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Bibliography of the Medieval Theories of Mental Language (Second part)

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Studies in English (Kin - O'Ca)

1. King, Peter. 2004. "Scotus on Mental Content." In *Duns Scot à Paris, 1302–2002: Actes du colloque de Paris, 2-4 septembre 2002*, edited by Boulnois, Olivier, Karger, Elizabeth, Solère, Jean-Luc and Sondag, Gérard, 65-88. Turnhout: Brepols.
"I shall examine what Scotus had to say in Paris about what we now call 'mental content': the feature of mental acts in virtue of which each has the character it does qua mental act. When I think about Socrates, the content of my thought is Socrates, which is what makes my act of thinking be about Socrates rather than about Plato; since Socrates may not exist when I happen to think of him, there must be some feature of the mental act that goes proxy for him in my act of thinking, and this feature is 'mental content' properly so-called(2). Scotus offers some "startlingly new ideas about cognition,"(3) making a radical break with his predecessors and contemporaries, in his proposal that mental content is a (perhaps complex) internal constituent of an act of thinking. More succinctly, Scotus invents the notion of mental content.
I will begin by looking at psychological theory at the time Scotus took up these issues in Paris (§ I), turning thereafter to his account (§ II) and its foundations (§ III), closing with a look at Scotus's attempt to provide a solid metaphysical footing for his account (§ IV)." (pp. 65-66)
(2) This is not to hold, though it is compatible with holding, mental content to be the (intentional) object of thought or the item of which we are immediately aware in thinking. It merely asserts that there must be some feature of the mental act rather than of the world that makes the act have the character it does, that is, to be about what it is about. Mental content in the strict sense, then, is more fundamental than intentionality and may explain it.
(3)3 Contrary to R. Pasnau, "Cognition", in *The Cambridge Companion to Duns Scotus*, ed. T. Williams, Cambridge, Cambridge University Press, 2003, p. 285 : "As in most matters, John Duns Scotus does not distinguish himself in cognitive theory by adopting a radically new perspective... Scotus is interesting, then, not because he offers any startlingly new ideas about cognition, but because he gives a careful and penetrating analysis of the field".

2. ———. 2007. "Abelard on Mental Language." *American Catholic Philosophical Quarterly* no. 81:169-187.
Abstract: "I argue that Abelard was the author of the first theory of mental language in the Middle Ages, devising a "language of thought" to provide the semantics for ordinary languages, based on the idea that thoughts have linguistic character. I examine Abelard's semantic framework with special attention to his principle of compositionality (the meaning of a whole is a function of the meanings of the parts); the results are then applied to Abelard's distinction between complete and incomplete expressions, as well as the distinction between sentences and the statements which the sentences are used to make. Abelard's theory of mental language is shown to be subtle and sophisticated, the forerunner of the great theories of the fourteenth century."

3. ———. 2007. "Rethinking Representation in the Middle Ages: A Vade-Mecum to Medieval Theories of Mental Representation." In *Representation and Objects of Thought in Medieval Philosophy*, edited by Lagerlund, Henrik, 81-100. Aldershot: Ashgate.
"The Christian Aristotelianism of the High Middle Ages had the conceptual resources to explain the representationality of mental representation – that is, the feature or features in virtue of which a mental representation represents what it represents – in four separate ways:
(R1) The mental representation and the represented item have the same form.
(R2) The mental representation resembles, or is a likeness, of the represented item.
(R3) The mental representation is caused by the represented item.
(R4) The mental representation signifies the represented item."

(...)
"A rough approximation of what I want to argue for here is that in the course of the High Middle Ages an important shift takes place in the theory of representation, namely a shift from accounts of representation that favor (R1) and (R2) to accounts that favor (R3) and (R4). This is all the more surprising in that (R1) and (R2) are clearly Aristotle's preferred account of representationality, if anything is. The trajectory of the debate begins with Thomas Aquinas and is epitomized, as so many medieval philosophical discussions are, in William of Ockham.
In the spirit of Fodor (1985) and Haugeland (1990), I'll take a top-down approach to the historical sources, concentrating on the logic of the positions and their development. My account will therefore track mainstream medieval philosophy of psychology. Richard Rufus's attack on naive representationalism, for example, won't be considered here since it appears not to have affected the course of the debate,
interesting though his arguments were. My focus is rather on scholastic 'common wisdom' about mental representation, to the extent there was any, in the High Middle Ages." (pp. 81-82, notes omitted)
References
Fodor, J. (1985), 'Fodor's Guide to Mental Representation', *Mind,* 94, 55–97; reprinted in *A Theory of Content and Other Essays,* Cambridge: MIT Press 1990, 3–29.
Haugeland, J. (1990), 'The Intentionality All-Stars', in James A. Tomberlin (ed.), *Philosophical Perspectives 4: Action Theory and Philosophy of Mind*, Ridgeview Publishing Company, 383–427.

4. ———. 2015. "Thinking About Things: Singular Thought in the Middle Age." In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 104-121. New York: Fordham University Press.
"For difficulties in explaining how it is we can think about things posed a challenge to the working paradigm of cognitive psychology, prompting a variety of responses and spurring innovative theories, fragmenting the initial consensus on an Aristotelian approach to the philosophy of mind. In what follows, I will sketch the main lines of the mediaeval debates: Aquinas presenting the dominant paradigm for cognitive psychology (§1), the initial challenges to the paradigm over the question of singular thought (§2), Scotus devising a "hybrid" account in response (§3), and Ockham proposing a radically different approach to psychological explanation altogether (§4)." (p. 104)

5. Klima, Gyula. 2004. "Tradition and innovation in medieval theories of mental representation." *Proceedings of the Society for Medieval Logic and Metaphysics* no. 4:4-11.
"In his recent book, Thomistic Realism and the Linguistic Turn, O'Callaghan marshals some of the resources of analytic philosophy's "linguistic turn" to recover some of the sense of Aquinas's "realism" in logic and psychology (I don't dare say "philosophy of mind")(1)
(...)
"I agree with O'Callaghan's account of Aquinas's treatment of acts of intellect and their objects, and I further agree with the corresponding treatment of Thomistic semantics in light of this account."
(...)
!As indicated, with these general and very basic points I am in complete agreement, and it is against this background of agreement that I want to carve out a modest area of disagreement. I want to defend, against O'Callaghan, the appropriateness of attributing a theory of "mental language" to Aquinas, or, at least (and even more modestly), the possibility of an authentically Thomistic theory of "mental language."
There are in fact two reasons that O'Callaghan thinks it is inappropriate to associate a theory of mental language with Aquinas. The first, not explored so much in his book but argued at length in a separate paper,2 is that a particular part of the

Thomistic vocabulary which might suggest a theory of mental language, the "verbum mentis," has no genuine philosophical import at all, and functions solely as a theological metaphor. The second is that a theory of mental language necessarily implies the mental representationalism from which O'Callaghan has worked so hard to separate an authentically Thomistic account of cognition. I will address these two points in turn." (pp. 12-13)
(1) John O'Callaghan, *Thomistic Realism and the Linguistic Turn: Toward a More Perfect Form of Existence*, (University of Notre Dame Press, 2003)

6. ———. 2004. "John Buridan and the Force-Content Distinction." In *Medieval Theories on Assertive and Non-Assertive Language* edited by Maierù, Alfonso and Valente, Luisa, 415-427. Firenze: Leo S. Olschki.
"Introduction: the «Frege Point»
Perhaps, the best way to motivate the force-content distinction is with reference to what Peter Geach called the «Frege point». As he wrote:
A thought may have just the same content whether you assent to its truth or not; a proposition may occur in discourse now asserted, now unasserted, and yet be recognizably the same proposition. This may appear so obviously true as to be hardly worth saying; but we shall see it is worth saying, by contrast with erroneous theories of assertion, and also because a right view of assertion is fatal to well-known philosophical views on certain other topics.
I shall call this point about assertion the Frege point after the logician who was the first (so far as I know) to make the point clearly and emphatically.(1)
For his part, Buridan was fully aware of the «Frege point», of course, without being aware of Frege. But then he was also fully aware of the De Morgan Laws without being aware of De Morgan, etc. - as we know, such designations are but common symptoms of what may be diagnosed as the chronic historical amnesia of the modern mind.
But this is not the point I wish to make here. In this paper, I will rather attempt to show how Buridan's awareness of the «Frege point» and of the force-content distinction in general enable him to avoid the philosophical evils Geach alluded to in this passage, and how this awareness is consistent with his general nominalist stance on propositions and what they signify both in the mind and in external reality." (p. 415)
(1) P. T. Geach, *Assertion*, in Id., *Logic Matters*, Berkeley-Los-Angeles, UC Press, 1980, p. 254-269, p. 254-255.

7. ———. 2006. "The Universality of Logic and the Primacy of Mental Language in the Nominalist Philosophy of Logic of John Buridan." *Mediaevalia philosophica Polonorum* no. 35:167-177.

8. ———. 2009. "Two Brief Remarks on Calvin Normore's Paper." *Proceedings of the Society for Medieval Logic and Metaphysics* no. 9:53-54.
On C. G. Normore, "Externalism, Singular Thought and Nominalist Ontology".
"Since at the meeting we ran out of time and I did not have a chance to offer my comments on Calvin Normore's extremely stimulating paper, let me offer them here.
(1) "If a whole just is its parts then a difference of parts should make for a different whole and if each material object is such a whole then for numerically the same material object to persist through time it must not gain or lose parts over time." (p. 45 above)
(...)
With this comment, I would actually like to caution people who want avoid nominalism, simply because (on the strength of the fallacious aporia quoted above) they tend to think that the equation of wholes with their parts is some dangerous "reductionism", which one can get rid of only if we deny this (otherwise perfectly plausible) claim.
"(2) As for the final question of the paper, I would say that pushing the issue to its ultimate consequences as Buridan is doing it in this question (and in this one alone, as far as I can tell) would lead to a conception of natural science as the science of

natural substances pretty much like the contemporary chemistry of elements, where the periodic table provides the quidditative definitions of various kinds of substances, and the laws of quantum physics and chemistry dictate what pertains to each by natural necessity" (pp. 53-54)

9. ———. 2009. *John Buridan*. New York: Oxford University Press.
Chapter 3: *The Primacy of Mental Language*: 27; Chapter 4: *The Various Concepts and the Idea of a Mental Language* 37-120.
"So how can Buridan be both an antiskeptical essentialist and a nominalist? To many contemporary philosophers, the phrase “essentialist nominalism” may appear to be an oxymoron. After all, essentialism is the doctrine that things come in natural kinds characterized by their essential properties, on account of some common nature or essence they share. But nominalism is precisely the denial of the existence, indeed, the very possibility of such shared essences. Nevertheless, despite the intuitions of such contemporary philosophers, John Buridan was not only a thoroughgoing nominalist, as is well known, but also a staunch defender of a strong essentialist doctrine against certain skeptics of his time. But then the question inevitably arises: could he consistently maintain such a doctrine?" (p. 259)
(...)
"In fact, from this case-study of Buridan’s essentialism, I think we can eneralize the following conclusions. If one is trying to avoid the inconsistencies of naïve ontological realism,(12) one has to deny the existence of universal entities. Yet, if one is unwilling to accept the apparent skeptical consequences of this denial, and wants to stay a scientific realist, one has to opt for some form of logical essentialism. But logical essentialism is predicated on a plausible account of our ability to acquire substantial concepts grounding our semantics of essential predicates. However, this account, to avoid the epistemological mysticism of innate or infused ideas, has to show how these concepts can be acquired from our limited experience. But if the previous objection to Buridan’s account is right, then it seems that this can only be done by recourse to some form of “moderate realism” in one’s semantics, namely, one that accounts for our substantial common terms and concepts as representing particulars in respect of their essential similarities, while abstracting from their accidental dissimilarities." (p. 266, a note omitted)
(12) By “naïve realism”, I mean the version of Plato’s theory of Forms found to be inconsistent already by Plato himself in his *Parmenides,* as well as the theory of universals found to be inconsistent by Boethius in his second commentary on Porphyry’s *Isagoge.*

10. ———. 2012. "Ontological Reduction by Logical Analysis and the Primitive Vocabulary of Mentalese." *American Catholic Philosophical Quarterly* no. 86:40'3-414.
Abstract: "This paper confronts a certain modern view of the relation between semantics and ontology with that of the late-medieval nominalist philosophers, William Ockham and John Buridan. The modern view in question is characterized in terms of what is called here “the thesis of ontosemantic parallelism,” which states that the primitive (indefinable) categorematic concepts of our semantics mark out the primary entities in reality. The paper argues that, despite some apparently plausible misinterpretations to the contrary, the late-medieval nominalist program of “ontological reduction” was not driven by considerations that try to “read off” ontology from semantic analysis or those that try to identify semantic primitives in their search for ontological primitives. The medieval authors presented a much more flexible, dynamic view of “Aristotelian naturalism,” which challenges both of the unappealing modern alternatives of “conceptual tribalism” and “conceptual imperialism”."

11. ———, ed. 2015. *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*. New York: Fordham University Press.
Contents: Acknowledgments XI; Gyula Kima: Introduction: Intentionality, Cognition, and Mental Representation in Medieval Philosophy 1; Stephen Read:

Concepts and Meaning in Medieval Philosophy 9; Joshua P. Hochschild: Mental Language in Aquinas? 29; Martin Pickavé: Causality and Cognition: An Interpretation of Henry of Ghent's Quodlibet V, q. 14 46; Giorgio Pini: Two Models of Thinking: Thomas Aquinas and John Duns Scotus on Occurrent Thoughts 81; Peter King: Thinking About Things: Singular Thought in the Middle Ages 104; Henrik Lagerlund: Singular Terms and Vague Concepts in Late Medieval Mental Language Theory: Or, the Decline and Fall of Mental Language 122-140; Russell L. Friedman: Act, Species, and Appearance: Peter Auriol on Intellectual Cognition and Consciousness 141; Claude Panaccio: Ockham's Externalism 166; Elizabeth Karger: Was Adam Wodeham an Internalist or an Externalist? 186; Susan Brower-Toland: How Chatton Changed Ockham's Mind: William Ockham and Walter Chatton on Objects and Acts of Judgment 204; Christophe Grellard: The Nature of Intentional Objects in Nicholas of Autrecourt's Theory of Knowledge 235; John Zupko: On the Several Senses of "Intentio" in Buridan 251; Olaf Pluta: Mental Representation in Animals and Humans: Some Late Medieval Discussions 273; Stephan Meier-Oeser: The Intersubjective Sameness of Mental Concepts in Late Scholastic Thought 287; Gyula Klima: Mental Representations and Concepts in Medieval Philosophy 323; Bibliography 339; List of Contributors 355; Index 357-359.
"The essays in this volume explore the intricacies and varieties of the conceptual relationships among intentionality, cognition, and mental representation as conceived by some of the greatest medieval philosophers, including Aquinas, Scotus, Ockham, and Buridan, and some of their lesser-known but in their own time just as infl uential contemporaries. The clarification of these conceptual connections sheds new light not only on the intriguing historical relationships between medieval and modern thought on these issues, but also on some fundamental questions in the philosophy of mind as it is conceived today." (p. 1)

12. ———. 2015. "Mental Representations and Concepts in Medieval Philosophy." In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 323-337. New York: Fordham University Press.
"Talking about mental representations and concepts in medieval philosophy, one should probably start with clarifying these terms in the way medieval philosophers used and understood them. However, the phrase *repraesentatio mentalis* is rarely, if ever, used by medieval philosophers: "mental representation" is rather a term of art of modern philosophy of mind. Furthermore, although the term conceptus is widely used by medieval philosophers, its meaning and reference seem to vary widely among them, depending on their particular theories.
Indeed, to complicate matters, many authors would use other terms, such as *intentio, intellectus, notitia*, or even *ratio* or *verbum mentis*, let alone *fictum* or *idolum mentis* or *conceptus obiectivus* or *species impressa*, on one hand, and *intellectio, conceptus mentalis, conceptus formalis,* or *species expressa* on the other, to designate what we would want to name "concept" and what other (or even the same) medieval authors would also be willing to call "conceptus."
Having in this way successfully muddied the terminological waters, I should probably first clarify what I will mean by the English terms in the proposed title, and explain my understanding of the relevant Latin phrases as used by various medieval authors in relation to this meaning." (.p. 323)

13. ———. 2017. "Intentionality and Mental Content in Aquinas, Ockham, and Buridan." In *Universals in the Fourteeenth Century*, edited by Amerini, Fabrizio and Cesalli, Laurent, 65-87. Pisa: Edizioni della Normale.
"As we all know, Buridan is usually billed as a nominalist, indeed, an 'Ockhamist' nominalist. Of course, by and large this is true, especially, as far as Buridan's logic is concerned. But we also know that the devil is in the detail. Received orthodoxy concerning Buridan's'Ockhamism' has recently been challenged, or at least qualified, time and again.
In this paper, I wish to add to those qualifications with regard to Buridan's cognitive psychology. In particular, I will argue that in some important respects Buridan's positions in his psychology are closer to Aquinaas' than to Ockham's, indeed,

possibly at the expense of the consistency of his own doctrine, even if it was possibly devised to avoid some of the problems of Ockham's account.
In order to make this argument, I will first sketch Aquinas' doctrine of intentionality and mental representation. Next, I will contrast it with Ockham's radically different doctrine, pointing out some of the difficulties that may have motivated Buridan's departure from Ockham. Finally, | will call attention to those points of Buridan's doctrine in which he seems to depart from Ockham and move in the direction of Aquinas, briefly evaluating the consistency of the resulting doctrine." (p. 65)

14. Klima, Gyula, and Hall, Alexander W., eds. 2011. *Mental Representation: Proceedings of the Society for Medieval Logic and Metaphysics 4*. CambridgE: Cambridge Scholars Publishing.
Table of Contents: Gyula Klima: Tradition and Innovation in Medieval Theories of Mental Representation 4; Joshua P. Hochschild: Does Mental Language Imply Mental Representationalism? The Case of Aquinas's *Verbum Mentis*.12; Claude Panaccio: Concepts as Similitudes in William of Ockham's Nominalism18; Henrik Lagerlund: Vague Concepts and Singular Terms in a Buridanian Language of Thought Tradition 25; Gyula Klima: The Demonic Temptations of Medieval Nominalism: Mental Representation and "Demon Skepticism" 37; Olaf Pluta: Mental Representation in Animals and Humans – Some Late-Medieval Discussions 45; Susan Brower-Toland: Against Ockham? Walter Chatton on Objects of Propositional Attitudes 59 (*)
"The papers presented in this volume will be published in an expanded form, along with a number of other papers, in a new volume to be published by Fordham University Press: *Intentionality, Cognition and Mental Representation in Medieval Philosophy* [edited by Gyula Klima, New York: Fordham University Press 2015]
It is supposed to be common knowledge in the history of ideas that one of the few medieval philosophical contributions preserved in modern philosophical thought is the idea that mental phenomena are distinguished from physical phenomena by their intentionality, their directedness toward some object. As is usually the case with such commonplaces about the history of ideas, especially those concerning medieval ideas, this claim is not quite true. Medieval philosophers routinely described ordinary physical phenomena, such as reflections in mirrors or sounds in the air, as exhibiting intentionality, while they described what modern philosophers would take to be typically mental phenomena, such as sensation and imagination, as ordinary physical processes. Still, it is true that medieval philosophers would regard all acts of cognition as characterized by intentionality, on account of which all these acts are some sort of representations of their intended objects.
The essays of this volume explore the intricacies and varieties of the conceptual relationships between intentionality, cognition and mental representation as conceived by some of the greatest medieval philosophers, including Aquinas, Scotus, Ockham and Buridan, and some of their lesser known contemporaries. The clarification of these conceptual connections sheds new light not only on the intriguing historical relationships between medieval and modern thought on these issues, but also on some fundamental questions in the philosophy of mind as it is conceived today." (p. 2)
(*) Editor's Note: The contribution that originally appeared here has been removed at the Author's request, as she has radically changed her mind about the main thesis of the paper. The revised version of the paper will appear in print in the volume forthcoming at Fordham University Press.

15. Kneepkens, Corneille Henry. 1990. "Erfurt, Amol Q 70A: A Questiones-Commentary on the Second Part of Alexander de Villa Dei's *Doctrinale*." *Vivarium*:26-54.
"To sum up, the present state of research allows the following remarks. The second part of the manuscript Erfurt, Ampl., Ç) 70A has preserved a collection of *Quaestiones* on the second part of Alexander's Doctrinale. The terminus post of the origin of these quaestiones is derived from Thomas of Erfurt's teaching activities, i.e. the first decade of the fourteenth century. The collection features two rather

unreliable ascriptions in the manuscript: one to a master Marcilius (sic!) and the other to a master Simon. Further, it has to be examined whether the Dutch scholar Marsilius of Inghen, who died on August 20, 1396, could be considered a serious candidate for the authorship." (p. 27)
(...)
!The author holds what Hübener has called a grammatical Ultramentalismus(36) and argues that incongruency and congruency are
not dependent on the spoken or written language, but are rooted in mental language(...)" (pp. 36-37)
(...)
!With this view the master of the quaestiones proves to be a follower of William of Ockham, who in the beginning of his Summa Logicae laid the foundations of the late-mediaeval nominalistic doctrine of mental language(37). However, the theory brought forward in the first quaestio is not identical with Ockham' s in every respect. Actually, it shows greater resemblance to the theory of mental language that we find in the writings of Pierre d'Ailly, especially in his early *Conceptus*, written in Paris in 1372(38), and his *Destructiones modorum significandi(*39). Unlike Ockham, who is mainly interested in the truth and falsity of the mental proposition, and who does not give serious attention to the problem of linguistic congruency and incongruency as such(40), both our author and Pierre d'Ailly emphasize the primacy of congruency and incongruency on the level of mental language(41)." (p. 37, some notes omitted)
(39) This work must have been written before 1395 (...)

16. Knuuttila, Simo. 2009. "Ockham on Fallacies and Mental Language." In *Le langage mental du Moyen Âge à l'âge classique*, edited by Biard, Joël, 135-144. Louvain: Peeters.
"The theory of fallacies was an important part of medieval logic, and Aristotle's work *On Sophistic Refutations* was the basic text in this context since the twelfth century. Sorne Aristotelian types of fallacy were also discussed separately on the basis of Boethius's remarks in the commentaries on *De interpretatione*.
(...)
My aim is to discuss some ideas in Ockham's theory of the fallacies and their relation to his reflections on mental language. I mainly refer to his commentary on the *On Sophistic Refutations*. There is also a section on fallacies in the *Summa logicae* which is based on what is said in the commentary with some minor changes(3). As for the theory of mental language, Ockham saw its elements in Aristotle's remark that spoken and written words signify things in the world through the affections of the soul and in Boethius's division between three sorts of discourse, spoken, written and mental(4).
While these ideas were generally known ideas among medieval logicians, Ockham was the first to sketch a theory of mental language as the universal medium of thinking with signifying signs and syntactic structures.
As distinct from the words of natural language which signify on the basis of conventional agreements, the basic units of mental language as the acts of intellection signify naturally. These are the same for all informed intellects, as are the syncategorematic logical terms. The syntax of mental language is more ascetic than that of natural language because its rules are restricted to those which are necessary for signification." (pp. 135-136, a note omitted)
(3) *3 Summa logicae*, ill-4, p. 749-849.
(4) 4 See Aristotle, De interpretatione 1, 16 a 6-7; Boethius, *Commentarii in Aristotelis Perihermeneias II,* L1 p. 29, 1. 26-30, 1. 10; Ockham, *Summa logicae* I, ch. 3, 1. 100-102, p. 14; I, ch. 12, 1. 8-28, p. 41-42.

17. ———. 2014. "Early Modern Psychology of Language." In *Sourcebook for the History of the Philosophy of Mind: Philosophical Psychology from Plato to Kant*, edited by Knuuttila, Simo and Sihvola, Juha, 401-412. Dordrecht: Springer.
"While the medieval doctrine of speculative grammar was known in the sixteenth century through several prints of Thomas Erfurt's *Grammatica speculativa* and

some other medieval treatises, it was of little importance in philosophical discussions.
William of Ockham argued that thinking had the structure of non-conventional mental language which was explanatorily prior to spoken and written language. This theory was influential in late medieval philosophy and continued to be discussed by authors of the second scholasticism. The notions of mental discourse and mental words were employed in the psychology of language even later when the conception of a detailed mental language had lost its attraction. Hobbes, Locke and many other seventeenth-century philosophers who spoke about mental discourse or mental propositions assumed that there was a mental power for thinking and another ability for ordinary language which presupposes the previous one." (pp. 401-402)

18. Lagerlund, Henrik. 2003. "Representations, Concepts and Words: Peter of Ailly on Semantics and Psychology." *Proceedings of the Society for Medieval Logic and Metaphysics* no. 3:15-36.
"Peter of Ailly (1350-1420) was a very influential person. He had a distinguished career both within the University of Paris and in the Catholic Church.
(...)
In the present study, I attempt, in some small ways, to remedy this by giving a unified account of his views on the semantics and psychology of mental language. (2)" (p. 15)
(...)
"The philosophical treatise of foremost interest to us in the present study is, of course, the *Conceptus*, and it is exactly what its title suggests – a work on mental terms, that is, a work on mental language. It is believed to have been written in 1372, which would make it a very early work by Peter. It was published and reprinted several times in the late fifteenth and early sixteenth century – always together with his treatise on insolubles.(3) Besides these two works, we will use the *Destructiones modorum significandi* and the *Tractatus exponibilium* as sources for Peter's treatment of the semantics of mental language. The psychological aspects of mental language are treated by Peter in the *Conceptus*, of course, but also in his commentary on Peter Lombard's Sentences and in the *Tractatus de anima*(4).
The *Destructiones modorum significandi* seems to be the earliest of these works, followed closely by Conceptus et insolubilia and *Tractatus exponibilium*. They are, however, earlier than Peter's commentary on the *Sentences*, which was supposedly written between 1376 and 1377, and the *Tractatus de anima*, which was completed between 1377 and 1381.(5) Since the *Tractatus de anima* is the latest of these works, I will assume that it represents Peter's most mature thoughts, but the *Conceptus* will otherwise be my main source.
I will argue that Peter develops a highly original theory of language and thought, which in details will differ from both William Ockham's and John Buridan's theories. It is, of course, true that he is deeply influenced by Ockham and Buridan, but he seems to develop their views in a new direction, particularly in light of some deep problems facing their theories." (pp. 15-16)
(2) Peter's views on semantics and mental language have previously been treated in Spade (1980), Biard (1989), Spade (1996) and Bakker (1996).
(3) See Spade (1980).
(4) See Pluta (1987).
(5) See Chappius et al. (1986).
References
Bakker, P. (1996) 'Syncatégorèmes, concepts, équivocité: Deux questions anonymes, conservées dans le ms. Paris, B.N., lat. 16.401, liées à la semantique de Pierre d'Ailly (c. 1350-1420)', *Vivarium* 34, 1: 76-131.
Biard, J. (1989) *Logique et théorie du signe au XIVe siècle*, Paris: J. Vrin.
Chappuis, M., Kaczmarke, L., Pluta, O. (1986) 'Die philosophischen Schriften des Peter von Ailly: Authentizität und Chronologie', *Freiburger Zeitschriften für Philosophie und Theologie* 33: 593-615.

Pluta, O. (1987) *Die philosophische Psyschologie des Peter von Ailly*, Amsterdam: B.R. Grüner.
Spade, P.V. (1980) Peter of Ailly: Concepts and Insolubles, Dordrecht: Reidel.
Spade, P.V. (1996) *Thoughts, Words and Things: An Introduction to Late Medieval Logic and Semantic Theory*, published on Internet. See https://pvspade.com/Logic/.

19. ———. 2004. "Vague Concepts and Singular Terms in a Buridanian Language of Thought Tradition." *Proceedings of the Society for Medieval Logic and Metaphysics* no. 4:25-36.
"William Ockham and John Buridan are in agreement on basic ontological and epistemological principles, and can therefore be said to belong to the same late medieval philosophical tradition, but they differ in the ways that they spell out and develop these shared presuppositions. They both want to explain human thinking by a language of thought hypothesis, and they thus argue that thinking is a combination of mental acts, which function as terms in a language. This mental language also functions as a semantics for our spoken and written languages. Ockham argues that the acquisition of the terms of the mental language happens through intuitive or abstractive cognitions. An intuitive cognition, which is primary, is a direct acquaintance with an external object. The object acts on us and produces an act in the mind, which is a representation of the object by standing in for the object in the mind, and hence the object and the mental act can be said to co-vary. The mental act is thus also a sign, which plays a linguistic role in the so-called language of thought. (1)" (p. 25)
(...)
"Buridan's solution to the problem of the generality of sense representation is quite interesting. By putting things in prospect or by attending to some thing in a representation we always understand particularly before we understand universally. Always 'that cup' before 'cup'. This is a singular cognition, since it is of one particular individual, but it is in a sense a common cognition as well, since the cognition is not uniquely determining. This implies, I will argue, a huge difference between Ockham's and Buridan's theories of singular thought, and when this example and this theory is combined with a language of thought hypothesis, as it is in Buridan and his nominalist followers, something new emerges that will affect the structure of the mental language tremendously, since whatever it is I first singularly cognize it seems not to be something simple – 'that thing', 'that animal' and 'that cup' seem all semantically complex. Buridan calls these concepts that are first acquired and from which all others are derived vague or confused concepts. The rest of my paper will be about these concepts and about how the tradition after Buridan saw them." (p. 27)
(1) The most thorough study of Ockham's theory so far is Panaccio 2004. See also Lagerlund 2004 for the context and background of the theory.
References
Lagerlund, H. (2004) "Mental Representation in Medieval Philosophy", in The Stanford Encyclopedia of Philosophy (Summer Edition), Edward N. Zalta (ed.), URL = https://plato.stanford.edu/archives/sum2004/entries/representation-medieval/
Panaccio, C. (2004) *Ockham on Concepts*, Aldershot: Ashgate.

20. ———. 2006. "What is Singular Thought? Ockham and Buridan on Singular Terms in the Language of Thought." In *Mind and Modality: Studies in the History of Philosophy in Honour of Simo Knuuttila*, edited by Hirvonen, Vesa, Holopainene, Toivo J. and Tuominen, Miira, 217-237. Leiden: Brill.
"Calvin Normore argues in a forthcoming article that William Ockham, in the early fourteenth century, invented the notion of singular thought.(1) The thesis is not that Ockham was first in the history of philosophy to think that humans can think about a singular object—he was most certainly not—but the point is instead that he was first to think that singular thought is primary and the foundation of more general thought. Ever since Aristotle, it had been the other way around, namely, that thinking is primarily universal and that we somehow think about singulars in terms of universals.

Normore wants to reject this and pejoratively notes that philosophy has always had a preference for the universal." (p. 217)
(...(
"The theory Ockham developed was incredibly influential and became the foundation of a family of theories of thought that were dominant well into the sixteenth and seventeenth centuries, and it can, in many ways, still be said to be the dominant theory of thought.(2) In Normore's article, he also claims that thinkers following in Ockham's footsteps radically misunderstood the notion invented by Ockham; Normore is primarily considering John Buridan. These two thinkers did not disagree on the notion that singular thought is somehow primary, but they instead disagreed on what singular thought is. Normore claims, further, that Buridan got it all wrong. In this article, I would like to investigate the relation between Ockham and Buridan further and explain why Buridan ends up with the view he defends. I furthermore would like to present a defense of Buridan's notion of singular thought." (p. 218)
(1) See Normore (forthcoming).[*The Invention of Singular Thought* (2007)]
(2) For studies of the medieval part of this tradition, see Lagerlund (2003), Lagerlund (2004b), and Lagerlund (forthcoming a). For a study of the continuation of this tradition in early modern thought, see Lagerlund (forthcoming b). See also Fodor (2003) for an example of the importance of this view today.
Rferences
Fodor, J. (2003), *Hume Variations* (Oxford: Clarendon Press).
Lagerlund, H. (2003), "Representations, Concepts and Words: Peter of Ailly on Semantics and Psychology," *Proceedings of the Society for Medieval Logic and Metaphysics* 3, 15–36.
Lagerlund, H. (2004b), "Vague Concepts and Singular Terms in a Buridanian Language of Thought Tradition," *Proceedings of the Society for Medieval Logic and Metaphysics* 4, 25–36.
Lagerlund, H. (forthcoming a [2007]), "Making Aristotle Modern: John Buridan on Psychology and Language," J.M.M.H. Thijssen & P.J.J.M. Bakker (eds.) *Mind, Perception, and Cognition: The Commentary Tradition on Aristotle's De anima* (Aldershot: Ashgate).

21. ———. 2007. "The terminological and conceptual roots of representation in the soul in late ancient and medieval philosophy." In *Representation and Objects of Thought in Medieval Philosophy*, edited by Lagerlund, Henrik, 11-32. Aldershot: Ashgate.
"An important aspect of the history I am trying to sketch here is terminology, but it seems to me that the concept of representation as it is introduced into the history of philosophy is intrinsically tied to the term 'representation', and a necessary part of the history of the concept is therefore the history of the term. Part of my task of answering the above questions will hence be tackled by tracing the usage of the Latin terms '*repraesentare*' and '*repraesentatio*' in late ancient and medieval philosophy. It will then become evident that the usage of representations in the soul become a part of philosophical psychology at about the same time as the concept of 'intentio' is introduced, namely the answer to the two questions just posed is the Latin translation of the works of Avicenna. By using these Latin terms to translate several Arabic terms used by Avicenna the translators are forming or creating the concept of internal and mental representation. Interestingly, however, it is primarily imagination that Avicenna talks about as being representational in nature and not concepts. Thinking about concepts as representations comes into philosophy in a slightly different way and much later." (p. 13)

22. ———. 2007. "Making Aristotle Modern. John Buridan on Psychology and Language." In *Mind, Cognition and Representation: The Tradition of Commentaries on Aristotle's De anima*, edited by Bakker, Paul J. J. M. and Thijssen, Johannes M. M. H., 69-85. New York: Routledge.
"There are, at least, two distinct views of the mind in medieval philosophy. On one view the mind is literally nothing before it thinks of something. In analogy with

perception, the mind takes on the form of the object thought about, i.e., thinking is having the form of some object in the mind.Thinking is also on this view, in the first instance, universal. On the second view thinking is constituted by a concept inhering or modifying the mind. Thinking is, furthermore, language like, i.e., a language of thought hypothesis usually accompanies this view of the mind. It also holds that thinking is, in the first instance, of particular individuals.
John Buridan's theory of the mind, which is the topic of the present chapter, belongs to the second of these two views.
(...)
This chapter will give a detailed presentation of how Buridan thinks sensitive and intellective cognition works and how concepts are acquired. By looking at how he approaches this problem and compare what he has to say with Ockham's discussions of the same problem, the dual aspect of Buridan's project will become clear.
Although he adheres to Ockham's theory of mental language, he also accepts a thoroughly Aristotelian conception of sense cognition, which is not easily compatible with this new theory of thought.The result of this analysis will be a much more complicated structure of the mental language." (p. 69)

23. ———. 2009. "John Mair on Concepts." In *Le langage mental du Moyen Âge à l'âge classique*, edited by Biard, Joël, 205-220. Louvain: Peeters.
"John Mair (c. 1470-1550) is little known but he was in fact one of the most influential thinkers in the beginning of the sixteenth century. He was originally from Scotland, but studied in Cambridge and Paris. He graduated in Arts in 1495 in Paris and became master at the Montaigu College in 1499. Mair subsequently continued his career in Paris and took his doctorate in theology in 1501." (p. 205)
(...)
"Mair's views about concepts and their acquisition should be seen in the context of a long tradition starting with William Ockham in the early fourteenth century. Much has already been said before Mair in this tradition and it is often claimed that he did not contribute many new ideas to it. He is instead seen as an important transition thinker for the spread of these ideas into the early modern world. The aim of this article is to show that this is a misconceived view and that Mair in fact is a very original thinker. I do this foremost by relying on three of Mair' s many works, namely his *Sentence* commentary, *De anima* commentary, and a logic work called *Summulae logicales*. I have divided the sections of the article below according to the three main philosophical questions surrounding concepts, namely (i) what is their ontological status? (ii) what psychological or epistemological role do they play? and (iii) what semantical role do they play? I hence start in section one by presenting Mair's view of concepts as qualities of the mind and I will then also talk about his view of the soul in general, and then I deal with his view of the acquisition of concepts. Finally, I present his view of the signification of concepts. As will be clear from this outline Mair is much more original than previously thought." (p. 206, note omitted)

24. ———. 2011. "Mental Representation." In *Encyclopedia of Medieval Philosophy: Philosophy between 500 and 1500*, edited by Lagerlund, Henrik, 1165-1169. Dordrecht: Springer.
Abstract: "The concept of mental representation played an important role in late medieval cognitive theories.
It was primarily introduced in the Latin translation of Avicenna and became a central concept by the mid-thirteenth century. It was developed in several ways and all the features we now attribute to this concept were more or less already present in the Middle Ages." (p. 1165)

25. ———. 2015. "Singular Terms and Vague Concepts in Late Medieval Mental Language Theory: Or, the Decline and Fall of Mental Language." In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 122-140. New York: Fordham University Press.

"Since they [Ockham and Buridan] agree that everything existing is individual or singular, it is quite surprising that they disagree about singular concepts. The reason for this is that they have different views about how the basic signifi cative constituents of the mental language are acquired. Ockham argues that the fi rst concepts acquired are simple and singular, primarily since they are caused through the simple act of cognition of a singular object. Buridan, on the other hand, argues that the first concepts acquired are singular, but complex, since they are caused by a species or similitude in the soul. Buridan calls these concepts vague singulars, since they might signify different things in different circumstances.
As will hopefully become clear in the course of this article, this difference between Ockham and Buridan has a profound effect on the theory of mental language as it is further developed by their followers in the fourteenth and fifteenth centuries. In struggling to hold on to some of Ockham's basic ideas and to incorporate Buridan's view on singular concepts, these followers radically change the theory into one that no longer takes a mental language hypothesis as its basis, but that it seems to me instead bears many similarities to the theory of thought defended by René Descartes in his *Meditations on First Philosophy*.
In this essay, I start by outlining the difference between Ockham and Buridan on singular concepts, and I then discuss the development of Buridan's ideas in Nicholas Oresme (d. 1382), Marsilius of Inghen (d. 1396), Peter of Ailly (d. 1420) and Gabriel Biel (d. 1495). I conclude by spelling out the consequences of this discussion as I see them." (pp. 122-123)

26. Lecq, Ria van der. 2009. Mental language: a key to the understanding of Buridan's Semantics.
Available on Academia.edu.

27. Lenz, Martin. 2008. "Why Is Thought Linguistic? Ockham's Two Conceptions of the Intellect." *Vivarium* no. 46:302-317.
Abstract: "One of Ockhams fundamental tenets about the human intellect is that its acts constitute a mental language. Although this language of thought shares some of the features of conventional language, thought is commonly considered as prior to conventional language. This paper tries to show that this consensus is seriously challenged in Ockhams early writings. I shall argue that, in claiming the priority of conventional language over mental language, Ockham established a novel explanation of the systematicity of thought - an explanation which anticipates the idea that thought becomes systematic through the acquisition of conventional language."

28. ———. 2012. "Mental Language." In *The Oxford Handbook of Medieval Philosophy*, edited by Marenbon, John, 363-382. New York: Oxford University Press.
"Unless one argues that the mind employs equivalents of such features naturally (whatever that might mean), it seems that the Augustinian model has a clear advantage in claiming that proper mental sentences
are unstructured, whereas the linguistic and logical features we seem to employ in thought appear only in improper mental language, that is, internalised language, and are thus derived from conventional language.
In the following paragraphs, then, I would like to show how this structural problem takes shape in the medieval debates on mental language (debates in which Ockham still deserves a prominent role, not as the inventor of a 'standard theory' but rather as someone who successfully imparted deep and fruitful worries). I shall argue that the variants of the received 'standard theory' face quite powerful competitors in medieval adherents of the Augustinian model, which compelled later theorists to rethink the relation between thought and language. Before looking at the discussion of structure, I (1) introduce the main ingredients of the rival theories and (2) show how they lead to competing views on the priority question. After setting out the 'standard theory' as an answer to this question, (3) I will take a look at competing

solutions of the structure problem in more detail, while hinting at parallels in contemporary discussions." (p. 365)

29. Magee, John. 1989. *Boethius on Signification and Mind*. Leiden: Brill.
Contents: Acknowledgements IX; Sigla X; Abbreviations and Editions XI; Introduction 1; I. Aristotle: *Peri Hermeneias* I, 16a3-9; 7; II. Boethius' Translation 49; III. Orandi Ordo 64; IV. Cogitabilis Oratio 93; Afterword 142; Bibliography 150; Index Locorum 155; Index Nominum et Rerum 162-165.
"The present work is divided into four chapters, taking as its starting point the lines of Aristotle's *Peri Hermeneias* around which Boethius' theory of signification turns. The first chapter of the study plunges in *medias res*, and for that the reader's patience is requested. The Greek text is both difficult and compressed, and necessarily brings into consideration questions of the history of transmission and commentary, as well as numerous aspects of Aristotle's thought both in this and in other works. But since Boethius translated either all or part of the *Peri Hermeneias* before commenting upon it, and then revised the translation for the second commentary; and since in his translation, as in all translations, there is an element of "commentary" upon the meaning of the original, it has been thought necessary to come to a clear understanding of what Aristotle wrote before proceeding to the translation and commentaries. After careful examination of the Greek passage and of the questions it poses, there follows in the second chapter an analysis of Boethius' Latin translation of the same, and of the interpretation implicitly contained therein. The third and fourth chapters treat of Boethius' commentaries on the passage, as seen from two points of view: (a) from the way in which Boethius thinks Aristotle to have disposed or ordered the four things (*res, intellects, vox, litterae*) laid down in the context of the doctrine of *Peri Hermeneias* 16a3-9; (b) from the point of view of the theory of cognition Boethius develops in support of the above. The question Boethius ultimately poses for our consideration is: How are the operations of the passive mind converted into words and statements that can be spoken aloud? If his commentaries allow no certain answer to this question, important ground will nevertheless have been gained in studying carefully the way in which Boethius introduces the problem, and then in suggesting the solution which seems most consistent with what is said in his commentaries." (pp. 1-2)

30. Maierù, Alfonso. 2004. "Mental Language and Italian Scholasticism in the Fourteenth and Fifteenth Centuries." In *John Buridan and Beyond: Topics in the Language Sciences, 1300-1700*, edited by Friedman, Russell and Ebbesen, Sten, 33-67. Copenhagen: C. A. Reitzel.
Summary: "Italian universities of the fourteenth and fifteenth centuries took part in the scholastic debate concerning mental language, which first arose at the universities in Oxford and Paris in the early fourteenth century. Peter of Mantua (d. 1400) and Paul of Venice (d. 1429) were the prominent Italian masters in this respect; their opinions continued to be cited at the European universities of the early modern period. Two main conclusions are reached here: that there is an obvious continuity between medieval and modern ideas concerning mental language; and that further research is needed in order to establish the respective roles of Paris and Oxford in the development of the debate at the beginning of the fourteenth century."

31. Maurer, Armand. 1981. "William of Ockham on Language and Reality." In *Miscellanea Mediaevalia*, edited by Beckmann, Jan P., 795-802. New York: Walter de Gruyter.
Translated in Italian in: *Logica e linguaggio nel medieoevo*, edited by Riccardo Fedriga and Sara Puggioni.
"In the first chapter of his *Summa Logicae*, Ockham describes three kinds of language {*oratio*): written, spoken, and mental. Written language, he says, is composed of words inscribed on some material and visible to the eye. Spoken language is made up of words uttered by the mouth and audible to the ear. Mental language is different from both of these because it has no material or outward expression. Rather, it is composed of mental words which, as St. Augustine says,

belong to no tongue, for they remain entirely within the mind and are incapable of external expression(2).
In these brief lines Ockham sketches three systems of communication that make possible an interchange of ideas, feelings, and desires. Each language is a complex set of signs with its own properties and place in human communication. The terms of written and spoken language are conventional signs, varying from people to people, and having no natural likeness to the things they signify. The terms of mental language are signs of an entirely different sort: they are mental names {nomina mentalia) or thoughts functioning as natural signs of things(3)." (p. 795)
(2) Ockham, *Summa logicae*, P. I, c. 1; *Opera philosophica*, I (Franciscan Institute: St. Bonaventure, New York, 1974), p. 7.13—25. For the references to St. Augustine, see p. 7, n. 3.
(3) Ockham, *ibid*. On Ockham's notion of mental language, see John Trentman, "Ockham on Mental," *Mind*, 79 (1970), 586-90; Joan Gibson, *The Role of Mental Language in the Philosophy of William of Ockham* (unpublished doctoral thesis, University of Toronto, 1976).

32. Meier-Oeser, Stephan. 1999. "Thinking as Internal Speaking: Some remarks on the conceptual changes in the relation between language and thinking from Middle Ages to Condillac." In *Signs and Signification. Vol. I*, edited by Gill, Harjeet Singh and Manetti, Giovanni, 175-194. New Delhi: Bahri Publications.
Summary: "Traditionally the two main paradigms for describing and explaining processes of thought and mental representation have been thought as image and thought as language. Whereas in present-day debates these paradigms are treated as mutually exclusive, in scholastic theories of cognition and mental language they were often amalgamated in various ways. By tracing pertinent discussions from the fourteenth to the seventeenth centuries, the article points to some consequences of this amalgamation both for the notions of image and of likeness and for approaches to thought as language."

33. ———. 2004. "Mental Language and Mental Representation in Late Scholastic Logic." In *John Buridan and Beyond: Topics in the Language Sciences, 1300-1700*, edited by Friedman, Russell and Ebbesen, Sten, 237-265. Copenhagen: C. A. Reitzel.
Summary: "Traditionally the two main paradigms for describing and explaining processes of thought and mental representation have been thought as image and thought as language. Whereas in present-day debates these paradigms are treated as mutually exclusive, in scholastic theories of cognition and mental language they were often amalgamated in various ways. By tracing pertinent discussions from the fourteenth to the seventeenth centuries, the article points to some consequences of this amalgamation both for the notions of image and of likeness and for approaches to thought as language."

34. ———. 2015. "The Intersubjective Sameness of Mental Concepts in Late Scholastic Thought." In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 287-322. New York: Fordham University Press.
"The short introductory remarks of Aristotle's *De interpretatione*, as unimposing as they may appear, have provided the starting point of some of the most intense and long-lasting debates in the history of semantics and epistemology.(1)
Quite a number of these discussions are more or less closely related to the Stagirite's well-known statement that "mental concepts are the same for all" (*eaedem omnibus passiones animae sunt*). What at a first glance might appear to be but an arcane issue in the scholastic exegesis of Aristotle, i.e. the attempt to provide a reasonable interpretation and account of his thesis of the intersubjective sameness of concepts (henceforth referred to as ISC), on a closer look, turns out to be historically connected with topics that, from different points of view and different perspectives, have been identifi ed as crucial for the foundation of modern semantics as well as for the origin of modern analytical philosophy" (p. 287)

(1) I am referring especially to *De interpretatione* I, 16a2–8: “Now spoken sounds are symbols of affections in the soul, and written marks symbols of spoken sounds. And just as written marks are not the same for all men, neither are spoken sounds. But what these are in the first place signs of—affections of the soul—are the same for all; and what these affections are likenesses of—actual things—are also the same.” *The Complete Works of Aristotle*, ed. Jonathan Barnes, vol. 1 (Princeton: Princeton University Press, 1984).

35. Normore, Calvin Gerard. 1990. "Ockham on Mental Language." In *Historical Foundations of Cognitive Science*, edited by Smith, J. C., 53-70. Dordrecht: Kluwer.
"Thanks largely to the work of Noam Chomsky, we have witnessed over the last thirty years a revival of interest in two closely related ideas: that there is a universal grammar, a set of structural features common to every human language, and that the exploration of this grammar is, in part, an exploration of the structure of thought. Fourteenth century grammarians and philosophers were also interested in this complex of questions, and debate about them raged as vigorously then as now. One tradition in this debate grew out of thirteenth century terminist logic and seems to have been given a distinctive shape by William Ockham This tradition posited a fully-fledged language of thought common to all rational beings and prior to al linguistic convention. In this essay I will attempt to outline Ockham's account of this mental language, to consider some fourteenth century objections which lead to the refinement of the account by others in the fourteenth century, and finally to suggest that Ockham's approach has something to contribute to current debate about the relationship between the theory of meaning and any language of thought.
At the very beginning of his *Summa Logicae* Ockham claims that there are three distinct types of language: written, spoken, and mental. He insists that written and spoken language are distinct in kind and that there is a type of language whose terms are concepts and which exists only in the mind. (1)
Ockham's mental language plays several distinct roles within his philosophy. On the one hand, mental language figures crucially in the semantics of spoken and written language. On the other hand, mental language is a fully articulated language which is suited to be spoken by natural telepaths and is spoken by the angels. These two kinds of role require very different features of mental language, features which, as we shall see, sometimes pull its structure in opposite directions."
(1) Cf. W. Ockham, *Summa Logicae* I. C. 1 in P. Boehner, G. Gal, S. Brown (eds.), *Opera Philosophica* (St. Bonaventure, NY: The Franciscan Institute, 1974).

36. ———. 1997. "Material Supposition and the Mental Language of Ockham's *Summa Logicae*." *Topoi. An International Review of Philosophy* no. 16:27-33.
"William Ockham begins his *Summa Logicae* by dividing language into three types, written, spoken and “conceived, having being only in the understanding”. He goes on to argue that this conceived language or ‘mental’ (*mentalis*) language, as he frequently calls it, is in some ways the most basic type. It is composed of terms which are natural whereas spoken and written language are instituted *ad placitum*. Spoken and written terms have their signification because of their subordination to the terms of mental language which play very much the roles Frege attributes to senses (*Sinne*).
Ockham’s views about mental language seem to have developed considerably during the part of his life in which he wrote extensively about issues in the philosophy of language. I will be concerned here only with what might be thought his ‘mature’ view as this is presented in the (relatively) late *Summa Logicae*. In this work the terms of the mental language (concepts (*conceptus*) as he also calls them) are acts of the mind and the formation of a mental sentence is some kind of production of such acts." (p. 27, a note omitted)

37. ———. 2007. "The Invention of Singular Thought." In *Forming the Mind: Essays on the Internal Senses and the Mind Body Problem from Avicenna to the Medical Enlightenment*, edited by Lagerlund, Henrik, 109-128. Dordrecht: Springer.

"Little is known of the views about singular thought there were in the period between 1150 and 1225 though it is clear that Avicenna's "floating man" thought experiment from the *De Anima*, a thought experiment which is designed to show that we have immediate intellectual contact with our selves, was taken up and reflected upon by several thinkers who were also well–aware of Augustine's similar views. The period between 1225 and 1325 is much better served. Thanks largely to the pioneering work of Camille Bérubeé who both surveyed the terrain himself and suggested research programmes to others we have not only a number of studies of the relevant views particular thinkers in this period but something like a consensus on the general contours of the development of theory on the subject. Bérubeé distinguished several rough periods. Between 1225 and 1250 we find, he suggested, little recognition of intellectual contact with material singular. Between 1250 and 1275 we find the development (notably in Aquinas) of a picture according to which there is no direct intellection apprehension of a singular but there are cognitive mechanisms for somehow combining intellections (which are themselves general) with the deliverances of sense to get cognition (in some general sense) of the singular. After 1275, the consenus has it, things began to change and we begin to find theories which propose direct intellectual contact with singulars albeit of a complex kind. Matthew of Aquasparta, Roger Marston, Peter John Olivi and Vital du Four are Franciscan masters who have received attention in this connection as has the secular master Henry of Ghent.)6) Finally after 1300 we begin to find in Scotus, in various Scotists and eventually in Ockham, the development of the concept of and a rich theory of intuitive cognition." (p. 115)
(...)
"I propose first to argue that it is issues about singularity and not about existence with which the mature Ockham is fundamentally concerned in giving singular thought pride of place." (p. 116)
(...)
"Although the role that singularity as contrasted with existence plays in Ockham's picture has not, to my knowledge, been much emphasized in previous discussions, Ockham's picture has long been acknowledged as a clear case of the view that thought can be singular. What has typically been debated is whether and if so to what extent his views on this were anticipated. What has been less debated but is of interest is whether and if so to what extent his views were taken up. In the remainder of this paper it is these issues to which I turn." (p. 122)
(1) For a good account of much recent discussion (and one which illustrates the bias to which I allude) cf. Lawlor [*New thoughts About Old Things: Cognitive Policies as the Ground of Singular Concepts*, Garland Press] (2001).
(6) Notable studies here include Bérubé [*La connaissance de l'Individuel au Moyen Age*, Montreal and Paris: Presses de l'Université de Montréal et P.U.F.] (1964), Putallaz [*Le sens de la réflexion chez Thomas D'Aquin*, (Études de philosophie Médiévale LXVI), Paris: Vrin] (1991).

38. ———. 2009. "Externalism, Singular Thought and Nominalist Ontology." *Proceedings of the Society for Medieval Logic and Metaphysics* no. 9:45-52.
"The 14th century nominalistae each held a number of theses, among them
(1) that there is a language of thought the grammar of which is shared by all humans.
(2) that the terms of spoken language are signs of whatever the terms of mental language with which they are correlated are signs.
(3) that the primitive terms of mental language are concepts.
(4) that the most basic concepts are of particular material substances and that all other concepts are acquired either by abstraction from these or by combining concepts previously acquired.
(5) that generality is a feature only of signs – terms of some language – and not of anything non-linguistic.
(6) that a whole just is its parts.
(7) that only spirits – human souls, angels and God – lack parts.

(8) that material objects persist through time.
Some of these theses are striking and one might wonder whether even those that concern ontology are mutually consistent. If a whole just is its parts then a difference of parts should make for a different whole and if each material object is such a whole then for numerically the same material object to persist through time it must not gain or lose parts over time. Since this happens at most rarely it would seem there are few if any persisting material objects. Hence it seems that the thesis that a whole just is its parts is in some tension with the thesis that it persists through time. Moreover if our primitive concepts are concepts of ordinary objects and such objects do persist through time despite changing parts there must be identity conditions for such objects built into such concepts. These conditions will have to be expressed in concepts previously acquired and so our concepts of ordinary objects cannot be basic after all. Hence it seems that the thesis that our basic concepts are of ordinary objects conflicts with the thesis that ordinary objects persist through time." (p. 45)

39. ———. 2009. "The End of Mental Language." In *Le langage mental du Moyen Âge à l'âge classique*, edited by Biard, Joël, 293-306. Louvain: Peeters.
"The hypothesis that thought is explanatorily prior to any spoken or written language and yet has the syntactic and semantic structure of a natural language has emerged at least twice in the history of philosophy.
The best known forms of the hypothesis, that advocated by William Ockham in the fourteenth century and that advocated by Jerry Fodor in the late twentieth, have remarkable and salient similarities, similarities strong enough that it is plausible to think of Fodor's and Ockham's theories as variants of a single picture of the relation between thought and language - the Mental Language Hypothesis. The Mental Language Hypothesis in various fairly closely related forms was the dominant account of the relation between thought and language throughout the fourteenth and fifteenth centuries but by the twentieth century even the memory of it was so restricted to a handful of specialists that neither Fodor nor Chomsky were aware of its fourteenth century development.
Why did the Mental Language Hypothesis disappear, what replaced it and how did the transition corne to pass? To fully answer any of these questions is beyond the scope of a single paper. My hope here can only be to make some small progress toward answers." (p. 293)

40. Nuchelmans, Gabriel. 1980. *Late-Scholastic and Humanist Theories of the Proposition*. Amsterdam: North-Holland.

41. ———. 1992. "Some Remarks on the Role of Mental Sentences in Medieval Semantics." *Histoire, Épistémologie, Langage* no. 14:47-59.
Abstract: "After introducing the notion of mental language as it was developed especially by William of Ockham this article focuses on the role of mental sentences in the logical interpretation of belief-ascriptions. First, the divergent positions advocated by Frege and Searle are outlined. Next, it is asked how the fourteenth-century Parisian logician Jean Buridan might hare handled such statements as 'The sheriff believes that Mr. Howard is an honest man'. It is concluded that in spite of many superficial differences, at bottom Buridan's view is rather similar to Searle's account. In particular, both authors hold that in reported speech the words 'Mr. Howard is an honest man' keep their usual meaning as far as reference and predication are concerned."

42. O'Callaghan, John P. 1997. "The Problem of Language and Mental Representation in Aristotle and St. Thomas." *The Review of Metaphysics* no. 50:499-545.
"In the opening passages of his *De interpretatione*,(1) Aristotle provides a simple summary of how he thinks language relates to the mind and the mind to reality, a sketch which has often been called his "semantic triangle." (p. 499)
(...)
"It has been called a triangle because of the three vertices, words, affections of the soul, and actual things. It is semantic because it has been interpreted to be providing

a sketch of the meaning of words, and how they relate to things. As Norman Kretzmann points out, in the form of Boethius's sixth-century Latin translation, this passage "constitute[s) the most influential text in the history of semantics,"(3) having an enormous influence on the subsequent philosophical tradition of reflection upon the interrelations of language, mind, and the world, or as Hilary Putnam often puts it, "how language hooks onto the world." This is particularly true of the Middle Ages, but also beyond into modern philosophy." (pp. 499-500)
"In fact, St. Thomas's account of Aristotle's semantic triangle avoids the main thrust of the contemporary criticism. To show this, I will focus upon Putnam's criticism. However, my purpose is not to evaluate the soundness of Putnam's larger argument with mental representationalism, but rather to test its adequacy as an argument addressed to Aristotle and St. Thomas. Consequently, I will do four things. First, I will give a brief account of Aristotle's remarks in the *De interpretatione*, and of St. Thomas's understanding of them. Next, I will provide a sketch of the historical context in which Putnam's criticism should be understood. I will then examine directly Putnam's criticism.[*]
Finally, I will indicate why this criticism does not, in fact, "cut at the joints" of St. Thomas's interpretation of Aristotle." (p. 504)
(1) The Greek title is *Peri hermeneias*.
(3) Norman Kretzmann, "Aristotle on Spoken Sound Significant by Convention," in *Ancient Logic and Its Modern Interpretations*, ed. John Corcoran (Dordrecht, Holland: D. Reidel Publishing Company, 1974), 3-21. Norman Kretzmann, "Semantics, History of," in vol. 7 of T*he Encyclopedia of Philosophy*, ed. Paul Edwards (New York: Macmillan Publishing Co., 1967), 367.
[*] Hilary Putnam, "Meaning, Other People, and the World," in *Representation and Reality* (Cambridge: MIT Press, 1988).

43. ———. 2000. "Verbum Mentis: Philosophical or Theological Doctrine in Aquinas?" *Proceedings of the American Catholic Philosophical Association* no. 74:103-119.

44. ———. 2003. "More Words on the Verbum: Response to Doig." *American Catholic Philosophical Quarterly* no. 77:257-268.