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1. Panaccio, Claude. 1990. "Connotative Terms in Ockham's Mental Language." *Cahiers d'Épistémologie*:1-22.

2. ———. 1992. "From Mental Word to Mental Language." *Philosophical Topics* no. 20:125-147.
"One of William of Ockham' s most striking tenets in philosophy of mind is that there is in each of us, prior to any external speech or action, an "oratio mentalis," a mental discourse composed of inner natural signs, the concepts, and endowed with an elaborate syntax very much like that of the external languages we use to communicate with each other, but semantically purer and structurally common to all human beings. This is a theme that became common in post-Ockhamistic philosophy at least up to the end of the sixteenth century, a fact which, among others, of course, seems to strongly testify to Ockham's crucial importance in the history of late medieval and early modem philosophy. But wasn't it already in his own time a very old concept? Ockham himself, after all, insists in the first chapter of his *Summa logicae* that these mental terms and propositions he is now talking about are nothing but the "mental words" (*verha mentalia*) which Augustine had extensively discussed in his *De trinitate*; and the idea of an internal *oratio* was also found, as Ockham readily acknowledges, in Boethius's detailed commentary on Aristotle's *Perihermeneias.*(4) These were very well-known texts all along in the Middle Ages and widely used by philosophers and theologians. What's so new, then, with Ockham's treatment of the topic? That is precisely the general question that lies behind the present paper.
I will attack this question here from one specific angle by concentrating on the doctrinal and historical relations between the Augustinian theme of the inner word as it was understood in thirteenth-century thought especially by Thomas Aquinas- and Ockham's idea of mental discourse.
The differences, as we shall see, are deeply significant. And we will replace them in the context of a crucial shift that occurred in the decades between Aquinas and Ockham: the shift from theology to logic as providing the main inputs and stimulations for the development--on an Aristotelian basis, of course--of a radically new sort of philosophy of mind." (pp. 125-126, two notes omitted)
(4) William Ockham, *Summa Logicae* I, 1 (St. Bonaventure, N.Y.: Franciscan Institute Publications, 1974), 7.

3. ———. 1997. "Angel's Talk, Mental Language, and the Transparency of the Mind." In *Vestigia, Imagines, Verba. Semiotics and logic in medieval theological texts (XIIth-XIVth century). Acts of the XIth Symposium on Medieval logic and semantics. San Marino, 24-28 May 1994*, edited by Marmo, Costantino, 323-335. Turnhout: Brepols.

4. ———. 1999. "Grammar and Mental Language in the Pseudo-Kilwardby." In *Medieval Analyses in Language and Cognition: Acts of the Symposium: The Copenhagen School of Medieval Philosophy, 10-13 January, 1996*, edited by Ebbesen, Sten and Friedman, Russell, 397-413. Copenhagen: C. A. Reitzels.
Summary: "In his commentary on the Priscianus Major, the author known as the Pseudo-Kilwardby proposed inner speech as the proper object for scientific grammar. It is shown here that this sermo in mente is something quite different from William of Ockham's later oratio mentalis it is a mental representation of words and not of things in general. The Pseudo-Kilwardby, in effect, delineates a purely intellectual level of linguistic representation, with a universal deep structure richly furnished. This doctrinal development is situated in its context, against the background of the increasing popularity of Aristotle's Posterior Analytics at the mid thirteenth-century university."

5. ———. 1999. "Semantics and Mental Language." In *The Cambridge Companion to Ockham*, edited by Spade, Paul Vincent, 53-75. Cambridge: Cambridge University

Press.
"At the outset of *SL* [*Summa Logicae*], Ockham endorses Boethius's old distinction between three sorts of discourse: written, spoken, and mental. The first two, he explains, are physically perceptible, whether by the eye or by the ear, and are made up of conventional signs. The units of mental language, by contrast, are concepts. They are internal to thinking minds, and their signification is natural rather than conventional.
Being mental, they are not directly perceptible – at least not in this world – to anybody but the person who internally produces them in the course of his or her private thinking. But being originally acquired as the result of a natural process, they are nevertheless strongly similar – and identically organized – from one human being to another.
Although it is not a public medium of communication, mental language is potentially common to all. Mental language is prior to, and underlies, every reasonable speech utterance and provides it with meaning. Ockham's semantical theory, as presented in SL and elsewhere, is primarily an explication of the various ways in which the natural conceptual signs that constitute the language of thought are linked with their external referents; and secondarily, of the ways in which conventional discourse is derived from this mental language." (p. 53)

6. ———. 2001. "Aquinas on Intellectual Representation." In *Ancient and Medieval Theories of Intentionality*, edited by Perler, Dominik, 185-201. Leiden: Brill.
"Many recent commentators on Thomas Aquinas have insisted that his theory of intellectual cognition should not be seen as a brand of representationalism.
(...)
My point here will be that such characterizations are in need of important qualifications: there is, as I will endeavour to show by reviewing a number of relevant texts in Aquinas's work, a perfectly acceptable sense in which his theory of intellectual intentionality is basically representationalist.
By representationalism, I will mean, in this context, any theory of cognition which attributes a crucial and indispensable role to some sort of mental representation. And by mental representation, I will mean any symbolic token existing in some individual mind and endowed within this mind with a semantic content. A mental representation, in this vocabulary, is a mental token referring to something else, something extramental in most cases. What I would like to say, then, is that Aquinas's theory does attribute a crucial and indispensable role to such intermediate mental entities in the very process of understanding.
First, I will briefly recall both the prima facie case for seeing Aquinas's theory of intellectual cognition as a brand of direct realism, and the prima facie case for seeing it as a brand of representationalism as well. And second, I will explore ways of reconciling these two opposite trends in Aquinas's thought. My main point, then, will be that the representationalist aspect of the theory must prevail In the last analysis. (pp. 185-186)

7. ———. 2003. "Debates on Mental Language in the Early Fourteenth Century." In *Aristotle's Peri hermeneias in the Latin Middle Ages Essays on the Commentary tradition*, edited by Braakhuis, Henk A.G. and Kneepkens, Corneille Henry, 85-101. Groningen: Ingenium Publishers.
"A complete assessment of William of Ockham' s originality and importance in the history of philosophy of mind and epistemology should certainly take into account his theory of mental discourse (*oratio mentali*s). This is a central topic in his writings, and it is well-known that it has also come to be central in the philosophical discussions from the 1320s until far into the fifteenth century, and even later. But what was the situation on this before Ockham? This is the general question I would like to contribute to in this paper.
Across the Latin Middle Ages, the idea that thought is a sort of inner discourse or mental speech has been conveyed in two different textual traditions, one theological and one logical. The former has to do with Augustine's notion of mental word (*verbum mentis*), which he develops mainly in his *De Trinitate*, and which was

extensively discussed during the scholastic period, usually in distinction 27 of the commentaries on the First Book of Peter Lombard's *Sentences,* and in many quodlibetal questions as well. This theological tradition I have dealt with elsewhere(2) and I will here leave it (almost) completely aside. The other medieval face of the mental language theme, the logical one, is embedded in the terminology of 'oratio mentalis' or 'oratio in mente', which comes from Boethius distinguishing in his *Second Commentary on the Perihermeneias* between three sorts of *oratio*: spoken, written, and mental; a distinction which he attributes to Porphyry and to the Peripateticians, and which, one must say, he doesn't make much of finally.(3) This is what I will call the triplex *oratio* theme.
Ockham, for one, plays it when he wants to introduce his own notion of mental language. But, contrary to what might have been expected, the theme occurs rather rarely in the thirteenth century *Perihermeneias* literature.
It is absent, for example, from such influential commentaries as Robert Kilwardby's and Albert the Great's, as well as from those of many lesser authors such as, to name but a few, Peter of Hibernia, Peter of Auvergne, Martin of Dacia, or Simon of Faversham.(4)" (p. 85, a note omitted)

(2) Panaccio (1992b) and Panaccio (l999a), in particular ch. 2, 3, 5, and 6.
(3) See Boethius, *In Peri hermeneias*, ed. lla, rec. Meiser (1880), 29-30; 35-6; and 42.
(4) It must be mentioned, though, that the *enunciatio in mente* is identified in Scotus' questions on the *Perihermeneias* as the very subject of Aristotle's book; see his In *Primum Librum Perihermeneias Quaestiones, Opus* I, q. 1, ed. Wadding, 186 (ed. Vives, Paris 1891, 539b). See Panaccio (1999a), 237-41.
References
Panaccio, C. (1992b) "From Mental Word to Mental Language", in: *Philosophical Topics,* 2012 (1992), 125-47.
Panaccio, C. (1999a) *Le discours interieur. De Platon a Guillaume d'Ockham* (Paris 1999)

8. ———. 2003. "Ockham and Locke on Mental Language." In *Metaphysics and Modal Theory, 1400-1700*, edited by Friedman, Russell and Nielsen, Lauge, 37-52. Dordrecht: Kluwer.
"What is extremely striking, though, at the present state of our knowledge, is that all this interest in mental language abruptly cools down towards the middle of the sixteenth century, leaving apparently but few
traces in the thought of the seventeenth and eighteenth centuries. I say "leaving apparently but few traces" because there is some uncertainty here.
There are, after all, interesting, if scattered, occurrences of the theme of the mental language in the seventeenth century. Thomas Hobbes, for one, in chapter III of the *Leviathan,* speaks of what he calls 'mental discourse' (*discursus mentalis* in the latin version).(3) And most notably, John Locke sometimes speaks of mental propositions, which, he thinks, are prior to and underlie spoken sentences. Intriguing questions thus arise about the connections between these seventeenth century developments and the late scholastic ideas of *oratio mentalis* or *propositio mentalis.*
My limited aim in the present paper is to contribute to the discussion of these questions by comparing John Locke and William of Ockham on mental propositions with the goal of identifying the main doctrinal similarities and differences between these two great thinkers." (pp. 37-38)
(3) See on this Pecharman ['Le discours mental selon Hobbes', *Archives de philosophie* 55, 553-573] 1992.

9. ———. 2003. "Connotative Concepts and Their Definitions in Ockham's Nominalism." In *La tradition médiévale des Catégories (xiie-xve siècles)*, edited by Biard, Joël and Rosier-Catach, Irène, 141-155. Louvain: Peeters.
"William Ockham, as is well known, thinks of Aristotle’s theory of the ten categories as a classification not of things in themselves, but of *signs* of external things. Ontologically speaking, things, in his view, are either singular substances

(horses, for example), singular qualities (whitenesses, for example), or essential parts of substances (namely: singular substantial forms and parcels of prime matter), and nothing else(1). No isomorphism is taken to hold between this rarefied ontological domain and the array of simple first-order general terms with which the Aristotelian classification is thought to be concerned. This discrepancy between signs and things gives rise, at the heart of Ockham's thought, to a nominalist program with respect to the categories, that of showing how all these various kinds of terms which are distributed among the Aristotelian ten categories need be referentially connected with nothing but singular substances, qualities, and essential parts of substances.
What does this program amount to exactly? What, in the end, should ockhamism show in order to make its point about the categories? This question crucially lurks in the background of much recent discussion on Ockham's semantics, on his theory of mental connotation in particular. What I would like to do here is to explain what I take Ockham's nominalist program to be with respect to connotative terms, and to clarify in so doing the role he attributes to nominal definitions in this program, a point which has become crucial in the recent literature on Ockham." (p. 141)
(1) A detailed ptesentaliun ot Ockham's ontology is found in M.M. Adams, *William Ockham*. Notre Dame, Ind., I997, pp. 3-313, and a summarized on in C. Panaccio, "William of Ockham", § 2-3, in *Routledge Encyclopedia of Philosophy*, vol IX, London, 1998. For Ockham's insistence on the reality of form and matter, see A. Goddu, *The Physics of William of Ockham*, Leiden, 1984, pp. 95-111.

10. ———. 2004. *Ockham on Concepts*. Aldershot: Ashgate.
"It should be mentioned that some of the developments to be read here partly correspond to previously published papers of mine:
• Chapter 1 is closely based on an article originally written in French ('Intuition, abstraction et langage mental dans la théorie occamiste de la connaissance', *Revue de Metaphysique et de Morale*, 97/1, 1992, pp. 61-81).
• A preliminary version of chapter 4 has circulated for quite some time among specialists in an informal 'prepublication' format ('Connotative terms in Ockham's mental language', *Cahiers d' epistémologie,* no. 9016,
Montreal, Universite du Quebec a Montreal, 1990, p. 21), and a slightly different one later appeared in French in an Italian journal ('Guillaume d'Ockham, les connotatifs et le langage mental', *Documenti e studi sulla tradizione filosofica medievale*, 11, 2000, pp. 297-316).
• Chapter 5 freely makes use of ideas about nominal definitions that I originally presented at the XIIIth European Symposium for Medieval Logic and Semantics held in Avignon in June 2000, in a contribution that was subsequently published in the acts ('Connotative concepts and their definitions in Ockham's nominalism', in *La tradition medievale des Catégories,* Joel Biard and Irene Rosier-Catach, eds, Leuwen: Peeters, 2003, pp. 141-55).
• Section 1 of chapter 9 is a revised version of a recent paper in French ('Guillaume d'Ockham et les syncategoremes mentaux: la première theorie', *Histoire, Epistemologie, Langage*, 25/2, 2003, pp. 145-'60)." (p. IX)
"This book is an exercise in interpretation. My background conviction is that William of Ockham's nominalism, even if elaborated in the distant context of the early fourteenth century, still provides a challenging and fruitful body of theory to be in dialogue with today. In philosophy of mind and language, in particular, Ockham's obstinate refusal to countenance anything but concrete singular beings in the real world, and the way he knits together on this basis an intriguing array of theses and arguments about mental language, intentionality, and reference, could have, I suspect, a healthy counterbalancing effect against the prevailing fondness in these fields for abstract entities of all sorts: general properties, natural kinds, linguistic types, Fregean propositions, and what not ... But surely, the prerequisite for these appealing virtues to be actualized is that the theory be well understood! And there still exists, I am afraid, wide disagreements among specialists as to what

exactly Ockham's nominalistic programme amounts to, especially with regards to cognition.
This is what I want to address here.
The focus will be on concepts - *conceptus* in Ockham's vocabulary - taken by him as the basic units of mental representation. Several discussions have been going on around Ockham's theory of concepts in the last fifteen years or so, in the aftermath of the remarkable critical edition of his philosophical and theological writings completed at St. Bonaventure University in the late 1980s, and of the publication in 1987 of Marilyn Adams's landmark synthetical study, *William Ockham*. My aim in the present work is to propose a thorough presentation and defence of how I understand Ockham's positions on the matter in the light of these recent developments." (p. 1)

11. ———. 2006. "Conceptual Acts." In *Intellect et imagination dans la philosophie médiévale / Intellect and Imagination in Medieval Philosophy / Intelecto e imaginação na filosofia medieval*, edited by Pacheco, Maria Cândida and Meirinhos, José Francesco, 37-51. Turnhout: Brepols.
Actes du XIe Congrès international de philosophie médiévale de la Société internationale pour l'Étude de la philosophie médiévale (S.I.E.P.M.), Porto, du 26 au 31 août 2002, vol. I.
"Two kinds of links were standardly made in medieval philosophy between thought and action. There is, on the one hand, the connection between internal thought and the actions which mental deliberation brings about, sometimes, as an outward result of the practical conclusions reached by the intellect. The very idea of a mental discourse, actually, was best illustrated, for many medieval authors, by the craftsman’s mental planning of what he or she is about to doi. So here is the first connection : inner thought is taken to manifest itself in external actions. And this already raises, undoubtedly, fascinating philosophical issues about which much is to be found in medieval texts. But what I will be interested in is the other general sort of connection that came to be regularly discussed in the thirteenth and fourteenth centuries between the theme of mental discourse and that of *actio* or *actus*. Something philosophically important, I think, took place exactly there and this is what I would like to draw attention to on the present occasion." (p. 37)

12. ———. 2007. "Mental Language and Tradition Encounters in Medieval Philosophy: Anselm, Albert and Ockham." *Vivarium* no. 45:269-282.
Abstract: "Medieval philosophy is often presented as the outcome of a large scale encounter between the Christian tradition and the Greek philosophical one. This picture, however, inappropriately tends to leave out the active role played by the medieval authors themselves and their institutional contexts. The theme of the mental language provides us with an interesting case study in such matters. The paper first introduces a few technical notions-'theme', 'tradition', 'textual chain' and 'textual borrowing'-, and then focuses on precise passages about mental language from Anselm of Canterbury, Albert the Great and William of Ockham. All three authors in effect identify some relevant Augustinian idea (that of 'mental word', most saliently) with some traditional philosophical one (such as that of 'concept' or that of 'logos endiathetos'). But the gist of the operation widely varies along the line and the tradition encounter is staged in each case with specific goals and interests in view. The use of ancient authoritative texts with respect to mental language is thus shown to be radically transformed from the eleventh to the fourteenth century."

13. ———. 2010. "Mental Language and Predication: Ockham and Abelard." *Analytica. Revista de Filosofia* no. 14:183-194.
Abstract: "One of the main tenets of my book *Le discours intérieur. De Platon à Guillaume d’Ockham* was that strictly speaking, the idea of mental language originated with William of Ockham in the late 1310s and early 1320s.
In a recent paper, however, Peter King claims that “Abelard was the author of the first full-fledged theory of mental language in the Middle Ages”. In this paper I

would like to reply to King's claim, and to point out the very significant differences that exist between Abelard and Ockham on mental language."

14. ———. 2015. "Ockham's Externalism." In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 166-185. New York: Fordham University Press.
"Externalism in recent philosophy is the idea that the internal states of an agent do not suffi ce in general to determine the content of what she thinks, or knows or does not know, or the meaning of what she says. Under one guise or another, externalism has been defended by some of the most prominent analytic philosophers of the last three or four decades, including Hilary Putnam, Saul Kripke, Tyler Burge, Jerry Fodor, Donald Davidson, Ruth Millikan, David Armstrong, and Alvin Goldman. What I would like to show here is that there was already an important externalist drive in William of Ockham's theory of language and mind in the early fourteenth century." (p. 166, a note omitted)

15. ———. 2016. "Ockham on Nominal Definitions, Synonymy and Mental Language." In *Formal Approaches and Natural Language in Medieval Logic: Proceedings of the XIXth European Symposium of Medieval Logic and Semantics, Geneva, 12-16 June 2012*, edited by Cesalli, Laurent, Goubier, Frédéric and Alain, de Libera., 393-416. Barcelona - Roma: Fédération Internationale des Instituts d'Études Médiévales.
"The one point I wish to develop further in the present context is the matter of synonymy, which still seems to be controversial. I have argued in this regard for three interpretative thesis: (1) Ockham's conception of
nominal definitions does not require them to be synonymous with their definienda; (2) they usually cannot be synonymous with their definienda; and (3) Ockham explicitly acknowledges on at least one occasion that nominal definitions and their definienda are not always synonymous(9).
From a semantical point of view a connotative term for Ockham as I understand him is not a mere abbreviation for its nominal definition. He does accept the possibility of abbreviations in conventional language
admittedly(10) –and surely such abbreviations, when they occur, are totally equivalent semantically with the corresponding abbreviated phrases–, but my contention is that this is not in general the situation we have with nominal definitions. This claim having recently been challenged on the basis of detailed textual counterevidence(11), I need to revisit the matter and this is what I aim to do in this paper." (pp. 395-396)
(9) [Panaccio, *Ockham on Concepts*] ch. 4, esp. pp. 69-73.
(10) See Ockham*, SL* I, 8, *OPh* I, pp. 29-30: «Possunt enim utentes, si voluerint, uti una dictione loco plurium».
(11) See F. Amerini, «William of Ockham and Mental Synonymy. The Case of Nugation», Franciscan Studies, 67 (2009) 375-403.

16. ———. 2017. *Mental Language: From Plato to William of Ockham*. New York: Fordham University Press.
Translation of *Le discours intérieur. De Platon à Guillaume d'Ockham*, by Joshua P. Hochschild and Meredith K. Ziebart.
Contents; Editorial Foreword IX; Preface XI; Introduction 1: Part I: The Sources; 1. Plato and Aristotle 11; 2. *Logos endiathetos* 28; 3. *Verbum in corde* 58; 4. *Oratio mentalis* 78; Part II: Thirteenth-Century Controversies; 5. Triple Is the Word; 6. Act versus Idol 121; 7. Concept and Sign 140; 8. What Is Logic About? 159; Part III: The *Via moderna*; 9. Ockham's Intervention 179; 10. Reactions 198; Conclusion 217; Postscript to the English-Language Edition (2014) 229; On the ancient and patristic sources, 229; On Augustine and Boethius, 234; On Abelard and the twelfth century, 236; On Aquinas and the thirteenth century, 238; On Ockham and the late medieval period, 247; Bibliography 259; Index of Names 277-283.
"Since the original French version of this work in 1999, quite a lot of research has been done on the history of the idea of mental language, especially in the Middle

Ages. As far as I can see, however, very little of what I wrote here needs to be withdrawn, and since no other monographical survey has covered the same ground in the meanwhile, the publication of an integral translation seemed appropriate. The material, on the other hand, can be updated, and I will address this briefly in the present postscript.
Comprehensiveness cannot be hoped for—it would require another volume, I am afraid—but I will at least react to published discussions of various parts of the book, while expressing along the way a few scattered aft erthoughts prompted by recent research in the f1ield." (p. 229)

17. ———. 2017. "Linguistic Externalism and Mental Language in Ockham and Buridan." In *Questions on the Soul by John Buridan and Others: A Companion to John Buridan's Philosophy of Mind*, edited by Klima, Gyula, 225-237. Cham, Switzerland: Springer.
"Linguistic externalism, as I understand the label, is—in Hilary Putnam's famous words—the thesis that linguistic meanings "just ain't in the head" (1975, 227)." (p. 225)
(...)
"If I am right that Ockham was strongly, and to some extent self-consciously, committed to linguistic externalism, it seems interesting from the point of view of the history of philosophy to ask what happened to the thesis after Ockham. In recent philosophy, linguistic externalism, as promoted by Hilary Putnam and Saul Kripke, has been considered a major turn in philosophy of language, sometimes even a genuine revolution. Did anything of the sort happen in fourteenth century philosophy of language on the heels of Ockham? My own expectation was that the main nominalist leaders after Ockham would have also endorsed the thesis. As far as I can see at this point, however, this does not seem to be the case. Adam Wodeham, for one, disagreed with Ockham on this issue and defended—explicitly against Ockham—a version of linguistic internalism.(2) The question I want to raise here is: What about Buridan? My claim will be that despite some appearances to the contrary, Buridan's considered position on linguistic meaning is a form of internalism rather than externalism.
I will first briefly recall what the case is for interpreting Ockham as a linguistic externalist; I will then turn to Buridan."
(2) See Panaccio (2012)
References
Panaccio, C. (2012). *Le nominalisme du xiv e siècle et l'universalité des concepts*. In A. Musco et al. (Eds.), *Universalità della ragione. Pluralità delle filosofie nel Medioevo* (pp. 481–488). Freiburg: The International Society for the Study of Medieval Philosophy.
Putnam, H. (1975). The meaning of 'Meaning'. In *Mind, language and reality. Philosophical papers* (Vol. 2, pp. 215–271). Cambridge: Cambridge University Press.

18. ———. 2023. *Ockham's Nominalism: A Philosophical Introduction*. New York: Oxford University Press.
"This book is about William of Ockham's views on universals, relations, and quantities. The underlying conviction is that his ideas on these matters are still of interest for today's philosophical discussions and that taken together they constitute a rich network of positions and arguments that deserve to be taken into consideration in metaphysics, epistemology, and philosophy of language."
(...)
"The focus will be on three central Ockhamist theses that can be brought together under the label of "nominalism." Here they are in preliminary formulations:
(1) Everything in the world is singular; generality is a semantic feature, not an ontological one: universals are nothing but signs.
(2) Relations are not a special kind of beings; relational signs are special indeed, but this is a matter of the distinctive ways in which they refer to non-relational things.

(3) Quantities, such as numbers and geometrical dimensions, are not a special kind of beings either; quantitative signs are special, but this is also a matter of the distinctive ways in which they refer to things in the world." (pp. 1-2)

19. ———. 2023. "Four Notes on the Grammar of Ockham's Mental Language." In *Metaphysics Through Semantics: The Philosophical Recovery of the Medieval Mind. Essays in Honor of Gyula Klima*, edited by Hochschild, Joshua P., Nevitt, Turner C., Wood, Adam and Borbély, Gábor, 207-219. Cham (Switzerland): Springer.
One of the main points of this book of mine [*Mental Language: From Plato to William of Ockham*] is that while the idea of mental discourse was present in Greek and medieval philosophy since Plato at least, William of Ockham accomplished a genuine revolution in the philosophy of mind by taking the linguistic model for human thought with utmost seriousness. Ockham purpose fully transferred the categories of Latin grammar and medieval logic to the fine-grained analysis of intellectual thought and this move had a major impact for the next two centuries at least. In the recent literature about Ockham the accent has been on his use of the logical theory of the "properties of terms" in developing this linguistic conception of thought (see e.g. Panaccio 1999a, b; Schierbaum 2014). The approach clearly presupposes, however, that human thought be endowed with a syntax and for this, Ockham turns to grammar rather than logic. Which grammatical categories exactly, he asks, should be transferred to the analysis of thought?
Two parallel passages in his works are dedicated to this question: *Quodlibeta* V, 8 (Ockham 1980, 508–513) and *Summa logicae* I, 3 (Ockham 1974, 11–14). His answer is roughly the same in both: since mental language must have at least as much expressive power as any conventional language, the grammatical distinctions that are liable to make a difference in the truth-value of spoken or written sentences must be reflected somehow in the syntax of human mental language." (pp. 207-208)
References
Ockham, William, 1974. *Summa logicae*. In *Guillelmi de Ockham opera philosophica*, ed. P. Boehner, G. Gal, and S. Brown, vol. I. St. Bonaventure: The Franciscan Institute.
———. 1980. *Quodlibeta septem.* In *Guillelmi de Ockham opera theologica*, ed. J.C. Wey, vol. IX. St. Bonaventure: The Franciscan Institute.
Panaccio, Claude 1999a. *Le discours intérieur: De Platon à Guillaume d'Ockham*. Paris: Éditions du Seuil.
———. 1999b. *Semantics and mental language*. In Spade 1999, 53–75.
Schierbaum, Sonja. 2014. *Ockham's assumption of mental speech: Thinking in a world of particulars*. Leiden: Brill.
Spade, Paul V., ed. 1999. *The Cambridge companion to Ockham.* Cambridge: Cambridge University Press.

20. Pasnau, Robert. 1997. "Aquinas on Thought's Linguistic Nature." *The Monist* no. 80:558-575.
"Thomas Aquinas gives us many reasons to think that conceptual thought is linguistic in nature. Most notably, he refers to a mental concept as a verbum or word. He further says that such concepts may be either simple or complex, and that complex concepts are formed out of simple ones, through composition or division. These complex concepts may either affirm or deny a predicate of a subject."
(...)
"In this paper I will focus on two such accounts, each of which finds some support in Aquinas's work. One is the claim that the content of our thought is in some way linguistic. I will be considering a number of ways in which this might be so. In every case the guiding idea will be that there is a match between what we are thinking and what we express (or might express) in our own spoken language. I'll refer to this as the thesis of *semantic likeness*."
(...)
"Thought might be like language in another way if thought were structurally linguistic. By this I mean that thoughts would be language-like in their underlying

form-complex thoughts would be formed out of simpler conceptual units, in accord with some kind of syntax. This thesis points to the medium as distinct from the content of thought. I 'II be referring to this as the thesis of *syntactic likeness* between thought and language. This thesis is what has come to be known in recent philosophy as the language-of-thought hypothesis;(4) it was, as we shall see, also defended by some scholastic philosophers. I will argue that Aquinas defends the syntactic-likeness thesis in part, but at a crucial point stops short of a full defense." (pp. 559-560)
(4) One classic discussion is Jerry Fodor's *The Language of Thought (*New York: Thomas Crowell, 1975). For an introductory treatment see J. Christopher Maloney, *The Mundane Matter of the Mental Languag*e (Cambridge: Cambridge University Press, 1989).

21. Pasquier, Anne. 2013. "Parole intérieure et parole proférée chez Philon d'Alexandrie et dans l'Évangile de la Vérité (NH I,3)." In *Gnosticism, Platonism and the Late Ancient World: Essays in Honour of John D. Turner*, edited by Corrigan, Kevin, Rasimus, Tuomas, Burns, Dylan M., Jenott, Lance and Mazur, Zeke, 199-208. Leiden: Brill.
"Bien que l'on puisse trouver précédemment ce thème chez Platon et Aristote, la terminologie spécifique, c'est-à-dire les occurrences les plus anciennes de l'expression *logos endiathetos*, se distinguant du *logos prophorikos*, datent du Ier siècle de notre ère.(10) Une étude approfondie sur le thème du langage mental et proféré, celle de Claude Panaccio, met bien en lumière les contextes dans lesquels se développe ce thème qui devient, à partir du Ier siècle de notre ère, une idée commune de la philosophie grecque(11).
La majorité des occurrences connues, souvent d'inspiration platonicienne, conduisent directement ou indirectement soit vers Alexandrie, soit l'Asie mineure. Cette terminologie est bien présente chez Philon d'Alexandrie et on en trouve une mention unique à la même époque chez un certain Héraclite, un allégoriste tout comme Philon(12). Le fait que les deux auteurs anciens soient des allégoristes révèle d'emblée le principal contexte d'apparition.
Alors que peu à peu, dans les écoles philosophiques des IIe et IIIe siècles, ces occurrences ne concernent plus nécessairement l'exégèse allégorique, chez les premiers écrivains chrétiens en revanche, on y reste attaché.
Au Ier siècle, en effet, le couple verbe intérieur et verbe extérieur entre dans le vocabulaire courant de l'exégèse allégorique, que celle-ci porte sur Homère, Hésiode, les mythes grecs ou encore sur la Bible." (pp. 201-202)
(10) Platon, *Phileb*. 39A; *Theaet.* 189E5; Aristote, *Cat.* 6 4B34; *An. post.* 1.10 76B24.
(11) Voir Panaccio [*Le discours intérieur de Platon à Guillaume d'Ockham*. Paris: Seuil] 1999.(...)

22. Pelletier, Jenny. 2018. "William Ockham on the Mental Ontology of Scientific Knowledge." In *The Ontology, Psychologyand Axiology of Habits (Habitus) in Medieval Philosophy*, edited by Faucher, Nicholas and Roques, Magali, 285-299. Cham (Switzeand): Springer.
Absract: "It has long been acknowledged that one of the most original aspects of Ockham's account of knowledge is his contention that bodies of scientific knowledge are aggregates but without much explanation as to why he holds this view. In this chapter, I argue that a plausible philosophical motivation lies in the inner structure of his mental ontology, namely, in the intellect's habits, acts, and their objects, which are the true and necessary principles and conclusions of demonstrations.
Ockham upholds what I call a "Principle of Object-Act-Habit-Specification," according to which kinds of habits and their acts are determined by the objects they grasp. This principle entails that if a body of scientific knowledge contains two or more sentences, it can only have aggregate unity. Furthermore, I look at the logical and determinate orders that gather together the sentences of various aggregate bodies of scientific knowledge."

23. Pelletier, Jenny, and Roques, Magali, eds. 2017. *The Language of Thought in Late Medieval Philosophy: Essays in Honor of Claude Panaccio*. Dordrecht: Springer.
Contents: 1 RETRACTED CHAPTER: Magali Roques and Jenny Pelletier: An Introduction to Mental Language in Late Medieval Philosophy 1 (The authors have retracted this chapter [1] because of significant textual overlap with a number of sources. All authors agree to this retraction. Magali Roques accepts responsibility for introducing this overlap into the text.); 2 Jenny Pelletier and Magali Roques: An Interview with Claude Panaccio 27;
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24. Perala, Mika. 2014. "Ancient and Early Medieval Theories." In *Sourcebook for the History of the Philosophy of Mind: Philosophical Psychology from Plato to Kant*, edited by Knuuttila, Simo and Sihvola, Juha, 359-378. Dordrecht: Springer.
"There were two ancient traditions on signs and language which played a significant role in medieval discussions: the Aristotelian tradition deriving from Boethius's second commentary on the *De interpretatione*, and the Augustinian tradition (with some Stoic influences), which was important to early medieval theorists such as Anselm of Canterbury and Peter Abelard. These two traditions remained separate in many contexts, but there were also authors who drew from both sources, raised further questions, and opened up perspectives in entirely new directions." (p. 359)
(...)

"Higher education started with logic, in accordance with all major schools of philosophy: the Peripatetic, Stoic, and the Platonist. A common conception was that although grammar was a product of human art, the basic partitions into the parts of speech were constrained by nature, and thus grammar, as an art, imitated nature. Some new ideas were put forward in the late thirteenth century by the 'modists' who argued that grammar should be regarded as a science rather than an art. On their view, all spoken languages are based on a universal grammar.
What was characteristic of their view was the assumption that there is a structural analogy between the 'modes of being', the 'modes of understanding', and the 'modes of signifying' which are common to all languages. The critics of the modists, of whom the most distinguished were mental language theorists such as William of Ockham, did not oppose the assumption of a universal grammar as such, but the assumption concerning the structural analogy between speech, understanding, and reality, and the assumption that in each linguistic expression, there inheres a mode of signifying." (p. 361)

25. Pérez-Ilzarbe, Paloma. 2009. "Jerónimo Pardo on the unity of mental propositions." In *Le langage mental du Moyen Âge à l'âge classique*, edited by Biard, Joël, 185-204. Louvain: Peeters.
"Pardo' s views on mental language reflect an advanced status of the discussions on this issue. Almost two centuries have passed since Ockham's innovative theses were delivered, and since the reactions of his contemporaries which followed. Given this distance from the original controversy, Pardo does not address the problem of mental language as an independent one, but rather he uses the notion of a mental language (which he takes for granted) when he needs it, either to solve some logical difficulty or to substantiate some of his semantic theses.
Pardo's logical work (*Medulla Dyalectices*: Paris, 1500, 1505) is constructed around a core issue, namely, the problem of truth. All his analyses are directed to finding out what it is that truth and falsity depend on.
In this approach, propositions (and also mental propositions) become the focus of the majority of Pardo's reflections. I have chosen the question of the unity of mental propositions, because it is extensively treated by Pardo, so that the detailed discussion allows him to bring into play his whole theory of language and thought." (p. 185, a note omitted)

26. Perini-Santos, Ernesto. 2016. "The Underdetermination of Mental Language in William of Ockham and John Buridan." In *Formal Approaches and Natural Language in Medieval Logic: Proceedings of the XIXth European Symposium of Medieval Logic and Semantics, Geneva, 12-16 June 2012*, edited by Cesalli, Laurent, Goubier, Frédéric and de Libera, Alain, 417-434. Barcelona - Roma: Fédération Internationale des Instituts d'Études Médiévales.
"The central theoretical role of mental language is to explain the intentionality of conventional languages. This thesis is usually accepted by medieval philosophers, and it follows from Aristotle's *De Interpretatione*,
I, 16 or at least from Boethius' interpretation of it(1). However, the idea of a mental language has been fully developed only in the XIVth century, by William of Ockham, as Claude Panaccio has shown in his seminal work(2): Ockham was the first to apply the apparatus of supposition theory to mental sentences, thereby building a structured language in the mind, as opposed to isolated concepts, on the one hand, and to mental counterparts of conventional languages, on the other."
(...)
"Geach's criticism[3] John Trentman's answer to it, comparing Ockham's ML [=*mental language*] with «slightly old-fashioned ideal languages of twentieth-century philosophers»(4) may seem both a bit outdated now. There is a criterion guiding the description of ML in Ockham's philosophy, and Geach's charge doesn't seem to be justified. However, the parallel with ideal languages suggested by Trentman is also far-fetched, the proposed criterion is not enough to fully determine the syntax of mental sentences.

Some of the most able interpreters of Ockham have proposed different solutions to deal with this underdetermination, and (at least some of them) think that it prevents Ockham's theory to fulfi ll all the expectations raised by the very project of a ML. I will examine two strategies, proposed by Marilyn Adams and Calvin Normore, to deal with this issue. My aim is to show that both proposals are wanting –and I hasten to say that I don't have another way out of this quandary, if quandary it is." (pp. 417-418)
(1) Aristotle, *De Interpretatione* I, 16a3-9, Transl. J. L. Aclrill, Clarendon Press, Oxford 1963. For Boethius' interpretation, see J. Magee, *Boethius on Signification and Mind*, Brill, Leiden – New York 1997.
(2) C. Panaccio, *Le Discours Intérieur,* Seuil, Paris 1999, and *Ockham on Concepts*, Ashgate, Aldershot – Burlington 2004.
(3) P. Geach, Mental Acts, Routledge and Kegan Paul, London 1957, p. 102.
(4) J. Trentman, «Ockham on Mental», Mind, 79 (1970) 588.

27. Perler, Dominik. 1997. "Crathorn on Mental Language." In *Vestigia, Imagines, Verba. Semiotics and logic in medieval theological texts (XIIth-XIVth century). Acts of the XIth Symposium on Medieval logic and semantics. San Marino, 24-28 May 1994*, edited by Marmo, Costantino, 337-354. Turnhout: Brepols.

28. Pini, GIorgio. 1999. "Species, Concept, and Thing: Theories of Signification in the Second Half of the Thirteenth Century." *Medieval Philosophy and Theology* no. 8:21-52.
"The standard reconstruction of the medieval debate on signification goes as follows. Until the end of the thirteenth century, the discussion over signification is dominated by the Aristotelian theory as interpreted by Boethius. This theory, which can be labeled as the traditional theory of signification, distinguishes between primary and secondary signification. Names primarily signify concepts in the mind. Since concepts are representations of extramental things, extramental things are secondarily signified by the names that primarily signify concepts.6 Around the end of the thirteenth century, however, the traditional theory of signification is challenged by a new theory. According to this new theory, names primarily signify extramental things. By contrast, concepts are not what names primarily signify but, at best, a necessary condition for their signification. The new theory of signification provides an interpretation of Aristotle different from that of Boethius, but it obviously has some difficulties in explaining Aristotle's text in a convincing way. In fact, the new theory of signification seems to be a real departure from the mentalistic theory of signification based on Aristotle." (p. 22)
(...)
"In what follows, I first show how Scotus understands the question concerning signification. Second, I briefly introduce the notion of intelligible species. Third, I analyze Scotus's account of a first opinion on signification.
(...)
The conclusions I draw are that Scotus himself cannot be regarded as one of the first supporters of the theory of the primary signification of the extramental thing, and that he cannot be regarded as an original figure in the controversy over the signification of words, since he is merely expounding positions that are already old when he refers to them. I hope that this analysis of Scotus's treatment of signification in his two commentaries on *Peri hermeneias* will provide a clearer and more accurate understanding of two of the most influential semantic views held at the end of the thirteenth century, that is, the view that names primarily signify intelligible species and the view that they primarily signify things." (p. 24)

29. Pizzone, Aglae. 2022. "Emotions and λόγος ἐνδιάθετος. Πάθη in John Sikeliotes' Commentary on Hermogenes' *On Types of Style*." In *Emotions through Time: From Antiquity to Byzantium*, edited by Cairns, Douglas, Hinterberger, Martin, Pizzone, Aglae and Zaccarini, Matteo, 141-156. Tübingen: Mohr Siebeck.
"In ancient Greece the very first systematic theorization of the emotions famously came to be in Aristotle's treatise on rhetoric. The nexus between rhetoric and

affective response has been inextricable ever since. It is therefore all the more surprising that, despite both the interest in the history of the emotions in Byzantium(1) and the strong emotional overtones of much of Byzantine rhetoric, no consideration has hitherto been given to the theorizations of the emotions in Byzantine rhetorical treatises. My contribution aims to address this topic, taking its cue from the commentary on Hermogenes' treatise *On Types of Style* authored in the eleventh century by John Sikeliotes." (p. 141)
(...)
"This contribution will therefore investigate the discursive definition of πάθη provided by Sikeliotes. A full understanding of such a definition is crucial, as it represents the cornerstone of subsequent reflections on the nature and function of the emotions in rhetoric. In order to explore the meaning and relevance of πάθη in John's commentary, however, it is necessary to take a step back and look first at some aspects of Sikeliotes' philosophy of language. Πάθη are in fact discussed by John mostly in connection with μέθοδος, or approach, one of the eight components through which speech is created: thought or content, approach, diction, figures of speech, clauses, word order, cadence, and rhythm.(12) Πάθη, qua movements of the soul, are seen as the equivalent of approach specifically when John discusses Hermogenes' λόγος ἐνδιάθετος. That is why we must first dive into the meaning of λόγος ἐνδιάθετος in Sikeliotes' commentary and into the thorny question of the difference between λόγος προφορικός (uttered or outer speech) and λόγος ἐνδιάθετος (internal speech). This discussion will in turn raise further questions on the linguistic – or non-linguistic – nature of the emotions and on their status within Christian discourse. If emotions – experienced and elicited – are seen not just as a powerful tool to manipulate the audience, but, rather, as ontologically connected with innate and truthful speech, their ethical value becomes unquestionable. Emotions, in fact, characterize the most preferable and best possible discursive type from a quintessentially Christian point of view." (p. 143)
(To sum up: the complex theoretical framework advanced by Sikeliotes in hiscommentary on Hermogenes, building on classical heritage, gives the expression of emotions a consistent ontological and psychological status, one that not only legitimizes them from a Christian moral point of view but is also in dialogue with Byzantine cultural practices well beyond rhetoric." (p. 156)
(1) See the Introduction to this volume.
(12) On these elements see Patillon (1988) [*La théorie du discours chez Hermogène le rhéteur, essai sur la structure de la rhétorique ancienne* (Paris)]; [Kennedy, G. (1994) [*A New History of Classical Rhetori*c Princeton)] 216

30. Read, Stephen. 2015. "Concepts and Meaning in Medieval Philosophy." In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 9-28. New York: Fordham University Press.
"Mental language
The seeds were sown in Boethius's commentary on Aristotle; they were nurtured and developed in the thirteenth-century discussions of the sign; but the full theory of a language of concepts, a mental language, found its most famous (or notorious) exponent in the fourteenth century, namely, William of Ockham. A further inspiration for Ockham, and others, was Augustine's image, in his *De Trinitate*, of an inner language. For Ockham, this fi nally broke the most important link in the Aristotelian chain, that between spoken word and concept.
Ockham no longer describes this as a link of signifi cation. Rather, the spoken word is subordinated to the corresponding mental word, and the spoken proposition is subordinated to the mental proposition. The mental word is a concept, a mental item fi tted for inclusion in a mental proposition. This is the primary language, what naturally has signification." (p. 18)
(...)
"Language is threefold (written, spoken, and mental), but the focus is on mental language. Mental language is common to all, whereas written and spoken languages differ between different peoples, as Aristotle had observed. Mental language

provides a “universal semantics,”(30) a natural medium whose properties of signifi cation arise naturally by a causal process. Having a certain concept is not independent of having certain linguistic abilities; it is an ability to exercise those concepts that confers on written and spoken utterances the signifi cation which they have." (p. 19?)
(30) The phrase is Nuchelmans’s. See G. Nuchelmans, *Late-Scholastic and Humanistic Theories of the Proposition* (Amsterdam: North-Holland, 1980), 4.

31. Robert, Aurélien. 2010. "William Crathorn on Predication and Mental Language." *Analytica. Revista de Filosofia* no. 14:227-258.
"Our Dominican can be considered to be a radical nominalist:6 there is no universal in reality but only singular things; categories are only classes of names signifying singular entities; the truth of propositions has to be analyzed through the semantics of terms. But unlike Ockham, he does not accept the Augustinian idea that there is a natural and universal mental language comprised of natural representations perfectly shared by the whole community of human beings. According to Crathorn, the semantical properties of terms in the human mental language are purely conventionnal.
Our aim in this paper is to understand this original theory of language, and more precisely, its epistemological constraints.
(...)
"We will argue that Crathorn’s interpretation of language, and in particular his refusal of Ockham’s theory of mental language, makes such a contextual analysis impossible." (pp. 227-228, a note omitted)

32. ———. 2016. "Crathorn Versus Ockham on Cognition, Language, and Ontology." In *A Companion to Responses to Ockham*, edited by Rode, Christian, 47-78. Leiden: Brill.
"From what has been presented above, it appears that William Crathorn cannot support the same view on mental language. The problem for Crathorn is that the human mind can only have an intuitive cognition of internal or external sensible qualities. As a consequence, if our mental language were composed of natural signs of things, and if its terms were our mental acts of cognition or their objects, there would be only natural signs of qualities in it.
Therefore, in Crathorn’s theory, the only way for species in the mind to be signs of something other than qualities is by conventional signification. This is what Crathorn tries to show in the entire Question 2 of his *commentary on the Sentences*: (46) natural representations of qualities cannot explain the signification of all the terms that can be expected in a mental language naturally and universally shared by the whole human community. For instance, as shown above, we cannot have natural signs of substances, and neither can we have natural signs of God and generally speaking of anything that is not cognized intuitively. Nor can we form natural signs corresponding to syncategorems (such as “some,” “all,” “therefore,” etc.), nor to very general terms such as “being” (ens), because we have no representations (species) of what they signify.
Indeed, what could be a natural representation of being in general or a representation of a quantifier?" (pp. 60-61, two notes omitted)
(46) Esp. 167–188.

33. Roncaglia, Gino. 2003. "Mesino de Codronchi's Discussion on Syncategoremata and Mental Language in his *Quaestiones on De interpretatione*." In *Aristotle's Peri hermeneias in the Latin Middle Ages: Essays on the Commentary Tradition*, edited by Braakhuis, Henk A. G. and Kneepkens, Corneille Henry, 149-163. Groningen: Nijmegen Publishers.
"Mesino de Codronchi was professor of logic at the University of Bologna between 1382 and 1394; although he has received little attention to date, we know that his works were highly influential in Italy during the 15th century, and were appreciated by philosophers such as Gaetan of Thiene."
(...)

Here I will give a little essential information on the manuscript tradition, and in the main section of this paper I will deal more extensively with Mesino's discussion of mental language, focusing on his answer to the question of whether mental language includes syncategoremata or not, and on his treatment of the mental copula." (pp. 149-150)
(...)
"Our interest will focus on Mesino's discussion of the internal structure of mental language, and on the presence in it of syncategorematic mental terms. Before dealing directly with Mesino's text, however, it may be useful to recall that according to Ockham both categorematic and syncategorematic terms are included in mental language:
Adhuc aliter dividitur terminus, tam vocalis quam mentalis, quia terminomm quidam sunt categorematici, quidam syncategorematici. (14)
But what precisely are syncategorematic mental terms? This question was connected with at least two, more general problems: on the one hand, that of the status of mental terms tout court; on the other, that of the nature and meaning of the *propositio* as a whole." (pp. 151-152)
(14) Ockham, *Summa log*., 1, 4, ed. Boehner e.a. (1974), 15, 4-5 (my italics); cf. ibid., 43; Ockham, *Quodlibeta,* IV, q. 35, art. 1, ed. Wey (1980), 470, 23-37.

34. Roques, Magali. 2019. "Metaphor and mental language in late-medieval nominalism." *Bochumer Philosophisches Jahrbuch für Antike und Mittelalter* no. 22:136-167.
Abstract: "In this paper, I intend to examine the conception of metaphor developed by fourteenth-century nominalist philosophers, in particular William of Ockham and John Buridan, but also the Ockhamist philosophers who were condemned by the 1340 statute of the faculty of arts of the University of Paris. According to these philosophers, metaphor is a transfer of meaning from one word to another. This transfer is based on some similarity, and is intentionally produced by a speaker. My aim is to study whether this view on metaphor is related to a specific view on the relation between thought, language, and communication. With this case study, I intend to argue that the view on the nature of thought one holds does not necessarily determine what the nature and function of metaphor are. I will show that the three philosophical doctrines under study diverge in their understanding of the mechanisms of a metaphor, while they share the same view on the nature of thought, namely that thought is a mental language."

35. Schierbaum, Sonja. 2014. *Ockham's Assumption of Mental Speech: Thinking in a World of Particulars*. Leiden: Brill.
"I claim that it is correct to view AMS (*oratio mentalis*, for short) as an attempt by Ockham to explain what thinking and saying that *p* amounts to in a world inhabited by particular things. I claim that the first and immediate purpose of the mental-speech assumption is to provide an account of the content of thought. Note that this interpretation complies with Ockham's tenet that mental speech is also a potential means of communication.
I emphasize this point since the fourth assumption I want to distinguish is that it seems accepted among scholars to view Ockham's assumption of mental speech as an ancestor of the 'Language of Thought Hypothesis' (LOTH), most ardently defended since the 1970s by the American philosopher Jerry Fodor.(17) Another scholar, Calvin Normore, has argued that the assumption of mental speech disappeared at the beginning of the 16th century, and was only to reappear in the guise of the LOTH in the second half of the twentieth century.(18) However, one has to be very clear about the exact limits of this similarity. It is not unusual to view the mental-speech assumption as a direct ancestor of LOTH, where the similarity is, rather tacitly, taken to bear on the asymmetrical dependence of language on thought: both Fodor's LOTH and Ockham's mental-speech assumption are usually taken to imply that thought is semantically and syntactically prior to natural languages such as English or Latin." (p. 4)
(17) See Jerry Fodor, *The Language of Thought,* Cambridge, Mass., 1975.

18 See Calvin Normore, 'The End of Mental Language', in J. Biard (ed.), *Le langage mental du moyen âge à l'âge classique*, Louvain-La-Neuve, 2009, 293–306. It should be clear from the beginning that, although historical questions are of course of considerable interest in their own right, I am not interested in the historical reasons for the appearance and disappearance of the assumption of mental speech.

36. Sirridge, Mary. 2000. "Augustine's Two Theories of Language." *Documenti e Studi sulla Tradizione Filosofica Medievale* no. 11:35-57.
"It is a curious feature of the Augustinian influence upon theories of language in the Middle Ages that it seems to give rise to two very different ways of understanding the nature and function of language. One approach stresses the conventional, arbitrary character of linguistic signs; the other alleges some natural or intrinsic connection between language and thought or between language and the external reality it represents or signifies. Not surprisingly, when we turn to Augustine's own theory of language, we seem to find two quite different models for understanding language, one the commonsense conventionalist and radically 'volitional'(2) theory found principally in *De Doctrina Christiana*, the other a more intrinsicist theory which we find most clearly articulated in *De Trinitate* and *Tractates on the Gospel of John*. I want to argue two points in this paper. First, in the thought of Augustine, the intrinsicist approach and conventionalism are not so much diverse theoretical approaches as they are distinct emphases within a more encompassing wiew of language, one which likes the use of language by turns to the generation of the Son from the Father, to the Incarnation, and to the divine creation of the worId, Secondly, and perhaps more importantly, because the philosophy of language is almost never Augustine's primary focus, is approach to language is extremey contextual. For Augustine, language is sometimes an illuminating model; sometimes as in discussions of epistemology and philosophy of mind, language is an as an important side-issue; and sometimes Augustine is simply respondmg to the way in which '*vox*' or '*verbum*' is used in a particular passage of Scripture. Ando so, just there are not two distinct Augustinian theories of language, there are also not only two details and emphases of his complex, but reasonably consistent, general conception of language to the demands of particular theological philosophical or exegetical contexts." (pp. 35-36, a note omitted)
(2) I have adopted 'volitional' to designate the view that the act of speaking (or writing) is completely determined by an act of will, by the intention to signify something.

37. Spade, Paul Vincent. 1980. "Synonymy and Equivocation in Ockham's Mental Language." *Journal of the History of Philosophy* no. 18:9-22.
"in 1957 Peter Geach [*] argued that Ockham's theory of mental language was too facile, that it made the grammar of mental language look too suspiciously like that of Latin(...)"
(...)
!In 1970 John Trentman responded to this charge in a short article that has since become very influential.(2) In that article Trentman makes three claims among others:
1. Ockham thought of mental language as a kind of stripped-down, "ideal" language, containing just those grammatical features that affect the truth conditions of mental sentences.
2. There can be no synonymy in mental language.
3. There can be no equivocation in mental language.
It is the purpose of this paper to examine each of these claims in turn. In so doing we shall discover that Ockham's theory of mental language is not so neat and tidy as might have been hoped. I shall argue that each of Trentman's three claims is "correct" in the sense that Ockham either explicitly holds it or else seems committed to holding it on the basis of other features of his thought. Nevertheless, I shall maintain, each of these claims also leads to difficulties for Ockham, either (with respect to the first claim) because there are certain empirical, linguistic reasons of a sort Ockham would accept for rejecting the claim as it stands, or else (with respect

to the second and third claims) because it conflicts with things Ockham says elsewhere. All this suggests that Ockham had not completely thought out all the implications of what he wanted to say about mental language. And that in turn suggests that, whatever is true for other authors, the theory of mental language was perhaps not as central to Ockham's own thinking as we have come to believe." (pp. 9-10, some notes omitted)
[*] *Mental Acts: Their Content and Their Objects* (London: Routledge & Kegan Paul, 1957), p. 102. Seealso the whole of sec. 23, pp. 101-6.
(2) 2 "Ockham on Mental," *Mind* 79 (1970): 586--90.

38. ———, ed. 1980. *Peter of Ailly: Comcepts and Insolubles*. Dordrecht: Reidel.
Contents: Acknowledgments XIII; Paul Vincet Spade: Introduction 1; Translation. Concepts 16; I. Introductory considerations (pars. 1-9) 16; II. Mental terms (pars. 10-54) 18; III. Spoken terms (pars. 55-88) 27; IV. Written terms and mental terms improperly so called (par. 89)34.
Insolubles 35; Notes 95; Bibliography 162; Index 169-193.
"Peter of Ailly(1) [1350-1420] wrote his *Concepts* and *Insolubles*,(2) according to the best estimate, in 1372.(3) He was at that time only about twenty-two years old." (p. 1)
(...)
"The *Concepts* and *Insolubles* does indeed represent significant developments in late mediaeval logic and semantic theory. It concerns (I) the theory of 'mental language' and (II) semantic paradoxes like the famous Liar paradox.
Aristotle was to some extent at the origin of both these late mediaeval concerns. In a famous passage of his *De interpretatione*, Aristotle suggested that the relation between written language and spoken language is in some way like the relation between spoken language and thought: "Now spoken sounds are symbols of affections in the soul, and written marks symbols of spoken sounds" (16a3-5).(22) This suggestion was transmitted to the Middle Ages by Boethius, in his translation of and commentaries on the *De interpretatione*.(23) If one takes the suggestion seriously, then just as there is written language the 'matter' of which (if I may call it that) is the written mark, and spoken language the 'matter' of which is the spoken sound, so too there is a mental language the 'matter' of which is thought.(24)" (p. 2)
(...)
"Although in fact the *Concepts* and the *Insolubles* appear to be distinct works, they complement one another nicely and may be regarded as a unit. The focus throughout is on mental language; although both tracts discuss spoken and written language, they do so only to show how it differs from and is grounded in mental language. The *Concepts* is about terms in general, although as the name implies, it is primarily about mental terms. The frrst two chapters of *Insolubles* are about mental sentences. Chapters Three and Four are applications of the general principles of the first two chapters to the particular problem of the paradoxes; it is only here that spoken and written sentences are discussed. Thus the *Concepts* and *Insolubles* together constitute a complete treatise on mental language, including both terms and sentences." (p. 7)
(1) 'Petrus de Alliaco', often called 'Pierre d'Ailly' even in the English secondary literature.
I prefer to Anglicize the name.
(2) Although these two tracts are always found together in the early printed editions, they seem to be distinct works.(...)
(22) Ackrill translation [5]. See also 16a9-12: "Just as some thoughts in the soul are neither true nor false while some are necessarily one or the other, so also with spoken sounds. For falsity and truth have to do with combination and separation."
(23) Boethius [17]. Boethius may have distorted Aristotle's meaning; see Kretzmann [49].
(24) In addition to Aristotle, Augustine's *De trinitate* was also an important source for the theory of mental language. See Augustine [12], XV, 10.19-11.20, pp. 485-489 (translated in [13], pp. 475-479).

References

(5) Aristotle, *Aristotle's Categories and De Interpretatione*, J. L. Ackrill (tr.), Clarendon Aristotle Series, Clarendon Press, Oxford 1963
(12) Augustine, *De trinitate libri XV*, W. J. Mountain (ed.), Corpus Christianorum series latina, vols. SO & 50a, Typographi Brepols Editores Pontificii, Turnholt 1968.
(13) Augustine, *The Trinity*, Stephen McKenna (tr.), The Fathers of the Church, vol. 18, The Catholic University of America Press, Washington 1963.
(17) Boethius, Anicli Manlii Severini Boetii Commentarii in librum Aristotelis fIEPI EPMHNEIAΣ, Carolus Meiser (ed.), Teubner, Leipzig 1877-1880.
[49] Kretzmann, Norman, 'Aristotle on Spoken Sound Significant by Convention', in John Corcoran (ed.), A*ncient Logic and Its Modern Interpretations: Proceedings of the Buffalo Symposium on Modernist Interpretations of Ancient Logic, 21 and 22 April, 1972,* Synthese Historical Library, vol. 9, D. Reidel Publ. Co., Dordrecht, Holland 1974, pp. 3-21.

39. Tabarroni, Andrea. 1989. "Mental Signs and the Theory of Representation in Ockham." In *On the Medieval Theory of Signs*, edited by Eco, Umberto and Marmo, Costantino, 195-224. Amsterdam/Philadelphia: John Benjamins.
English translation of: "Segno mentale e teoria della rappresentazione in Ockham". *VS Versus. Quaderni di Studi Semiotici*, 38-39, 1984, pp. 63-90.

40. Tachau, Katherine H. 1988. *Vision and Certitude in the Age of Ockham: Optics, Epistemology and the Foundations of Semantics 1250–1345*. Leiden: Brill.
"This book charts the development of a complex of optical, epistemological, and semantic ideas to which fourteenth-century scholars in Oxford, London, and Paris contributed with an originality and intelligence rarely equalled in the history of western thought; to do so, however, they were required to integrate questions which are today the preserve of the three distinct, if overlapping, communities formed by historians of medieval philosophy, of medieval science, and of medieval intellectual life more generally." (*Preface*, XIII)
(...)
"The discussions traced in what follows indicate, rather, that late medieval thinkers did not turn away from the more all-encompassing goal pursued already by Roger Bacon, that is, of developing new theories by appropriating as wide a range of sources as could be put to use.
This realization is the starting point of the present study, which therefore aims not to recount what did not occur, but to tell instead what *did*.
If this book begins when medieval scholars initially sought to realize the complex, perhaps impossible, task that they had set themselves, it concludes with the generation of John of Mirecourt and Gregory of Rimini, whose accounts of knowledge exemplify the eventual confluence of the theoretical insights of England and Paris. By ending this work with the Parisian ferment of the 1340s, we merely reach an important watershed in the creation of the rich noetic legacy that medieval scholastics bequeathed to subsequent generations of intellectuals and to culture more generally, as Chaucer's remarks (quoted above, p. VII) signal. For us to reach the real end of the story would require an examination of how this legacy was transmitted to early modern philosophers and scientists; nevertheless, it is my hope that the present work will provide the historical framework and conceptual precision for that further investigation." (p. XVII)

41. Toom, Tarmo. 2007. "The Potential of a Condemned Analogy: Augustine on λόγος ἐνδιάθετος and λόγος προφορικός." *Heythrop Journal* no. 48:205-213.
"This paper investigates Augustine’s Christological application of the distinction between the internal and the expressed word (λόγος ἐνδιάθετος and λόγος προφορικός).
Although both Plato and Aristotle employed the notion of thought (νόημα) as a voiceless mental discourse,(2) the non-theological distinction between the internal and the expressed word had been traditionally

associated with the Stoics.(3) According to the Stoics, it was not the uttered speech (λόγος προφορικός) but the internal speech (λόγος ἐνδιάθετο) which differentiated human beings from non-rational animals (Sextus Empiricus, *M*. 8.275–276). Mere articulated sounds made by crows and parrots could not express the λεκτόν, the semantic content carried by rational thought.(4(Philo, in turn, invoked the internal/expressed word distinction throughout his works as he made various points by using figurative exegesis.(5) Eventually, Christian apologists and authors found what was originally a non-theological notion of a two-fold logos to be a useful conceptual category for explaining the 'second God'.(6) Indeed, the Prologue of the Gospel of John had 'theologized' the distinction by boldly employing it – or some variations of it – as the Word's role in creation and the Word's 'becoming flesh'.(7) In the fourth century, certain controversial theologians were adopting the internal/expressed word distinction as a paradigm for Christology." (p. 205)
(2) 2 Plato, *Tht.* 190a; *Sph*. 263e; Aristotle, *An. post*. 76b24–25.
(3) M.C. Chiesa, 'Le problème du langage intérieur chez les Stoïciens', *Revue Internationale de Philosophie*, 45 (1991), 301–321; K. Hülser, *Die Fragmente zur Dialektik der Stoiker*, vol. 2 (Stuttgart: Frommann-Holzboog, 1987), frgs. 528–529a; M. Mühl, 'Der λόγος ἐνδιάθετος und λόγος προφορικός von der ãlteren Stoa bis zur Synode von Sirmium 351', *Archiv für Begriffsgeschichte* 7 (1962): 7–16.
(4) M. Frede, 'The Stoic Notion of a Lekton', in *Language*, ed. S. Everson, in *Companions to Ancient Thought* 3 (Cambridge: Cambridge University Press,1994): 109–128; G. Verbeke, 'Meaning and Role of the Expressible in Stoic Logic', in *Knowledge Through Sign*s, ed. G. Manetti, *Semiotic and Cognitive Studies II*, ed. U. Eco and P. Violi (Bologna: Brepols, 1996): 133–154. In *De Dialectica* 5, Augustine translates the Stoic lekton as *dicibile,* but for him, an individual word rather than a proposition is its carrier (*mag*. 7.19.15) (B. D. Jackson, 'Semantics and Hermeneutics in Saint Augustine's De doctrina Christiana' [PhD diss., Yale University,
1967], 132–134; J. Rist, *Augustine: Ancient Thought Baptized* [Cambridge: Cambridge University Press, 1994], 26 and 314–316).
(5) Philo, *Abr.* 83; *Mig*. 71 and 78; *Mos*. 2.127–129; *Som.* 29; Hülser, *Die Fragmente zur Dialektik der Stoike*r, frgs. 530–534; A. Kamesar, 'The Logos Endiathetos and the Logos Prophorikos in Allegorical Interpretation: Philo and the D-Scholia to the Iliad', *Greek, Roman, and Byzantine Studies*, 44 (2004), 163–181; Mühl, 'Der λόγος ἐνδιάθετος und λόγος προφορικός', 17–24.
(6) Theophilius of Antioch, *Ad Autol.* 2.10, 2.22; Hippolytus, *Noet.* 10; Novatian, *Trin*. 31; M.J. Edwards, 'Clement of Alexandria and His Doctrine of the Logos', *Vigiliae Christianae*, 54/2 (2000), 159–177; R.E. Heine, 'The Christology of Callistus', *Journal of Theological Studies*, 49/1 (April 1998), 64–68; C. Markschies, "'Die wunderliche Mār von zwei Logoi . . .'' Clemens Alexandrinus, Frgm. 23 – Zeugnis eines Arius ante Arium oder des arianischen Streits selbst?' in *Logos: Festschrift für Luise Abramowski zum 8. Juli 1993*, ed. H. C. Brennecke (Berlin: Walter de Gruyter, 1993): 214–216; Mühl, 'Der λόγος ἐνδιάθετος und λόγος προφορικός', 25–32; R.B.
Norris, 'Logos Christology as Cosmological Paradigm', *Pro Ecclesia*, 5/2 (1996), 191–192.
(7) J. Gericke, 'Dimensions of the Logos from Logos-Philospphy to Logos-Theology', *Acta patristica et byzantin*a 11 (2000): 93–116, especially 108–111; Heine, 'The Christology of Callistus', 67; L. Morris, *The Gospel According to John*, rev. ed., in *The New International Commentary on the New Testament* (Grand Rapids: Eerdmans, 1995), 102–111; Mühl, 'Der λόγος ἐνδιάθετος und λόγος προφορικός', 33–43.

42. Trentman, John Allen. 1970. "Ockham on Mental." *Mind* no. 79:586-590. "Ockham tought it possible to distinguish spoken and written language from what he called mental language. Further, he thought mental language is really of prior importance to spoken or written language, and its structure is, in fact, the proper subject for the logician to study. By mental language Ockham meant simply a set of

mental acts, or more properly, a set of capacities for periforming mental acts (*passiones* or *intentiones animae*). These acts, according to Ockham, are natural signs of things (*naturaliter significans*); meaning or signification is a relation that, strictly speaking, obtains between mental acts and things, and in some way not further explicated (except through analogies like smoke as a sign of fire) there is some natural appropriateness about this relation. These capacities can also be shared by all rational beings so that speakers of different languages have something in common although the particular marks or sounds they make to express these capacities differ, being instituted by convention (*secundum voluntariam institutionem*).(1)" (p 586)
(1) Sutmma totizts logicae, I, c. 1

43. ———. 1986. "Mental Language and Lying." In *L'homme et son univers au Moyen Age. Actes du septième congrés international de philosophie médiévale (30 aout - 4 septembre 1982 (volume II)*, edited by Wenin, Christian, 544-553. Louvain-la-Neuve: Editions de l'Institut Supérieur de Philosophie.

44. ———. 1990. "Mental Reservation and Mental Language in Suarez." In *De Ortu Grammaticae: Studies in Medieval Grammar and Linguistics Theory in Memory of Jan Pinborg*, edited by Bursill-Hall, Geoffrey L., Ebbesen, Sten and Koerner, Konrad, 339-357. Amsterdam, Philadelphia: John Benjamins.
"We can now relate this brief account of concepts to the idea of mental language. According to Suarez, mental words are to be identified with formal concepts; these utterances, sayings in the heart of what the mind thinks are particular mental acts. (14) The universality of language derives from the capacity of mental words to represent or intend what is universal or common to many things. They can do this through their capacity to intend objective concepts. Up to a point this looks like Ockhamism, and I have pointed out elsewhere(15) that it is very characteristic of Suarez's thought, together with that of many like-minded late scholastics, to accept Ockhamist presuppositions or Scotist presuppositions in the process of attempting to refute Ockham or Scotus. Suarez's account is different from Ockhamism, however. Ockham thought the mental word, i.e., the mental act, could be universal simply in that it referred to many externally existing things. According to Suarez, the matter is not so simple. The mental word can denote many external objects only because it intends a universal objective concept. There is, of course, a corollary to this in Suarez's general account of universals. The unity of the universal is not, according Suarez, a real, i.e., extramental unity. It is something mind-dependent, a so-called rational unity. But minds are not completely free to do whatever they please, independently of what is universal in thought. What is universal in thought has an ontological grounding in things, this is the point of the Suarezian concept *cum fundamento in re*." (p. 350)
(12) Francisco Suarez, *Disputaciones Metafísicas / Disputationes Metaphysica*e, ed. and transl., by Sergio Rábade Romeo, Salvador Cabellero Sanchez & Antonio Puigcerver Zanon, *Disp.* II, sec. 1, vol. 1, 360-62. Madrid: Gredos, 1960-66.
(14) See, e.g., Suarez 1960-66 [see note 12 (above)], *Disp*. VIII, sec. 4.
(15). J.A. Trentman, "Scholasticism in the Seventeenth Century." *Cambridge History of Later Medieval Philosophy* ed. by N. Kretzmann, A. Kenny & J. Pinborg, 818-38. Cambridge: Cambridge Univ. Press, 1982.

45. Valente, Luisa. 2009. "*Verbum mentis - Vox clamantis:* The Notion of the Mental Word in Twelfth-Century Theology." In *The Word in Medieval Logic, Theology and Psychology*, edited by Shimizu, Tetsuro and Burnett, Charles, 365-402. Turnhout: Brepols.
"In studies on mental language in the Middle Ages, scholars usually insist on the association of the patristic and medieval notion of interior language with the mystery of the eternal generation of the Son, on the one hand, and with the incarnation of Christ, on the other. The fathers of the Church as well as medieval scholars based these analogies on a “theo-linguistical” interpretation of the prologue to St. John’s Gospel (1:1 and 1:14): “In principio erat verbum et verbum erat apud

Deum et Deus erat verbum.... Et verbum caro factum est et habitavit in nobis."
These scholars concentrated on patristic elaborations of the notion of the inner word and on the constitution, in the thirteenth and fourteenth centuries, of the more complex theories of mental language of the logicians and grammarians. These theories, in turn, were the result of a convergence of Aristotelian logic (both the *logica vetus* and the *logica nova*) and the Augustinian tradition.
In this essay I shall expand this analysis. First, I shall call attention to the analogy which has been suggested not only by the fathers but also by some twelfth-century masters between the sensible expression of an inner word and two events of sacred history: the creation and the preaching of John the Baptist. Secondly, I shall stress the relevance of some twelfth-century theological texts from the point of view of the assimilation of theories coming from the logica vetus in a theological context marked by the use of the notion of inner word." (pp. 365-366, notes omitted)

46. Yrjönsuuri, Mikko. 1997. "Supposition and Truth in Ockham's Mental Language." *Topoi* no. 16:15-25.
Abstract: "In this paper, Ockham's theory of an ideal language of thought is used to illuminate problems of interpretation of his theory of truth. The twentieth century idea of logical form is used for finding out what kinds of atomic sentences there are in Ockham's mental language. It turns out that not only the theory of modes of supposition, but also the theory of supposition in general is insufficient as a full theory of truth. Rather, the theory of supposition is a theory of reference, which can help in the determination of truth values within the scope of simple predications. Outside this area, there are interesting types of sentences, whose truth does not depend on whether the terms supposit for the same things or not for the same things."

47. ———. 2005. "William Ockham and Mental Language." In *Representation and Objects of Thought in Medieval Philosophy*, edited by Lagerlund, Henrik, 101-114. Aldershot: Ashgate.
"In many different connections throughout his whole oeuvre, William Ockham puts forward the program of an ideal mental language. This language is presented as a universal representative system in which all thinking takes place and which lies at the background of all communication. In addition to people, it is used by all possible thinking beings, angels as well as the God. Most obviously, Ockham would have supposed machines to use this language as well, if he had presented fantasies of thinking machines. Also, Ockham clearly thought that everything that can be expressed in any language could also be expressed in the mental language. This is because all expressions of the spoken languages are subordinate to expressions of mental language, so that all meanings of spoken words are derivative upon those of mental terms. My claim in this chapter is that not only everything that there is in the world, but also everything true or false that can be said about the world, can be expressed in this language."
(...)
"In this chapter, I try to examine Ockham's theory from another kind of perspective – from the perspective of a universal language. I want to sketch Ockham's mental language as an ideal representational system, and look how the program would work for that purpose." (p. 101)

48. Zheng, Yiwei. 1998. "Metaphysical Simplicity and Semantical Complexity of Connotative Terms in Ockham's Mental Language." *The Modern Schoolman* no. 75:253-264.