-arabes de la théorie médiévale de l'analogie de l'être," *Les études philosophiques* 3/4 (1989): 319-45; and E. Jennifer Ashworth, "L'analogie de l'être et les homonymes: *Catégories*, 1 dans le *Guide de l'étudiant*" in *L'enseignement de la philosophie au xiii^e siècle. Autour du «Guide de l'étudiant» du ms. Ripoll 109*, ed. Claude Lafleur with the collaboration of Joanne Carrier (*Studia Artistarum* 5. Turnhout, Belgium: Brepols, 1997), pp. 281-95. For a general discussion of analogy, see E. Jennifer Ashworth, *Les théories de l'analogie du XII^e au XVI^e siècle* (Paris: J. Vrin, 2008).

(2) Silvia Donati, "La discussione sull'unità del concetto di ente nella tradizione di commento della *Fisica*: commenti parigini degli anni 1270-1315 ca." in *Die Logik des Transzendentalen. Festschrift für fan A. Aertsen zum 65. Geburtstag*, ed. Martin Pickavé (*Miscellanea Mediaevalia* 30. Berlin, New York: Walter de Gruyter, 2003), pp. 60-139; and Giorgio Pini, *Scoto e l'analogia. Logica e metafisica nei commenti aristotelici* (Pisa: Scuola Normale Superiore, 2002).

(3) For discussion of Aquinas see E. Jennifer Ashworth, "Signification and Modes of Signifying in Thirteenth-Century Logic: A Preface to Aquinas on Analogy," *Medieval Philosophy and Theology* 1 (1991): 39-67; E. Jennifer Ashworth, "Analogy and Equivocation in Thirteenth-Century Logic: Aquinas in Context," *Mediaeval Studies* 54 (1992): 94-135; Joël Lonfat, "Archéologie de la notion d'analogie d'Aristote à saint Thomas d'Aquin," *Archives d'histoire doctrinale et littéraire du moyen âge* 71 (2004): 35-107; and Seung-Chan Park, *Die Rezeption der mittelalterlichen Sprachphilosophie in der Theologie des Thomas von Aquin. Mit besondere Berücksichtigung der Analogie (Studien und Texte zur Geistesgeschichte des Mittelalters* 65. Leiden, Boston, Köln: Brill, 1999).

9. ———. 2013. "Aquinas, Scotus and Others on Naming, Knowing and the Origin of Language " In *Logic and Language in the Middle Ages: A Volume in Honour of Sten Ebbesen*, edited by Fink, Jakob Leth, Hansen, Heine and Mora-Márquez, Ana María, 257-272. Leiden: Brill.

"Many medieval discussions start from the fruitful intersection of two apparently opposed texts. My two texts are Adam's naming of the animals in *Genesis* and Aristotle's remark (in Latin translation) that spoken language is *ad placitum*, and I shall use them to discuss three problems, the origin of language, our ability to name God, and our ability to name animal species.

I shall refer to various texts by Aquinas, the commentaries on *Genesis* written by Henry of Ghent and Peter John Olivi, article 73 of Henry of Ghent's *Summa Quaestionum Ordinariarum*, and the treatment of *Sentences* 1, distinction 22 by John Duns Scotus in the five different versions of his commentary. The first version

- is the *Lectura*, written in Oxford before 1300. The second version is the *Ordinatio*, begun in Oxford as a revision of the *Lectura*, but never completed. The third version is the *Reportatio Parisiensis*, produced in Paris where Scotus lectured ca. 1302–4. Alternative *Reportationes* are found in Reportatio I-A (the *Reportatio examinata*), and *Appendix A* to the edited version of the *Ordinatio* (pp. 383–93). *Reportatio I-A* and *Appendix A* are different, though *Appendix A* is often wrongly called *Reportatio I-A* in the secondary literature, and it is not complete. In addition to these versions, there are extensive *adnotationes*, found in the edited version of the *Ordinatio* (pp. 339–47). (pp. 257–258, notes omitted)
10. ———. 2013. "Being and Analogy." In *A Companion to Walter Burley. Late Medieval Logician and Metaphysician*, edited by Conti, Alessandro, 135-165. Leiden: Brill.
 "Burley's discussion of being (*ens*) and analogy is notable for his thesis that the word "being" corresponds to a single analogical concept. Moreover, he was part of a movement, begun in the later 13th century, which explicitly opposed semantic analogy, a doctrine of language, to metaphysical analogy, the doctrine that just as creatures are beings analogically through their relationship to God, the first cause, whose very essence is being, so accidents are beings analogically through their relationship to the substance, a being *per se*, on which they depend. Obviously, what is new here is not the doctrine itself, but the fact that the relations between God and creatures, substance and accident, were described as analogical. Unlike John Duns Scotus, who insisted that no single word could express a real relation between things ordered in accordance with priority and posteriority, and that no single concept could capture such a relation, Burley retained the link between semantic analogy and metaphysical analogy, for he believed that our words and our concepts can mirror the world. On the other hand, he broke the link between semantics and ontology for other terms traditionally regarded as analogical, such as "healthy", by construing these as metaphorical in their secondary senses. In what follows I shall begin by surveying the sources in which Burley's views are expressed. I shall then consider some basic notions in the medieval theory of language, including analogy, but also signification, imposition, and metaphor. Next I shall discuss the standard divisions of equivocation and how these related to both analogy and metaphor in Burley's writings. Finally, I will discuss how Burley deals with *ens*, first from the point of view of semantics, and then from the point of view of metaphysics." (p. 135).
11. ———. 2013. "Descent and Ascent from Ockham to Domingo de Soto: An Answer to Paul Spade." In *Medieval Supposition Theory Revisited. Studies in Memory of L. M. de Rijk*, edited by Bos, Egbert Peter, 385-410. Leiden: Brill.
 Also published as Volume 51, 1-4 (2013) of *Vivarium*.
 Acts of the XVIIth European Symposium for Medieval Logic and Semantics, held the University of Leiden, 2nd, 7th June. 2008.
 "Paul Spade has attacked the theory of the modes of personal supposition as found in Ockham and Buridan, partly on the grounds that the details of the theory are incompatible with the equivalence between propositions and their descended forms which is implied by the appeal to suppositional descent and ascent. I trace the development of the doctrines of ascent and descent from the mid-fourteenth century to the early sixteenth century, and I investigate Domingo de Soto's elaborate account of how descent and ascent actually worked. I show that although Soto himself shared some of Spade's doubts, including those about the use of merely confused supposition, he had a way of reducing at least some propositions containing terms with such supposition to equivalent disjunctions and conjunctions of singular propositions. Moreover, he gave explicit instructions on how to avoid the supposed problem of O-propositions." (p. 385)
12. ———. 2013. "Domingo de Soto on the *Categories*: Words, Things, and Denominatives." In *Aristotle's Categories in the Byzantine, Arabic and Latin*

Traditions, edited by Ebbesen, Sten, Marenbon, John and Thom, Paul, 263-284. Copenhagen: The Royal Danish Academy of Sciences and Letters.

"Despite humanist attacks, notably by Petrus Ramus, Porphyry's *Isagoge* and Aristotle's *Categories* retained their place in university education throughout the sixteenth century and into the seventeenth century. Indeed, as late as the 1660s the logic notes in John Locke's early manuscripts are largely devoted to predication, the five predicables, and the ten categories, (1) and in his *Essay concerning human understanding* Locke found it necessary to complain about those "bred up in the Peripatetick Philosophy" who "think the Ten Names, under which are ranked the Ten Predicaments, to be exactly conformable to the Nature of Things". (2) Original and sustained discussion of these matters is, however, harder to find. Most textbooks cover the issues only in a summary fashion, and such a leading commentator as Agostino Nifo wrote no commentary on Porphyry's *Isagoge* or on the *Categories*. Domingo de Soto is one exception. His substantial commentary on the *Categories*, combined with commentaries on Porphyry's *Isagoge* and Aristotle's *Posterior Analytics*, was published 18 times between 1543 and 1598, mainly in Salamanca, but with one edition in Louvain and five in Venice. (3)

In his commentary, Soto addresses the main questions faced by medieval and Renaissance thinkers, namely does the work deal with words or things, and why is it classified as an introduction to logic? He then takes up a number of subsidiary questions, two of which I shall discuss below. First, why does the work begin with the discussion of equivocals, univocals and denominatives? Second, are denominatives really like equivocals and univocals in relevant respects? In what follows I shall begin by sketching Soto's main conclusions about the nature and purpose of Aristotle's *Categories* as a whole. This will lead me into a discussion of predication, and what it is that we predicate. I shall then turn to the subsidiary questions about why the work opens as it does, and about the status of denominatives." (pp. 263-264)

(...)

"Conclusion.

To conclude, what I find striking about Soto's discussion of the parts of the *Categories* that I have chosen to focus on is not only that he provides a coherent and thoughtful discussion, but that he displays the strong influence of the tradition of Oxford realism found in Walter Burley and Paul of Venice. It is easy to think of Soto as a Renaissance Thomist, but in fact, he was a well-read eclectic." (p. 280)

(1) See Ashworth 'Locke and Scholasticism', in M. Stuart (ed.), *A Companion to Locke*, Blackwell: Oxford, forthcoming [December 2015].

(2) Locke, *Essay*, III.x.14, p. 497.

(3) Lohr 1988: 431. For a general summary of Soto's position, see Bos 2000. For a useful introduction to medieval views, see Pini 200a. For Soto on equivocation, see Ashworth 1996. Bos and Ashworth give different dates for Soto's birth, but Angel d'Ors (in private correspondence) supported the view that 1494 is the correct date. I owe much to Angel d'Ors (d. 2012) for his useful comments on an earlier version of this paper.

13. ———. 2013. "Logic." In *The Cambridge History of Science. Volume 2: Medieval Science*, edited by Lindberg, David C. and Shank, Michael H., 532-547.

Cambridge: Cambridge University Press.

"Medieval logic is crucial to the understanding of medieval science for several reasons.(1) At the practical level, every educated person was trained in logic, which provided not only a technical vocabulary and techniques of analysis that permeate philosophical, scientific, and theological writing but also the training necessary for participation in the disputations that were a central feature of medieval instruction. At the theoretical level, medieval logicians made several contributions. First, they discussed logic itself, its status as a science, its relation to other sciences, and the nature of its objects.

Here it is important to note that medieval thinkers took a science (*scientia*) to be an organized body of certain knowledge that might include theology, logic, and

grammar as well as mathematics and physics. Second, they discussed the nature of a demonstrative science and scientific method in general. Third, they provided a semantics that allows one to sort out the ontological commitments carried by nouns and adjectives. The discussion of connotative terms is particularly important here since it allowed logicians

to analyze such terms as "motion" without postulating the existence of anything other than ordinary objects and their qualities. Fourth, they provided particular logical strategies that allow one to sort out the truth-conditions for scientific claims. Particularly important here are supposition theory, the distinction between compounded and divided senses, and the analysis of propositions containing such syncategorematic terms as "begins" and "ceases". (pp. 532-533)

(1) For full information about medieval logic, see Catarina Dutilh Novaes, *Formalizing Medieval Logical Theories: Suppositio, Consequentiae and Obligationes* (Dordrecht: Springer, 2007); Dov M. Gabbay and John Woods, eds., *Handbook of the History of Logic 2: Mediaeval and Renaissance Logic* (Amsterdam: Elsevier/North-Holland, 2008); Klaus Jacobi, ed., *Argumentationstheorie: Scholastische Forschungen zu den logischen und semantischen Regeln korrekten Folgerns* (Leiden: Brill, 1993); Norman Kretzmann, Anthony Kenny, and Jan Pinborg, eds., *The Cambridge History of Later Medieval Philosophy* (Cambridge: Cambridge University Press, 1982); Norman Kretzmann and Eleonore Stump, trans., *The Cambridge Translations of Medieval Philosophical Texts, vol. 1: Logic and the Philosophy of Language* (Cambridge: Cambridge University Press, 1988); and Mikko Yrjonsuuri, ed., *Medieval Formal Logic: Obligations, Insolubles and Consequences* (Dordrecht: Kluwer Academic Publishers, 2001).

14. ———. 2014. "Aquinas on Analogy." In *Debates in Medieval Philosophy. Essential Readings and Contemporary Responses*, edited by Hause, Jeffrey, 232-242. New York: Routledge.

"In this short chapter, I hope to demonstrate the importance of pay close attention to the historical context of the theory of analogy, and to the way in which technical terms were actually used when explicating Aquinas' theory of analogy. In addition, I intend to argue that McNerny gets Aquinas' theory wrong partly because he places too little emphasis on the fact that Aquinas was principally concerned with the names we use of God.

Introduction

Analogy is a notion with various uses. In epistemology one can speak of coming to know something new on the basis of an analogy or likeness between two things and such analogies can form the basis for analogical arguments, including the argument from design for the existence of God. In ontology, the so-called analogy of being refers to the doctrine that reality is divided horizontally into the very different realities of substances and accidents, (1) and vertically into the very different realities of God and creatures, and that these different realities are related by some kind of likeness. However, for the purposes of this discussion, we are primarily concerned with analogy as a doctrine belonging to the philosophy of language and most especially as a solution to the problem of religious language.

Aquinas has been hailed through the centuries as making a particularly important contribution, and recent philosophers of religion have taken the doctrines seriously (e.g. Swinburne 1977, Alston 1993). But there are various problems, many stemming from the fact that nowhere does Aquinas give a sustained account of analogy, but rather he employs the notion on an ad hoc basis to settle the issues under discussion in a particular place. One problem, which I shall touch on briefly below, is whether his account of analogy changed over the years. Two other problems have been discussed fairly extensively by McNerny. One is the question of whether it is a theory of language at all, or whether Aquinas was more concerned with the analogy of being; another concerns the truth of the long-held belief that Cardinal Cajetan's book on analogy, published in 1506, though written in 1498, gave an accurate account of Aquinas. McNerny has successfully argued that

Aquinas was indeed concerned with analogical terms, even though his account had certain metaphysical views as its basis, and that Cajetan is not a good interpreter of Aquinas. (2) In what follows, I shall focus on another aspect of Aquinas: how his theory is embedded in specifically medieval semantics. It is here that the fourth chapter of McInerny's book (*Analogous Names*, chapter 13, this volume) offers a useful object lesson in the importance of getting such matters straight. Aquinas wrote in a specific context, and he used terminology with an established meaning that his readers would have known. It is a mistake to read a thirteenth-century author (or any other, for that matter) as if he wrote in a vacuum, and as if his views were only related to thinkers such as Boethius, Cajetan, and John of St. Thomas, who were all far removed from him in time. The only author contemporary with Aquinas cited by McInerny is Albert the Great, and the references are not always helpful." (pp. 232-233)

(1) Editor's note: Aquinas explains that, in contrast to a substance, an accident's mode of being is to exist in something else. For instance, a horse is a substance, but its size, color, are accidents because their nature is to exist in something else.

(2) While McInerny successfully dismisses Cajetan as an interpreter, he does not recognize that much of Cajetan's discussion is directed towards some fifteenth-century authors rather than Aquinas himself.

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William P. Alston, "Aquinas on Theological Predication: A Look Backward and a Look Forward." In *Reasoned Faith: Essays in Philosophical Theology in Honor of Norman Kretzmann*, ed. Eleonore Stump. Ithaca and London: Cornell University Press, 1993, pp. 145-178.

Ralph McInerny, *Aquinas and Analogy*, Washington, D.C.: The Catholic University of America Press, 1996.

Richard Swinburne, *The Coherence of Theism*, Oxford: Clarendon Press, 1977.

15. ———. 2015. "Medieval Theories of Signification to John Locke." In *Linguistic Content. New Essays on the History of Philosophy of Language*, edited by Cameron, Margaret and Stainton, Robert J., 156-175. New York: Oxford University Press.

"Locke wrote that "*Words... came to be made use of by Men, as the Signs of their Ideas... The use then of Words, is to be sensible Marks of Ideas; and the Ideas they stand for, are their proper and immediate Signification*" (*Essay*, 3.2.1). (1) Behind this brief and controversial passage lies a long development of interrelated discussions of the Aristotelian semantic triangle: the discussion of spoken words as signs, both of things and of concepts; the discussion of whether the things signified are natures (whatever their ontological status) or individual existents; and the discussion of ordering: do words signify things or concepts primarily? In this chapter I hope to do three things: (i) trace the history of developments from the thirteenth to the seventeenth century; (ii) throw some light on the issue of whether the theory of signification is a theory of meaning; (iii) illuminate the immediate background to Locke on language. (2)

My treatment is partly synoptic, partly chronological. Given the long period I am dealing with, and the complicated doctrinal history involved, I shall simplify my account by tracing just a few influential doctrines and focusing on just a few authors, though I shall make occasional references to other figures. The main path I intend to follow starts with Thomas Aquinas (1224/5-74), for, although he was not a logician, he had many things to say about language, and his views, particularly as found in his unfinished commentary on Aristotle's *Peri hermeneias*, were influential in the sixteenth and seventeenth centuries. (3) I shall then turn to the two fourteenth-century nominalists, William of Ockham (c. 1287—1347) and John Buridan (1295/1300-1358/ 61). (4) Both men were very influential at the University of Paris in the late fifteenth and early sixteenth centuries, though Thomism also had a role to play there. For my purposes, the most important product of the Parisian schools is the Dominican, Domingo de Soto (1494-1560), who, while absorbing many features of nominalist logic, is more properly described as an

eclectic Thomist. He published his popular logical works after his return to Spain, where he retained a strong influence into the seventeenth century. Another important Iberian was the Portuguese Jesuit Petrus Fonseca (1528-99), whose work inspired the Conimbricenses, commentaries on Aristotle's works produced by the Jesuits at Coimbra. The volume on Aristotle's *Organon* was first published in 1606. Other significant Jesuit authors include the two Spaniards Franciscus Toletus (1533-96) and Antonius Rubius (1548-1615) and the Polish logician Martinus Smiglecius (1564-1618). The importance of these late Scholastic authors is twofold. First, they were all moderate realists in the Thomistic tradition, although they were well acquainted with nominalism and Scotism. Second, they were read throughout Europe and, in particular, were used at the University of Oxford. Descartes told Mersenne that he recalled reading the Conimbricenses, Toletus, and Rubius (AT III, 185), (5) and, when Locke was teaching at Christ Church, Oxford, he recorded in a notebook that his students bought works by Smiglecius (Ashworth 1981: 304)." (pp. 156-157)

(1) Quotations are taken from Locke, *An Essay Concerning Human Understanding*, edited by Peter H. Nidditch, New York: Oxford University Press, 1975, but references will be given in standard format so that other editions can also be used.

(2) See Ashworth (1981, 1984, 1987) for discussion of the sixteenth- and seventeenth-century background.

(3) For a wider perspective on the earlier period, see Rosier, *La Parole comme acte: Sur la grammaire et la sémantique au XIIIe siècle*, Paris: Vrin 1994 and Rosier-Catach, *La Parole efficace: Signe, rituel, sacré*, Paris: Editions du Seuil 2004. For more on Aquinas, see Ashworth (1999). References to Aquinas will be given in standard format, since there are many editions (and some translations) of his works.

(4) For nominalism, see Biard, *Logique et théorie du signe au XIVe siècle*, Paris: Vrin 1989, Panaccio, *Ockham on Concepts*, Aldershot and Burlington, VT: Ashgate 2004 and Klima, *John Buridan*, Oxford: Oxford University Press 2009.

(5) I give standard references to the Adam and Tannery edition (Descartes 1897-1913).

16. ———. 2015. "Richard Billingham and the Oxford *Obligationes* Texts: Restrictions on *positio*." *Vivarium* no. 53:372-390.

"The study of Oxford *Obligationes* texts in the 14th century owes much to the work of Angel d'Ors.(1) Fittingly, it is also a subject linked with Spain through the work attributed to Juan de Pastrana, the publication of the Oxford *Sophistrie* in 1503, and the presence of texts by Richard Billingham and others in Spanish libraries. (2) In this paper, I intend to focus on one aspect of a group of texts associated with the University of Oxford, namely the restrictions placed on the very first rule of the type of obligations called *positio*, and their relation to the sophismata introduced to illustrate the very difficulties that these restrictions were intended to counter. One of my intentions here is to show what was said in a series of rather modest texts that must have been used in actual teaching.

First, however, it is necessary to say something about the *Obligationes* treatises themselves and what they were about." (p. 372)

(1) See especially Angel d'Ors, 'Sobre las *Obligationes* de Richard Lavenham', *Archives d'histoire doctrinale et littéraire du moyen âge* 58 (1991), 253-78; Angel d'Ors, 'Sortes non currit vel Sortes movetur (Roger Swyneshed, *Obligationes*, § 137-138)', *Archives d'histoire doctrinale et littéraire du moyen âge* 60 (1993), 165-72; Angel d'Ors and Manuel García-Clavel, 'Sobre las *Obligationes* de Robert Fland. *Antiqua et nova responsio*', *Revista de Filosofía* 7 (1994), 51-8. For some discussion, see E.J. Ashworth, 'Autour des *Obligationes* de Roger Swyneshed: la *nova responsio*', *Les études philosophiques* 3 (1996), 341-60.

(2) See below for details.

17. ———. 2015. "Logic teaching at the University of Oxford from the Sixteenth to the early Eighteenth Century." *Noctua* no. 2 (1-2):24-62.

"The title of the conference for which this paper was written was «From commentary to manual: the teaching of philosophy in the modern period», but

where logic teaching at the University of Oxford is concerned, this title needs to be glossed, because the significant changes that took place involve the types of commentary and manual rather than the replacement of one by the other¹. At the beginning of the sixteenth century, university-wide lectures on logic presented the content of the central Aristotelian texts orally with or without detailed commentary, depending on the level of instruction, but students also worked with brief texts devoted to such medieval developments as obligationes, insolubilia and consequences, which had been gathered together in printed manuals, especially the *Libellus Sophistarum ad Usus Oxoniensium* which was published in England six times between 1499 and 1530, as well as on the European continent². If we jump to the beginning of the eighteenth century, we find that teaching now took place within the colleges and the halls, which, unlike colleges, were not permanent property-owning, self-governing institutions, but which otherwise functioned in the same way. University-wide lectures had virtually disappeared, as had discussion of nearly all the specifically medieval developments, and, while commentaries were still read, students began, and often ended, their study of logic with succinct manuals that summarized Aristotelian logic, especially the *Logicae Artis Compendium* by Robert Sanderson, first published in 1615, and the *Artis Logicae Compendium* by Henry Aldrich, two slightly different versions of which were first published in 1691. A long and complicated history lies behind these changes, and to understand what happened I shall start by considering the wider changes that took place in the organization of university teaching as well as more generally in English society. I will then consider humanism and the new Aristotelianism, and I will conclude with an overview of the most important logic manuals.

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

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

References

Ashworth 1979 = «The “*Libelli Sophistarum*” and the Use of Medieval Logic Texts at Oxford and Cambridge in the Early Sixteenth Century», *Vivarium* 17 (1979), 134-158.

Ashworth 1988(1) = «Changes in Logic Textbooks from 1500 to 1650: The New Aristotelianism», in Eckhart Kessler, Charles H. Lohr, Walter Sparr, (eds.), *Aristotelismus und Renaissance. In Memoriam Charles B. Schmitt*, Wiesbaden, in Kommission bei Otto Harrassowitz 1988 (Wolfenbütteler Forschungen Band 40), 75-87.

Ashworth 1988(2) = «§1. Die philosophischen Lehrstätten. 1. Oxford», in Schobinger, Jean-Pierre (ed.), *Die Philosophie des 17. Jahrhunderts*. Band 3/1. England, Basel, Schwabe & Co. 1988 (Grundriss der Geschichte der Philosophie), 6-9, 26-27.

Ashworth 1999 = «Text-books: a case study – logic», in Lotte Hellinga, Joseph Burney Trapp, (eds), *The Cambridge History of the Book in Britain. Vol. III: 1400-1557*, Cambridge, Cambridge University Press 1999, 380-386.

18. ———. 2016. "Locke and Scholasticism." In *A Companion to Locke*, edited by Stuart, Matthew, 82-99. Malden: Wiley-Blackwell.
Introduction. Locke's public attitude to scholasticism is well known. Many are the disparaging references to the schoolmen, their reliance on disputational success rather than the search for truth, and their obscure jargon. In the *Essay Concerning Human Understanding*, he writes that “the Schoolmen” found the “very useless Skill” of disputing “a good Expedient to cover their Ignorance, with a curious and unexplicable Web of perplexed Words” (3.10.8). Yet public attitudes can be misleading. Descartes professed to be making a new start, yet historians of philosophy have become increasingly aware of how much he took for granted of what he had learned from the Jesuits at La Flèche. Moreover, philosophers often turn out to be in dialogue with their predecessors even if they do not make this

explicit. We have to ask whether the same is true of Locke. Did he enter into a secret dialogue with any scholastics? Are there features of his thought that can be explained in terms of scholastic assumptions?

In order to answer these questions, we need to look at who the schoolmen referred to by Locke were, and what he might have learned from them, particularly with respect to topics in metaphysics, logic, and language. First, however, we must consider the Oxford curriculum which provided the framework for Locke's years of study and teaching there, as there is little reason to believe that he enriched his acquaintance with the schoolmen in his later career." (p. 82)

19. ———. 2016. "The Post-Medieval Period." In *The Cambridge Companion to Medieval Logic*, edited by Novaes, Catarina Dutilh and Read, Stephen, 166-191. Cambridge: Cambridge University Press.

"This chapter has two main parts. The first part discusses the effects that historical events and movements had on educational systems and the logical studies thought to be suitable for undergraduates.

The Western reception of the printing press in the middle of the fifteenth century was perhaps the most important event, for it accentuated the impact of the other events and movements. Suddenly it became possible to produce books cheaply, in relatively large numbers, and without the differences between one copy and another that often make work with manuscripts so difficult. By the end of the fifteenth century, many university towns had presses able to print the textbooks needed by the faculty of Arts, and teachers could disseminate their own works. Moreover, publishers, especially in Italy, were able to print the works required for serious scholarship, such as Aristotle's *Organon* in Greek and the newly discovered Greek commentaries on Aristotle, while in the sixteenth century, the writings of the Protestant reformers and their Roman Catholic opponents could be widely circulated.

The second main part looks at some specific doctrines, including supposition theory and consequences, in order to show that medieval doctrines were developed in interesting ways before they are finally abandoned, and to highlight some of the important changes that took place." (pp. 166-167)

20. ———. 2016. "How Natural is Natural Language? Some Postmedieval discussions." In *Formal Approaches and Natural Language in Medieval Logic*, edited by Cesalli, Laurent, Goubier, Frédéric and de Libera, Alain, 485-500. Barcelona - Roma: Fédération Internationale des Instituts d'Études Médiévales.

"The title of the Geneva symposium held in 2012 was «Formal approaches and natural language in medieval logic», and on the face of it this title suggests the distinction made by twenty-first century logicians between natural or ordinary languages and the formal language-systems of symbolic logic and mathematics (1). However, the modern sense of «natural» was not that used by late medieval and post-medieval logicians. As we will see, various senses appear in their writings, but for our purposes the most important sense involves their distinction between natural signification and *ad placitum* signification, and only words with the latter kind of signification belong to such spoken languages as English and French.

Accordingly, in this paper I shall discuss the distinction between natural and *ad placitum* signification and how it relates to views about the nature and origin of human language, in order to see how far these views would allow for the construction of a fully-fledged formal language, such as firstorder quantificational logic. What power did logicians think we have over the languages we use? How far can we stipulate a signification for a term, and could the notion of an uninterpreted system have a role to play? In order to find some answers to these questions, I shall focus on selected post-medieval logicians, starting with Johannes Versor († after 1482), an eclectic author who drew on both Aquinas and Albertus Magnus (2). From the first decades of the sixteenth century, I shall consider a group of men who studied and taught at the University of Paris, including Gaspar Lax (1487-1560), his pupil Juan Dolz del Castellar (M.A. 1509), Fernando de Enzinas († 1523), Juan de Celaya (ca. 1490-1558), John Major (1467-1550), and Domingo de Soto (1494-

1560). The latter, whose *Summulae* was first published in 1529 (3), had a strong influence on a later group of authors in the scholastic tradition, including the Jesuits Sebastianus de Couto (1567-1639), Antonius Rubius (1548-1615) and Martinus Smiglecius (1564-1618). Couto was the author of the Coimbra commentary on Aristotle's *Organon* published in 1606, and as such was particularly influential throughout the seventeenth century."

(1) For a very useful analysis of various senses of «formal», see C. Dutilh Novaes, «The Different Ways in which Logic is (said to be) Formal», *History and Philosophy of Logic*, 32 (2011) 303-332.

(2) See P. Rutten, «“Secundum processum et mentem Versoris”: John Versor and His Relation to the Schools of Thought Reconsidered», *Vivarium*, 43 (2005) 292-336.

3 Domingo de Soto, *Summulae*, Burgis 1529. Later editions were considerably changed.

21. ———. 2017. "Philosophy of Language: Words, Concepts, Things, and Non-Things." In *The Routledge Companion to Sixteenth-Century Philosophy*, edited by Lagerlund, Henrik and Hill, Benjamin, 350-372. New York: Routledge.
 "One of the big questions raised by the philosophy of language is how our words relate to the world we live in. Some of the words we use seem to be names of the things around us: 'Socrates' seems to name an actual person, and 'smiling' seems to name something that he does. Similarly, 'dog' and 'horse' seem to name ordinary examples of types of living thing, but do they also name common natures that have a status of their own, apart from individuals? What about such words as 'blindness' and 'nonbeing,' or the names of fictional entities such as 'chimera'? What about so-called analogical words such as 'being,' which seems to encompass both substances and accidents, both God and creatures? And what about words in particular contexts, such as 'Some men are dead' or 'The meadows are smiling'? In this chapter, I shall first say something about the general background to sixteenth-century philosophies of language, and I shall then explore the views of two particular groups of philosopher on how it is that our words relate to the world, ending with a detailed examination of doctrines of analogy." (p. 350)
22. ———. 2017. "Was Buridan a 'Psychologist' in His Logic?" In *Questions on the Soul by John Buridan and Others. A Companion to John Buridan's Philosophy of Mind*, edited by Klima, Gyula, 239-260. Dordrecht: Springer.
 "If we look back at Gottlob Frege, and all that has stemmed from his work, it may seem easy to accuse John Buridan of a grossly misconceived psychological approach to logic."
 (...)
 "In order to discover whether Buridan's approach to logic lays him open to Fregean accusations of failing to separate the psychological from the logical, of failing to distinguish taking something to be true from proving it to be true, and of falling into the supposed trap of asking for the meaning of words in isolation rather than in the context of a proposition, I shall start by considering Buridan's account of signification and the role played by concepts in the Buridanian sense of that word. I shall then consider the relationship between spoken language and what may be called mental language, before going on to discuss the truth of propositions and the nature of argumentation." (pp. 240-241)
23. ———. 2017. "Burley, Ockham, and English Logicians on *Impositio* as a Type of *Obligatio*." In *The Language of Thought in Late Medieval Philosophy: Essays in Honor of Claude Panaccio*, edited by Pelletier, Jenny and Roques, Magali, 233-245. Dordrecht: Springer.
 Abstract: "This is a study of how the doctrine of *impositio*, the endowing of terms and propositions with a new signification, was treated in English obligationes texts from Walter Burley to the end of the fourteenth century. I show that in Burley and Ockham the rules for *impositio* were closely linked to the solution of *insolubilia*, but that this emphasis disappeared. I also show that Burley's doctrines were more

- honoured on the European continent than in England. I then examine the different doctrines of subsequent English logicians and how they were applied to selected sophismata. Here Roger Swyneshed and Richard Brinkley are particularly important, the first because of his *nova responsio*, and the second because of his doctrine that speakers can change imposition at will."
24. ———. 2017. "Buridan and His Successors on "ex impossibili sequitur quodlibet". In *Miroir de l'amitié. Mélanges offerts à Joël Biard à l'occasion de ses 65 ans*, edited by Grellard, Christophe, 243-252. Paris: Vrin.
25. ———. 2018. "Exponibilia, Proofs of Terms, and the Oxford-Paris Split 1340-1530." In *Sujet libre: pour Alain de Libera*, edited by Brenet, Jean-Baptiste and Cesalli, Laurent, 15-20. Paris: Vrin.
 "In the first years of his long and distinguished career Alain de Libera published a number of articles and text editions relating to two themes in thirteenth-century logic."
 (...)
 "These discussions have led me to ask two questions about what happened in Oxford and Paris after the first decades of the fourteenth century. First, were there continued differences between the two institutions? Second, did these differences relate mainly to the topics already mentioned, whether to supposition theory and its offshoots or to the group of texts on *sophismata*, *syncategoremata* and *abstractiones*? My answers are that there were indeed specific kinds of text that typified the divergence between Oxford and Paris, though not between Oxford and other European universities, such as Prague and Padua. These were the texts on proofs of terms and the texts devoted to *exponibilia*. Both of these seem to have grown out of the texts on *sophismata*, *syncategoremata*, and *abstractiones*, whose importance diminished during the period under consideration. Treatises on *sophismata* were still produced, such as the treatise by the Parisian Albert of Saxony, but it seems that no new texts on *abstractiones* appeared, and treatises devoted to *syncategoremata* declined in popularity, though Peter of Spain's text continued to be used in Paris, and near the end of the fourteenth century in Oxford Richard Lavenham did produce a very short work which was later to be printed."
 (pp. 15-16)
26. ———. 2021. "Aquinas on Truth, Logic, and Sinning in Speech." In *Ad placitum. Pour Irène Rosier-Catach*, edited by Cesalli, Laurent, Goubier, Frédéric, Grondeux, Anne, Robert, Aurélien and Valente, Luisa, 41-48. Roma: Aracne.

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