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

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

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Studies in English (A- Kel)

1. Adams, Marilyn McCord. 1978. "Ockham's Theory of Natural Signification." *The Monist* no. 61:444-459.
"Ockham is called a nominalist because he identifies universals with names. But there are different kinds of names and a variety of forms of nominalism. One sort says that universals are names whose meaning is ultimately to be explained in terms of the conventions of linguistic communities.
Ockham appears never to have taken such a "nominalism of convention" very seriously.
(...)
Ockham himself distinguishes signs that signify by convention from those that signify naturally. Conventional signs are imposed to signify what the corresponding natural signs signify. Hence, the ultimate explanation of why names signify anything at all, and why they signify the things they do, is not to be given in terms of conventions that depend upon the human will and could have been otherwise than they are, but in terms of a natural relation between concepts and things. In what follows, I shall try to arrive at a fuller understanding of Ockham's nominalism by investigating his theory of natural signification." (p. 444)
(...)
"The proper names of Ockham's mental language are really more analogous to Russell's logically proper names, since they are the cognitions in which we apprehend or can apprehend particulars immediately and for the first time. In Russell's terminology, in such cognitions we know particulars "by acquaintance" and "by description." Ockham allows that we can compound various simple cognitions of imagination and memory together to arrive at a composite concept that is proper to Socrates and by means of which we conceive of him as having a certain color, shape, location, etc.30 And these concepts would be a closer analogue in Ockham's theory of Russell's alleged truncated descriptions. And just as Russell takes it for granted that such descriptions are very often uniquely satisfied, so Ockham tacitly assumes that such composite concepts are proper even though their simple components are not, because many things may be actually similar to one simple concept, while one actual thing is more similar to the whole composite than any other actual thing is." (p. 453)

2. ———. 1987. *William Ockham*. Notre Dame: University of Notre Dame Press.
On mental languasge see pp. 71–141, 289–298 and 348–351.
"Chapter 9: Evaluation of Ockham's Ontological Program.
Ockham's notorious ontological program is supposed to "turn things (*res*) into names." In the first and more famous half (examined in chapters 1-4 above), he argues that universals are nothing other than names-primarily concepts that naturally signify many particulars indifferently. Then, turning to the logically independent issue of how many fundamentally different kinds of things there are, he argues that-from the viewpoint of natural reason-nothing created is a thing (*res*) really distinct from substances and qualities. His own thesis is that Aristotle's ten categories classify not things, but names and represent ten fundamentally distinct ways of· signifying particular substances and qualities. Now that considerations for and against distinct quantity- relation-, and quality-things have been examined and weighed (in chapters 5-8 above), it is time to consider two general objections to Ockham 's program and its resultant ontology: the first, to the effect that its difficulties are insuperable; the second that it carries no compensating advantages. I shall argue that Ockham need not accept either charge." (p. 287)

3. Amerini, Fabrizio. 2009. "William of Ockham and Mental Synonymy: The Case of Nugation." *Franciscan Studies* no. 67:375-403.
"In recent years an important point of discussion among the scholars of William of Ockham has been the possibility of accounting for a reductionist interpretation of Ockham’s mental language. Especially, the debate focused on the legitimacy of

eliminating connotative simple terms from mental language by reducing them to their nominal definition. The distinction between absolute and connotative terms plays an important role in Ockham's philosophy of language. Ockham introduces it as a subdivision of the class of categorematic terms, i.e. of the terms provided with signification, and such a distinction overlaps that between concrete and abstract terms. In the *Summa Logicae,* Part I, chap. 10, devoted to the explanation of such a distinction, Ockham makes three major claims concerning connotative terms." (pp. 375-376, two notes omitted)

4. ———. 2013. "Thomas Aquinas on Mental Language." *Medioevo. Rivista di storia della filosofia medievale* no. 38:77-110.
Abstract: "Many scholars noted that Thomas Aquinas has been very elusive about mental language. Neither a full-fledged theory of mental language nor an accurate description of what happens in our mind when we speak or we listen to a given language can be found in his works. I fundamentally agree with this judgment; nonetheless I think that Aquinas had something important to say about mental language. My purpose in the article is to show that Aquinas endorsed a version of the so-called "Language of Thought Hypothesis". Influenced by Boethius, Aquinas seems to believe that our thought is primitively linguistic and provided with a natural grammar that is narrower than those of the different spoken and written languages. If our thought had no language-like articulation, Aquinas seems to argue, we could not be able to form and proficiently speak any language. I give arguments to show, in particular, that Aquinas adopted a functional explanation of the acts of thought and a compositional description of their contents. On Aquinas' texts, mental language is articulated on two-levels, i.e., that of the natural concepts derived, by abstraction, from the extramental world and that of the logical operations that our mind can carry out on such concepts. Unlike Robert Pasnau, I think that Aquinas would be prepared to accept that the mere possession of concepts and mental operations is a necessary and sufficient condition to translate immediately our thought into a spoken and written language."

5. ———. 2017. "Ockham on mental syncategoremata." In *The Language of Thought in Late Medieval Philosophy: Essays in Honor of Claude Panaccio*, edited by Pelletier, Jenny and Roques, Magali, 149-168. Dordrecht: Springer.
Abstract: "Many scholars have argued that Ockham changes his mind on the nature of mental syncategoremata when he moves from his early to his late theory of concepts. If, in the first theory (the so-called *fictum* theory), Ockham describes mental syncategoremata as linguistic concepts that are abstracted from spoken language, in the second theory (the so-called *actus* theory), he describes them as signs of the mind, naturally co-signifying the same things that the mental categoremata to which they apply naturally signify. In this essay, I want to give some arguments to prove that while Ockham indisputably modifies his position on the nature of concepts, he does not depart from his early explanation of the formation and function of mental syncategoremata. I shall focus especially on his *Quodlibet* IV, q. 35, which dates to a later period of his career. It is a significant text, for in it Ockham reaffirms the view he established in the early *Ordinatio*."

6. ———. 2022. "Ockham and Chatton on the Origin of Logical Concepts." In *Thinking and Calculating: Essays in Logic, Its History and Its Philosophical Applications in Honour of Massimo Mugnai*, edited by Ademollo, Francesco, Amerini, Fabrizio and De Risi, Vincenzo, 185-203. Cham (Switzerland): Springer.
"In Ockham's vocabulary, syncategoremata designate logical operators: connectives (*et, vel, sed*, etc.), quantifiers (*omnis, quidam, aliquis, nullus*, etc.), exceptive, exclusive, reduplicative particles (e.g. *preter, solum, in quantum*, etc.), the copula (*est*), adverbs and all the modes, grammatical as well as logical (e.g. *necessario, possibile, per se, formaliter,* etc.), which affect the semantics of terms and, in consequence, the truth-value of propositions." (p. 185, a note omitted)
(...)

"I shall reconsider Ockham's position in the first part of this paper, while offering an overview of syncategoremata in Ockham's texts.(4) I shall argue that his early account of the origin and nature of syncategorematic concepts may be reconciled with his second theory of concepts. On the other hand, someone who was not of this opinion was Walter Chatton, a confrère of Ockham at London and Oxford. Chatton vigorously reacted to Ockham's early explanation of syncategorematic concepts.)5) According to Chatton, such concepts do not signify conventionally, but naturally. Chatton considers the actus-theory of concepts to be incompatible with the *Ordinatio* explanation of the origin and nature of syncategorematic concepts. I shall reconstruct Chatton's criticism in the second part of this paper."
(4) In the first part, I draw upon and occasionally clarify or expand what I said in Amerini (2017).
(5) For an introduction to Chatton's life and works, see Keele and Pelletier (2018).
References
Amerini, F. (2017). Ockham on mental syncategoremata. In J. Pellettier & M. Roques (Eds.), T*he language of thought in late medieval philosophy* (pp. 149–168). Springer.
Keele, R., & Pelletier, J. (2018).Walter Chatton. In The Stanford Encyclopedia of Philosophy (Fall 2018 Edition) (E. N. Zalta, Ed.). https://plato.stanford.edu/archives/fall2018/entries/walter-chatton/. Accessed 25 March 2022.

7. Ashworth, Earline Jennifer. 1981. "Mental Language and the Unity of Propositions: A Semantic Problem Discussed by Early Sixteenth Century Logicians." *Franciscan Studies* no. 41:61-96.
Reprinted as essay VI in: *Studies in Post-Medieval Semantics*, London: Variorum Reprints 1985.
"Gregory of Rimini's influential *Sentence Commentary* was written in the 1340s. One of the questions which he discussed in his prologue was how it is that a mental proposition functions as a united whole, with a force that its apparent parts taken separately do not possess. (1)
In this article I intend to explore the reactions to Gregory's arguments among a group of logicians who studied or taught at Paris in the first three decades of the sixteenth century. The most important of the authors I shall examine are three Spaniards: Jerome Pardo (d. 1502 or 1505) whose *Medulla Dialectices* was published in 1500 and again in 1505; Antonio Coronel, whose *Duplex Tractatus Terminorum* was published in 1511 and whose *Prima Pars Rosarii in qua de Propositione Multa Notanda* was published at about the same time; and Fernando de Enzinas, whose most noteworthy book for our purposes was his *Tractatus de Compositione Propositionis Mentalis Actuum Sincathegoreumaticorum Naturam Manifestans*, first published in 1521, and reprinted in 1526 and 1528." (p. 61)
(...)
"In conclusion there are two points I would like to make. On the one hand it is quite clear that when early sixteenth century logicians were discussing mental language they took it that they were concerned with philosophy of mind. In part this is the natural result of their approach to signification as a causal process. If one defines "signify" in terms of making known or representing to the cognitive faculty, then the question of the various effects of words upon the hearer's mind, and what they reveal about the speaker's mind, will embrace both semantic and psychological issues. One also has to bear in mind the part played by speaker intentions in endowing linguistic aggregates with their propositional force.(134) At this level the study of language cannot be separated from the study of mental attitudes and processes. On the other hand, if one isolates the part of the discussion which was devoted to purely semantic issues, then it is no longer necessary to postulate mental language as such. Everything that was said about the semantic function of syncategorematic acts, subject and predicate, the unity of propositions and the equivalence between propositions, could be described in neutral terms as the study of semantic structure leaving it quite open what the relationship is between the

semantic structure of a given utterance and the psychological states of the speaker. Nor does there seem any genuine need to postulate a naturally meaningful language in addition to conventionally meaningful language, since a given speaker's psychological states can be adequately described in terms of conventional language, and since synonymy can be redefined for conventional languages.
Indeed, one can argue that the notion of a naturally meaningful mental language is without any function, since we have no criteria for identifying it or its structures. But this is to go far beyond Gregory of Rimini and sixteenth century reactions to his arguments." (pp. 95-96)
(1) Gregory of Rimini, *Gregorii Ariminensis O.E.S.A. Super Primum et Secundum Sententiarum* (Reprint of the 1522 edition: St. Bonaventure, N.Y.: The Franciscain Institute; Louvain: E. Nauwelaerts; Paderborn: F. Schöningh, 1955), fol. 3va-5rb.
(134) But Michael Dummett, *Frege: Philosophy of Language* (London: Duckworth, 1973, p. 311, reminds us that "*linguistic* acts should be classed as conventional actions, not as the external expression of interior states. Assertion, for example, is to be explained in terms of the conventions governing the use of those sentences which are understood as having assertoric force, not as the utterance of a sentence with the intention of expressing one's interior act of judgment (or interior state of belief) that it is true."

8. ———. 1982. "The Structure of Mental Language: Some Problems Discussed by Early Sixteenth Century Logicians." *Vivarium* no. 20:59-83.
Reprinted as essay V in: *Studies in Post-Medieval Semantics*, London: Variorum Reprints 1985.
"Preface.
As is well known, late and post-medieval logicians shared the belief that were three types of language, spoken, written, and mental. (1) Spoken and written languages had conventional meaning, and were in fact, though not necessarily so, different for different groups of people. Mental language, on the other hand, was thought to have natural meaning and to be common to all men. The obvious question to ask about mental language concerns its structure and how this relates to the structure of spoken or written languages, especiallyLatin. Ockham's position on the matter has been investigated by more than one author; (2) so in this paper I intend to focus on the views held by logicians in early sixteenth centuryParis, and by some of those earlier logicians who most influenced them. I shall leave firmly aside the obvious philosophical question of what criteria could possibly be used in determining a structure for mental language which is independent of spoken or written language. Sufficeit to say that late medieval logicians saw no problem here.
The main issues concerning structure arose from a consideration of the categorical proposition.This was taken to be the simplest kind of proposition, which at its most basic displays a subject and a predicate, both in the nominative case, and the copula "is" or "are". To these ingredients may be added quantifiers such as "all" and "some", negation signs, adjectives, adverbs, and other modifiers. Two kinds of problem are presented by this account. First there is the question of what to say about spoken or written propositions which do not fit the standard mould.I include here such sentences as "Pluit"/"It is raining" which do not have a subject; sentences displaying so-called adjectival verbsuch as "runs" in "Socrates runs" which do not have a separate copula and predicate; and sentences containing pronouns and demonstrative terms such as "I am running"and "This is white", whose subject is given only by the context of the utterance. Second, there is the question of how to account for certain features of those spoken and written propositions which do fit the standard mould, namely such features as syncategorematic terms, tense variations (which will not be discussed in this paper) and variations of number, case and gender. It was in their discussion of these issues that Parisian logicians gave their most detailed account of the structureof mental propositions." (pp. 59-60)
(...)
"It seems that the road was left open to considerable variation in mental language. Two speakers could perfectly well utter sentences which were logically equivalent

and which picked out the same state of affairs without using the same mental propositions.As a result,one can suggest both that it is consistent with the post-medieval view that sentences in different languages may be equivalent and translatable without exhibiting precisely the same deep structure, and that there is no reason why one should speak of mental language as containing "*the* forms that are necessary for any true description of the world", as Trentman put it in his account of Ockham's view of mental language. (110) Ockham may have had an ideal language in mind; Enzinas and his contemporaries did not. (111)". (p. 82)
(1) See Gabriel Nuchelmans, (1) *Theories of the Proposition. Ancient and Medieval Conceptions of the Bearers of Truth and Falsity*, Amsterdam/London 1973 and (2) *Late Scholastic and Humanist Theories of the Proposition*, Amsterdam, Oxford, New York 1980, passim.
(2) For a discussion of Ockham's views, see Peter Geach, *Mental Acts*, London 1957, pp. 101-104 and John Trentman, "Ockham on Mental", in: *Mind*, 79 (1970), 586-590.
(110) Trentman, p. 589, my italics.

9. ———. 2004. "Singular Terms and Singular Concepts: From Buridan to the Early Sixteenth Century." In *John Buridan and Beyond: Topics in the Language Sciences 1300-1700*, edited by Ebbesen, Sten and Friedman, Russell L., 121-151. Copenhagen: C. A. Reitzel.
Summary: "This article considers medieval treatments of proper names and demonstrative phrases in relation to the question of when and how we are able to form singular concepts. The logical and grammatical background provided by the authoritative texts of Porphyry and Priscian is examined, but the main focus is on John Buridan and his successors at Paris, from John Dorp to Domingo de Soto. Buridan is linked to contemporary philosophers of language through his suggestion that, although the name 'Aristotle' is a genuine proper name only for those who have the appropriate singular concept caused by acquaintance with Aristotle, it can be properly treated as a singular tem by subsequent users because of their beliefs about the original imposition of the name."

10. Biard, Joël. 2021. "Mental Language." In *The Routledge Companion to Medieval Philosophy*, edited by Cross, Richard and Passch, J. T., 306-314. New York: Routledge.
"The idea that thought is like a dialogue of the soul with itself dates back to Plato. (1) But talking about mental language in the strict sense implies the fact that the field of intellections or concepts is made of meaningful units carrying semantic properties and being articulated in a certain syntactical structure. Such an approach goes beyond the idea of talking with oneself; it is neither, strictly speaking, that of Aristotle, in his fundamental works on which medieval logic and semantics were built, even more so in his psychology.
(...)
The full notion of mental language was developed at the end of a long genealogy which reworked all these elements. In antiquity, there was much interest in the composition of mental acts. The Middle Ages witnessed many debates about concepts and their status as sign or signified.
In the thirteenth century, the notion of a mental word was strongly embedded in reflections on language and knowledge. However, the theory of mental language in the strict sense is fully developed only in the fourteenth century, especially with William of Ockham. Mental language then comes to the forefront of logic, as it becomes the language par excellence, the one that is used to assess the meaning and truth value of spoken expressions. The theory of mental language then left a deep mark on late medieval semantics, even though, from its very beginnings, it provoked questions and discussion." (p. 306)

11. Boehner, Philotheus. 1943. "The Notitia Intuitiva of Non-Existents according to William Ockham." *Traditio* no. 1:223-275.
Reprinted in: P. Boehner, *Collected Articles on Ockham,* pp. 268-300.

12. Boler, John. 1972. "Ockham's Mental Language (Abstract)." *Journal of Philosophy* no. 69:676-676.
"Ockham uses 'mental' in two contexts about language: (1) he adopts the well-entrenched metaphor that thought is "inner speaking"; but (2) his primary use of 'mental language' is as a conceit for expressing a non-conventionalist, non-inscriptionalist attitude toward logic. There may be reason to extend the latter concern to a theory about the "form" of language, but that is not to be identified with a theory of knowledge. The idea that mental language is exclusively "interior" is not, I suggest, a matter of privacy, but only a variant on Ockham's insistence that universals "cannot exist outside the mind." The simplicity of mental language is evidence that it is not introspectable. The association with Augustine's theory of knowledge is purely honorific."

13. ———. 2003. "Ockham on the Concept." *Medieval Philosophy and Theology* no. 11:65-86.
"It is a commonplace of Ockham commentary that he changed his position on what concepts are. While I see no reason to question the general lines of the familiar story, I do think there are some interesting details along the way which are not always emphasized and which raise (for me at least) the question of whether we understand just what was going on.
The development of Ockham's thought on the topic divides, I think, into two unequal stages, the first of which can again be divided into three.
(1) He began by favoring a sort of double aspect scheme. The act of thinking itself is a real, individual quality existing "subjectively" in the mind. But as representative, we might say, it requires an object. In his early account, Ockham posits the concept as the object of our thinking, holding that of itself it must, like a fictional entity or fictum, have merely "objective" existence and not real or "subjective" existence.3 Call this the fictum theory. After a short time—the whole story takes place in about eight years—Ockham decided that it would be equally as probable to hold a theory that simply identifies the concept with the act of thinking. Call this the mental-act theory. And (3) Ockham soon enough comes to favor it over the fictum theory.
(...)
In the immediately following sections, I provide more detail on Ockham's developing position. In Section 4, I discuss the "Terminator Principle," which, I think, carries the weight in both his early and later positions.
In Section 5, I develop an analogy from art to bring out what I think is peculiar to Ockham's account of ficta. Section 6 offers a guess at what is going on in the first stage of his thought. Section 7 sets out my guess about what is going on in the second or ultimate stage in Ockham's account of the concept. Finally Section 8 provides a summary and conclusions." (pp. 65-66, notes omitted)

14. Bos, Egbert Peter. 1997. "Speaking About Signs: Fourteenth-century views on suppositio materialis." *Amsterdamer Beiträge zur älteren Germanistik* no. 48:71-86.
"The principal questions in my paper are the following: How did the medieval semanticists indicate the autonymous use of words? Does the subject term in such a proposition express a linguistic item (itself, or its likes) because of the determination by the predicate? Or is it dependent on the will or intention of man, the *voluntas utentium*, as Ockham calls it?
Or is it a convention that determines the use of terms? Is a *signum materialitatis* (a sign, or mark, indicating material supposition) necessary? To what extent do the Medievals distinguish the autonymous use of language from other uses? Or is this kind of language meaningless?
There is hardly any secondary literature on this subject. (*)" (p. 75)
(*) M. Bochenski, *Formale Logik* (München 1970 (1956). 188-193; CA. Dufour, *Die Lehre der Proprietates Terminorum. Sinn und Referenz in mittelalterlicher Logik* (München/Hamden/Vv'ien 1989). 172-188. (Dufour tries to reconstruct the medieval theory of the properties of terms with the help of modern formal logic. This very interesting study did not obtain the attention it deserves, I feel). E. Karger,

'*La supposition matérielle comme supposition significative: Paul de Venise, Paul de Pergola*', in *English Logic in Italy in the 14th and 15th Centuries. Acts of the 5th European Symposium on Medieval Logic and Semantics*, Rome, 10-14 november 1980, ed. by A. Maierù (Napoli). 331-342. In a penetrating analysis, Karger discusses the difficulties arising from the 'mentioning' of terms in relation to the general semantical theory of a philosopher.

15. Bottin, Francesco. 2010. "Ockham and *Oratio Mentalis*." In *Logic in Religious Discourse*, edited by Schumann, Andrew, 132-162. Frankfurt: Ontos Verlag.
Abstract: "Ockham was the first to carry out a complete process of grammaticalization of mental language carefully outlining distinct specific rules for the written, spoken and mental language. From a formal point of view Ockham's program appears to many contemporary scholars as incomplete and inadequate, particularly when he attempts to eliminate equivocity and synonymy in mental language. But, on the ground of the Augustinian epistemology, the Franciscan logician seems to be stating that mental language is not devoid of ambiguities because it is a perfect language, even if it is a language devoid of the unclearness due to the will to deceive, as it is the expression of the inner Self."

16. Broadie, Alexander. 1990. "Act and Object in Late Scholastic Logic." In *Estudios de Historia de la logica. Actas del II simposio de historia de la lógica, Universidad de Navarra, Pamplona, 25-27 de mayo de 1987*, edited by Angelelli, Ignacio and D'Ors, Angel, 103-124. Pamplona: Ediciones Eunate.

17. Brower-Toland, Susan. 2007. "Intuition, Externalism, and Direct Reference in Ockham." *History of Philosophy Quarterly* no. 24:317-335.
"In recent years, a number of Ockham's commentators have been converging around a broadly externalist reading of his theory of mental content. Noting the emphasis he places on the role of (efficient) causation in his account of concept formation and mental representation, these commentators argue that, on Ockham's view, the content of a given mental state is determined, at least in part, by its causal connections to objects in the environment.(1) The aim of this paper is to challenge this increasingly prominent interpretation by focusing on Ockham's account of singular thought-or what he himself refers to as 'intuitive cognition.'
This focus makes sense because those who defend the externalist reading of Ockham's theory of content typically build their case on his account of intuitive cognition. Nor is it hard to see why. Ockham not only places particular stress on the role of causality in his account of intuitive states, but also assigns a foundational rol e to intuition in his broader account of mental content. Any grounds for rejecting an externalist interpretation of Ockham's theory of intuitive cognition will, therefore, count likewise against the externalist reading as whole." (p. 317)
(1) 1. See, for example, Peter King, "Rethinking Representation in the Middle Ages," in *Representation and Objects of Thought in Medieval Philosophy*, ed. H. Lagerlund (Hampshire: Ashgate Press, 2007); Peter King, "Thinking about Things: Singular Thought in the Middle Ages," in *Intentionality, Cognition, and Representation in the Middle Ages*, ed. G. Klima (Bronx: Fordham University Press, forthcoming [2015]); Calvin Normore, "Burge, Descartes, and Us," in *Reflections and Replies: Essays on the Philosophy of Tyler Burge*, ed. M. Hahn and B. Ramberg (Cambridge, Mass.: The MIT Press, 2003); Calvin Normore, "Ockham on Mental Language," in *Historical Foundations of Cognitive Science,* ed. J.C. Smith (Dordrecht: Kluwer Academic Publishers, 1990); Claude Panaccio, "Ockham's Externalism," in *Intentionality, Cognition, and Representation in the Middle Ages,* ed. G. Klima (Bronx: Fordham University Press, forthcoming [2015]).

18. ———. 2015. "How Chatton Changed Ockham's Mind. William Ockham and Walter Chatton on Objects and Acts of Judgment." In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 204-234. New York: Fordham University Press.
"Recent scholarship has begun to uncover the nature and extent of the reciprocal—and typically adversarial—relationship between William Ockham (d. 1347) and

Walter Chatton (d. 1343). We now know, for example, that Chatton, a slightly younger contemporary of Ockham, is both enormously influenced by and, at the same time, highly critical of his older colleague. Chatton often takes up precisely those questions Ockham treats (and likewise the terminology and conceptual framework in which he expresses them) only to reject Ockham's conclusions. We also know that Chatton's criticisms leave their mark on Ockham.
Ockham frequently rehearses and responds to Chatton's objections, occasionally refining or even altogether revising his views in light of them. Perhaps the best-documented case of such infl uence concerns Ockham's developing views of concepts, where, in direct response to Chatton's criticisms, Ockham famously abandons his early "fictum" theory of concepts in favor of Chatton's own "mental act" account. Although this may be the best-documented case, it is by no means the only example of such influence—a handful of others have been discussed in the literature.(3) In this essay, I hope to extend our current understanding of the relationship between these two Franciscan thinkers by looking in some detail at a debate between them over the objects of judgment." (pp. 204-205, two ntes omitted)
(3) 3. Joseph Wey provides a list of places in Ockham's Quodlibetal Questions in which Ockham explicitly rehearses arguments or objections offered by Chatton. In addition to these, Wey also fi nds some 68 other textual parallels between Ockham's *Quodlibeta* and Chatton's writings. (...)

19. Brown, Deborah J. 1996. "The Puzzle of Names in Ockham's Theory of Mental Language." *The Review of Metaphysics* no. 50:79-99.
"In his writings on semantics and logic, William of Ockham combines two very strong claims about mental language: that mental terms are naturally prior to and determinative of the signification of conventional signs and that mental language contains neither synonymous nor equivocal terms. (1) The first claim represents the role mental language has in explaining the origins, structure, and content of thought and language. Ockham was, as many commentators have observed, a conceptual empiricist but it would be a mistake to think that he was primarily concerned with the psychological processes that underlie our representational system. The second claim indicates that the theory of mental language is primarily a theory of signification or a semantics. The notion of a redundancy-free mental language is an idealization crafted for its explanatory role in Ockham's semantics.
The notion of a mental language devoid of synonymous and ambiguous terms raises puzzles which threaten the internal coherence of the project. These puzzles concern a species of categorematic terms in mental language, Ockham's absolute terms, and are not unlike the puzzles about proper names in Kripkean semantics. Although I am skeptical that Ockham's theory is adequate to the dual tasks of being a semantics as well as a psychological thesis, I shall argue that the wrong response to these puzzles is to forfeit the theory's status as a semantic theory by giving up the commitment to parsimony." (p. 79)
(1) Ockham's most sustained development of the theory of mental language is in *Summa Logicae* I, in *Opera Philosophica* I, ed. Philotheus Boehner, Gedeon Gal, Stephen S. Brown (St. Bonaventure, NY: The Franciscan Institute, 1974).

20. Cesalli, Laurent. 2016. "Pseudo-Richard of Campsall and Richard Brinkley." In *A Companion to Responses to Ockham*, edited by Rode, Christian, 79-108. Leiden: Brill.
"Unlike Ockham's other opponents such as the Dominicans Hugh Lawton and William Crathorn, both contemporaries of the author of the *LCO*, Pseudo-Campsall and Brinkley accept that there is a mental language and that its terms are natural signs of extra-mental things.(58) Furthermore, Brinkley and Pseudo-Campsall endorse the thesis of the semantic subordination of extramental to mental language.(59) In spite of this fundamental agreement, one can point at some divergences between Ockham and its eponymous opponents." (p. 94)
(58) Lawton rejects mental language altogether, while Crathorn accepts it in a very peculiar sense: there are mental sentences, but these are nothing but mental images of extramental (i.e. linguistic) sentences. See D. Perler, "Crathorn on Mental

Language," in *Vestigia, Imagines, Verba. Semiotics and Logic in Medieval Theological Texts (xiith-xivth century)*, (ed.) C. Marmo (Turnhout, 1997), 337–354 as well as M. Lenz, *Mentale Sätze. Wilhelm von Ockham's Thesen zur Sprachlichkeit des Denkens* (Stuttgart, 2003), esp. 173–176.
(59) Without being as explicit as Brinkley who, as we saw, uses *subordinari,* Pseudo-Campsall is nonetheless quite clear on that point: "[…] vni proposicioni in voce correspondet vna proposicio in mente […] vna proposicio que significat idem et pro eisdem verificatur de quibus verificatur proposicio vocalis et pro tanto dicitur quod proposicio formata in voce prius formatur in mente […]" (*LCO* 13.11, 117).
Abbreviations
LCO = Pseudo-Campsall's *Logica contra Ocham*

21. Chalmers, David. 1999. "Is There Synonymy in Ockham's Mental Language?" In *The Cambridge Companion to Ockham*, edited by Spade, Paul Vincent, 76-99. Cambridge: Cambridge University Press.
"My argument for synonymy is largely theoretical, although it also has a textual element. The theoretical case has a positive and a negative part. On the positive side, I will argue that there are several reasons mental synonymy might exist and that a mental language without synonymy would be relatively clumsy, with several ad hoc features. On the negative side, I will address various arguments that have been put forward against the possibility of synonymy and will try to show they are not conclusive. Textually, I will argue that, although Ockham appears to deny the possibility of synonymy in mental language, he also makes remarks that commit him to that possibility. I do not think my arguments are entirely conclusive, but I hope to demonstrate that the possibility of mental synonymy is not as implausible as has sometimes been thought." (p. 77)

22. Cross, Richard. 2009. "The Mental Word in Duns Scotus and Some of His Contemporaries." In *The Word in Medieval Logic, Theology and Psychology*, edited by Shimizu, Tetsuro and Burnett, Charles, 291-332. Turnhout: Brepols.
"All of the thinkers whom I consider here hold that there are dispositional cognitions—cognitive habits—and that these dispositions are related in some way or other to the occurrent cognitions in which I am interested.
Some of these thinkers hold that such dispositional cognitions should be thought of as what are known as 'intelligible species': abstract general notions of a particular or set of particulars, contents stored in the mind prior to, and explanatory of, actual cognition of such universal contents.
The species is not an occurrent cognition; it is the stored content that we can use in generating such cognitions. As we shall see, thinkers differ on the extent to which we can think of the intelligible species as itself an object of cognition: to some extent, this difference explains differences in the theories of the mental word.
Something has to happen when we actually cognize an object: when we form occurrent acts of cognition on the basis of our dispositional cognitions. Specifying what that is will be part of my aim here. But as we shall see, an important by-product of this discussion will be to highlight a covert debate about the nature of the intelligible species." (p. 293)

23. ———. 2014. *Duns Scotus's Theory of Cognition*. New York: Oxford University Press.
Chapter 9: *Mental Language and the Nature of Conceptual Content,* 171-181.
"I have argued in Chapter 8 that Scotus believes conceptual content to be grounded in the real structure of a cognitive act, such that it is the real structure of the act that explains its having the content that it has; and in Chapter 10 I argue that this content is in fact to be ontologically reduced to the real structure of the act: the content is nothing over and above the real act itself. (It is not, for instance, some kind of spooky unreal being.) In the current chapter, I want to examine the nature of conceptual content. As I try to show, Scotus conceives of it not imagistically but rather linguistically. Scotus does not make the point explicitly; it has to be inferred from other things he says about the nature of thought.

Following Augustine, the medievals thought of conceptual acts as mental words, and while this in itself is not sufficient to show that conceptual content is linguistic, I believe that Scotus holds that there are mental acts with genuine syntactic structure, suggesting that Scotus thinks of conceptual content as linguistic in nature. I thus argue that Scotus has an inchoate account of mental language. I begin with a brief general discussion of some medieval views on the mental word, and then turn to consider Scotus's discussion of those mental acts that have syntactic structure (syntactically complex combinations of different mental acts)." (p. 171)

24. Doig, Jaames C. 2000. "O'Callaghan on *Verbum Mentis* in Aquinas." *American Catholic Philosophical Quarterly* no. 77:233-255.
Abstract: "The essay's point of departure is O'Callaghan's insistence that *verbum mentis* is for Aquinas not a philosophical doctrine, but "a properly theological topic." The principal evidence for this interpretation consists in the functioning of *verbum mentis* in certain theological passages as well as its absence in others characterized as philosophical. The essay proceeds by situating Aquinas's doctrine of *verbum mentis* within the tradition from which the expression is drawn and by examining the nature of the *Summa theologiae*. Consequently, Aquinas is seen to espouse a philosophical doctrine of *verbum mentis* whose presence or absence in a particular passage is a function of both the passage's goal and the nature of the audience for whom the passage was originally intended."

25. Duncombe, Matthew. 2016. "Thought as Internal Speech in Plato and Aristotle." *Logical Analysis and History of Philosophy / Philosophiegeschichte und logische Analyse* no. 19:105-125.
Abstract: "Scholars often assert that Plato and Aristotle share the view that discursive thought (*dianoia*)is intemal speech (TIS). However, there has been little work to c1arify or substantiate this reading. In this paper I show Plato and Aristotle share some core commitrnents about the relationship of thought and speech, but cash out TIS in different ways. Plato and Aristotle both hold that discursive thinking is a process that moves from a set of doxastic states to a final doxastic state. The resulting judgments (*doxai*) can be true or false. Norms govern these final judgments and, in virtue of that, they govern the process that arrives at those judgments. The principal norm is consistency. However, the philosophers differ on the source of this norm.
For Plato, persuasiveness and accuracy ground non-contradiction because internal speech is dialogical. For Aristotle, the Principle of Non-Contradiction grounds a Doxastic Thesis (DT) that no judgment can contradict itself. For Aristotle, metaphysics grounds non-contr~diction because internal speech is monological."

26. Dutilh Novaes, Catarina. 2003. "Ockham on Supposition and Equivocation in Mental Language." *Proceedings of the Society for Medieval Logic and Metaphysics* no. 3:37-50.
"medieval combination of Aristotelianism with Christianity, namely theories of supposition. I say that theories of supposition are a hybrid between Aristotelianism and Christianity for the following reason: it seems that the historical starting point of theories of supposition were the so-called theories of fallacies, whose main source was Aristotle's *De Sophisticis Elenchis* (cf. De Rijk [*Logica Modernorum*] 1967), but they were developed in view of the conceptual framework of commentary and interpretation of authoritative and sacred texts, which constituted the core of intellectual activity in the Christian world.(1)
In this paper, I will analyze Ockham's theory of supposition, focusing on the notions of mental language and equivocation. My main contention is that Ockham's supposition theory as it is formulated implies that there is equivocation in mental language, and that this fact has problematic consequences for his supposition theory itself and for his notion of mental language. But besides outlining the internal tensions in Ockham's system, this discussion will bring some positive results as well; it is to be hoped that it will shed light on the nature of written and spoken

language, on the concept of mental language and its role for logical investigations, and on the general purpose of theories of supposition" (p. 37)
(1) Indeed, the rarified considerations concerning the Holy Trinity in medieval theology are simply not understandable without the logical distinctions between the *supposita* and *significata*, and different modes of supposition and signification of Trinitarian terms.

27. ———. 2012. "Ockham on Supposition Theory, Mental Language, and Angelic Communication." *American Catholic Philosophical Quarterly* no. 86:415-434.
Abstract: "In my previous work on Ockham's theory of supposition, I have argued that it is best understood as a theory of sentential meaning, i.e., as an apparatus for the interpretation of sentences. In this paper, I address the challenge posed to this interpretation of Ockham's theory by the (presumed) existence of different kinds of supposition in mental language through the lenses of Ockham's theory of angelic communication. I identify two potentially problematic implications of Ockham's account of mental language as allowing for different kinds of supposition: the existence of non-significative supposition in mental language; and the possibility of ambiguous mental sentences. I then turn to angelic communication and examine these two issues from that point of view, concluding that there cannot be non-significative supposition in mental language, but also that there may still be room for sentential ambiguity in mental language."

28. Edwards, M. J. 2000. "Clement of Alexandria and His Doctrine of the Logos." *Vigiliae Christianae*:159-177.
"In the first part I shall argue that the classic formulation of the "two-stage" theory, in which an outgoing word or logos *prophorikos* supervenes upon an immanent word or *logos endiathetos,* was not a universal datum in the time of Clement. In the second I shall challenge the philological and philosophical arguments that have been adduced to prove that he held the theory; then, examining the testimony of Photius in the third part, I shall give reasons for suspecting a misquotation. Finally, in defending the authenticity of another disputed passage, I shall propose that Clement taught the eternal generation of the Logos, and that he may have framed this doctrine as an antidote to the teaching of the Valentinian school." (pp. 159-160)

29. Friedman, Russell L. 2009. "Mental Propositions before Mental Language." In *Le langage mental du Moyen Âge à l'âge classique*, edited by Biard, Joël, 95-116. Louvain: Peeters.
"My topic in this paper is early fourteenth-century discussions of mental propositions. I won't be dealing much at all with mental propositions as used by thinkers who developed a full-fledged theory of mental language - rather, I am going to focus on some material from the early 1310s that I believe we need to integrate into the "prehistory" of medieval ideas on mental language. To begin, then, I want to make clear why the material examined here is worthy of consideration, and particularly why it is worthy of inclusion in a book devoted to medieval and early modem theories of mental language." (p. 95)
(...)
"Now, in this paper I will return to Buridan, but I will mainly be looking at the premental language history of the type of "compositional" theory of the mental proposition that Buridan held (i.e. that the mental proposition is composed of parts), as well as the rival "unity" theory of the mental proposition. Both these views in fact came up in a later-medieval debate that was high-profile at the time, but is now basically forgotten, a debate between the French Dominican Durand of St. Pourçain (d. 1334), on the one band, and the English secular Thomas Wylton (d. ca. 1327), on the other, while both were holding chairs of theology at the University of Paris in 1312 or 1313. The debate between Durand and Wylton centered on the question of whether the intellect can entertain more than one act at any one time. Wylton - as far as I know for the first time in the medieval university discussion - answered this question in the affirmative: we human beings can and do have more than one intellectual act at once.

Durand argued for the negative view. In what follows, then, I want to discuss Durand and Wylton's controversy and the role played in it by mental l propositions." (p. 96)
(...)
"The written remains of the debate between Durand and Wylton are edited in P. T. Stella, "Le 'Quaestiones de libero arbitrio' di Durando da S. Porciano", *Salesianum* 24 (1962), p. 450-524." (p. 96 note 3)

30. Friedman, Russell L., and Pelletier, Jenny. 2014. "Mental Words and Mental Language in the Later Middle Ages." In *Sourcebook for the History of the Philosophy of Mind: Philosophical Psychology from Plato to Kant*, edited by Knuuttila, Simo and Sihvola, Juha, 379-399. Dordrecht: Springer.
"It is now a well known and increasingly well studied episode in medieval philosophy of mind that William of Ockham in the first quarter of the fourteenth century developed a genuine theory of mental language, in which the mind builds up mental propositions out of component concepts. Although one can find hints of the idea of mental speech, as distinct from spoken or written speech, already in Plato, Aristotle, and the Stoics, nevertheless for the later scholastic discussion, it was Augustine's treatment of the *verbum cordis* in especially book fifteen of his *De trinitate* that set the agenda." (p. 379)
(...)
"In the fourteenth century Ockham develops a highly complex and sophisticated notion of a mental language which is, in principle, the universal language of thought for all human beings. Ockham famously changed his mind on the ontological status of concepts. Initially advocating an act-object theory, superficially similar to Peter Auriol's, Ockham ultimately endorsed an act theory on which the concept is simply the intellectual act itself. These mental concepts, conceived of as natural signs of things, are the elemental semantic units of mental language. They are combinable into syntactically structured and semantically rich mental propositions in which they figure as subject and predicate terms, supplemented by logical particles known as 'syncategoremata'. A mental proposition, according to the mature Ockham, is an organised composite of many, discrete intellectual acts; for this reason, Ockham appears to hold a version of [Thomas] Wylton's 'compositional' theory of the mental proposition. Both the terms and propositions of mental language are prior to and underlie all spoken and written languages. Following in Ockham's footsteps, John Buridan continues to develop an elaborate understanding of mental language, with some salient differences concerning the function and reference of concepts. Further, Buridan agrees with Wylton and Ockham that the mental proposition is composed of many acts.
In contrast, Gregory of Rimini supported Durand's unity theory of the mental proposition where the mental proposition is produced all at once in a single act. The debate on the ontological structure of the mental proposition would remain prominent into the early modern period (...)." (pp. 381-382)

31. Garcia-Carpintero, Manuel. 2022. "Aristotle and Inner Awareness." *JoLMA. The Journal for the Philosophy of Language, Mind and the Arts* no. 3:119-134.
Abstract: "Recent debates on phenomenal consciousness have focused on the idea that conscious experience includes an experience of the self, whatever else it may present the self with. When a subject has an experience as of a pink cube, she is not just aware of the world as being presented in a certain way (a pinkish, cubic way in this case); she is also aware of the fact that it is presented to her. According to Victor Caston, Aristotle defended an interesting version of this view in *De Anima*, later developed in different directions by many other philosopher s – outside current research in the Analytic tradition, particularly in Phenomenology and the Heidelberg school. My goal in this paper is to locate Aristotle's views, as interpreted by Caston, in the context of the current debate, and to offer some considerations in favour of a view like Aristotle's, also following Caston."
References
Caston, V. (2002). "Aristotle on Consciousness". *Mind*, 111, 751-815.

32. Gaskin, Richard. 2001. "Ockham's Mental Language, Connotation, and the Inherence Regress." In *Ancient and Medieval Theories of Intentionality*, edited by Perler, Dominik, 227-264. Leiden: Brill.
"Aristotle does not speak of the affections of the soul as themselves constituting a language but, as is familiar, this sort of terminology was used by Augustine in his *De Trinitate*.(20) and by Boethius in his commentaries on the *De Interpretatione*, where, following Porphyry, he speaks (in his second commentary) of three *orationes,* one written down, one produced in the voice, and one put together in the mind.(21)
In the medieval Aristotelian tradition there was widespread (though not universally) (22) acceptance of the view, articulated in its most systematic and influential form by Ockham, that there is such a thing as mental language.(23)
Ockham conceives of mental language as a kind of simplified version of spoken or written language, containing only semantically essential features of the latter , according to a certain conception of what counts as semantically essential- namely, one which recognises as semantically essenti al only what affects the truth or falsity of sentences.(24)
Thus mental language is said, for example, to contain nouns which are marked for number and case, but not for gender or declension."
More importantly, it contains no synonymy."(p. 230)
(20) 20 XV, 10.19; 12.22; 27.50.
(21) *Editio Secunda*, 24.21-27; 29.16-2 1; 30.3- 10; 36.10- 14. Cf. *Editio Prima*, 42.11- 43.13 (note here especially the idea that a propositio can be formed "in cogitatione" : 43.2).
(22) Gelber, [., "I Cannot Tell a Lie: Hugh Lawton's Critique of Ockham on Mental Language", *Franciscan Studies* 44 (1984), 141-179] 156-160.
(23) See especially *Summa Logicae* I, 12 (...).
(24) *Summa Logicae* I, 3 (OPh I, 13.57- 68). (...)

33. Geach, Peter Thomas. 1957. *Mental Acts: Their Content and Their Objects*. London: Routledge & Kegan Paul.
Section 23 *Dangers of the "Inner Language" Analogy*, pp. 101-106.
"The important thing about analogical extensions of a concept is that we should know (in practice at any rate) how far to carry the analogy. Som« people have certainly carried the analogy of thought to language too far. Thus, for William of Ockham, besides the spoken, conventional, languages, all men have a common, natural, language; for convenience, I shall call it "Mental". The grammar of Mental turns out to be remarkably like Latin grammar. There are nouns and verbs in Mental; nouns have cases and numbers, and verbs have voice, mood, tense, number, and person.
On the other hand, there is nothing in Mental corresponding to the different Latin declensions and conjugations; nor are there any deponent verbs in Mental.
Ockham's criterion for transferring Latin grammatical terms to Mental was very simple-minded. Nouns of different declensions, or verbs of different conjugations, may be synonyms, and then presumably correspond to the same Mental noun or verb; so there is no reason to ascribe differences of declension or conjugation to Mental words. But a change of case or number or voice may quite alter the sense of a Latin sentence; so Mental words must have case, number, and voice.
Without being able to say just how far the analogy of inner language can be carried, I think men of good sense would see immediately that Ockham carries it much too far. He merely transfers features of Latin grammar to Mental, and then regards this as explaining why such features occur in Latin - they are needed there if what we say inwardly in Mental is to be outwardly got across to others in Latin. But clearly nothing is explained at all. Presumably Ockham's reasons for thinking that the supposed grammar of Mental had explanatory force were that Mental is a natural and universal language, and that Mental words, unlike Latin words, are immaterial entities. But if all men had a natural and universal *spoken* language, that would not mean that its grammar was any more self-explanatory than Latin grammar. And

what carries significance in a language is its structure, not its medium - the structure that can be transferred from spoken to written language and to Morse code; but Ockham takes for granted the grammatical structure of Latin, and supposes that Mental, unlike Latin, is intrinsically intelligible, simply because its medium is not material but spiritual. In point of fact, any problems that arise as to the significance of a grammatical device will arise equally for the alleged Mental uses of this device; and Ockham's saying that the words of Mental are immaterial would merely raise such footling problems as how something immaterial can be in the genitive case, without throwing any light on the use of the genitive. To do Ockham justice, he wastes little time on such futilities; most of his, often acute, enquiries into the logical syntax of Latin are undisturbed by the reflection that Latin is really an imperfect reproduction of the Mental original, which on his view is the proper study of a logician." (pp. 101-103)

34. Gelber, Hester Goodenough. 1984. "I Cannot Tell a Lie: Hugh Lawton's Critique of Ockham on Mental Language." *Franciscan Studies* no. 44:141-179.
"Much research lies ahead, both on Ockham himself and on the views of his successors, before the story will finally be told of how Ockham's fruitful new position on mental language affected his contemporaries.
We do know some of the chapters. Ockham is justly famous for having perceived mental as an ideal logical language." (p. 142, one note omitted)
(...)
"There are more chapters of the story yet to be written, however.
Ockham's position on mental language set off an immediate controversy, not just among his fellow Franciscans, but also among th e Dominicans studying at Oxford at Blackfriars during the 1320's and 1330's. One of those Dominicans, Hugh of Lawton, writing in the 1320's, must be numbered among Ockham's earliest critics on the question of mental language. Lawton rejected the idea that mental activity constituted any sort of language. Only externalized spoken and written expressions were properly called language, and, therefore, there could be no such thing as a mental proposition. Propositions, as far as Lawton was concerned, existed only in spoken and written form.
Lawton's response to the proponents of mental language involved a surprisingly nominalist propositional theory." (pp. 143-133, two notes omitted)
(..)
"Lawton's intuition that some form of the liar, that recalcitrant difficulty which afflicts complex linguistic systems, would also intrude into mental language, is borne out. Ockham's dialectical line not only fails to protect against such intrusion, it seems even to generate it.
Although Lawton's skepticism about mental language served to pose difficult questions for his contemporaries, I know of no converts to his position among them. Ockham's views, in amended and extended form, continued to hold sway. However, it was incumbent on anyone wishing to defend the idea of mental language to give an account for the sorts of issues Lawton raised. Fourteenth-century scholastics went far towards doing so, but perhaps not quite far enough." (p. 174)

35. Gibson, Joan. 1976. *The Role of Mental Language in the Philosophy of William of Ockham*, University of Toronto.
Unpublished Ph.D. Dissertation available at Pro Quest Dissertation Express n. NK36658.
"Throughout his career William of Ockham refers to thoughts as mental‘ words spoken in a mental language.
The purpose of this thesis is to explore the implications of this view in Ockham's philosophy especially as it relates to his theories of epistemology and metaphysics. These.aspects of the theory have often been overlooked in favour of a concentration on the relation between Ockham's logic and his theory of mental language. In this thesis I contend that thinking is a real language, that is, a system of communication. Consequently, it is not possible to understand fully the role of mental language using only the logical approach.

At different times in his own development Ockham preferred different explanations of the metaphysical status of the concept. These explanations are correlated with different views of how concepts signify extramcntal things. Such-considerations affect Ockham's emphasis on what it means for something to be a mental word or a mental language.
In- this thesis, I explore two particular theories of the status of the concept, namely tlie *fictum* theory and the *intellectio* theory. Special attention is paid to the *fictum* theory, since it is in this context that Ockham first develops a theory of mental language, and in which the philosophical implications of ihis theory arc most systematically examined. The.role of mental language as formulated in the *fictum* theory is then compared with later work based on the *intellectio* theory." (From the Abstract, pp. 1-2)

36. Goehring, Bernd. 2011. "Henry of Ghent on the Verbum Mentis." In *A Companion to Henry of Ghent*, edited by Wilson, Gordon A., 241-272. Leiden: Brill.
"Conclusion
Throughout his career Henry of Ghent seeks to develop a comprehensive account of the mental word. To this end Henry reinterprets Augustine's views on the mental word. Henry takes Augustine to imply that in forming a mental word we do not merely actualize cognitive content; rather, we progress towards a more complete, explanatory conception of a given object. Henry asks how we can acquire the sort of conceptual content that is deeply explanatory of the things that we cognize, and that can figure in our theoretical knowledge and understanding of reality. In Henry's view cognition begins with a receptive stage; thus a cognizer can only have representational content if some object initially acts on her (sensory) capacities. But Henry realizes that it is the agent's active, constructive abilities that allow for the formation of concepts that are more distinct and explanatory than initial concepts abstracted from representational content in phantasms. In developing his mature account of the mental word Henry stresses these abilities to explicate how a cognitive agent re-constructs an extramental object's essential structure: the agent engages in an intellectual, discursive inquiry into a thing's essence by working with genera, kinds, and specific differences. Henry considers this inquiry as the cognizer's approaching a full definitional account of some object. It is driven by a rational desire for complete understanding that comes to rest only in a perfect mental word that adequately matches and represents a thing's essential nature. Moreover, our ability to actualize mental acts of this kind requires not only an awareness of the acts or their conceptual content, or both, but also selfreflexivity that enables a cognizer to understand herself as the subject of her mental acts." (p. 272)

37. Hagedorn, Eric W. 2012. *The Language of Scientia: Ockham's Mental Language as the Subject Matter of Aristotelian Science*, Notre Dame, Indiana.
Unpublished Ph.D. Dissertation available at Pro Quest Dissertation Express n. 3578935.
Abstract: "William of Ockham's theory of mental language is among the most studied aspects of his thought; yet, surprisingly, there is little scholarly consensus on just what it is supposed to be a theory of. The most widely held view today is that Ockham's mental language is intended to be an account of human cognitive operations, akin to the Language of Thought Hypothesis held by some contemporary cognitive scientists. In this dissertation, I first raise a series of objections to this interpretation, both philosophical and textual: Ockham refrains from endorsing the key doctrines this interpretation attributes to him, and his actual discussions of mental language seem disconnected from the theory of cognition he does indeed hold.
I then proceed to sketch an alternative interpretation, which takes as its starting point the sole argument that Ockham provides for positing mental language. On this interpretation, Ockham posits mental language in order to provide a collection of entities which are both compatible with his nominalist ontology and sufficient to

fulfill the strictures of the Aristotelian account of scientific practice that he endorses."

38. ———. 2015. "Ockham's Scientia Argument for Mental Language." *Oxford Studies in Medieval Philosophy* no. 3:145-168.
"William of Ockham famously held that, in addition to written and spoken language, there exists a mental language, a structured representational system common to all thinkers (human and angelic), containing both atomic representations (so-called "mental terms") and molecular representations (including "mental sentences" and "mental syllogisms"). Ockham's account of mental language has been much studied, but there has been very little discussion of Ockham's reasons for positing mental language in the first place. In what follows, I present a line of argument by which Ockham seeks to establish the existence of mental language, an argument which to this point has been uniformly overlooked by the secondary literature. In the first half of the paper I briefly present Ockham's account of mental language and examine a set of texts which, when taken together, show Ockham arguing that positing a mental language is the only way a nominalist can meet certain ontological constraints imposed by Aristotle's account of scientific demonstration. In the second half of the paper, I discuss and evaluate Ockham's argument in greater detail." (p. 145, two notes omitted)

39. Hochschild, Joshua P. 2004. "Does Mental Language Imply Mental Representationalism? The Case of Aquinas's *Verburn Mentis*." *Proceedings of the Society for Medieval Logic and Metaphysics* no. 4:12-17.
"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)
(2) John O'Callaghan, "Verbum Mentis: Philosophical or Theological Doctrine in Aquinas?", *Proceedings of the American Catholic Philosophical Association*, 74 (2000): 103-119

40. ———. 2015. "Mental Language in Aquinas?" In *Intentionality, Cognition, and Mental Representation in Medieval Philosophy*, edited by Klima, Gyula, 29-45. New York: Fordham University Press.
"It would be anachronistic, at the very least, to attribute to Aquinas a theory of mental language. As historians of philosophy seem to agree, and I will not question,

it is only after Aquinas that thinkers elaborated theories of mental language, or of a "language of thought," with attempts to provide a linguistic (especially semantic and syntactic) analysis of cognition: first within the project of later medieval nominalism, and more recently (and apparently independently) by thinkers in contemporary analytic philosophy (foremost Jerry Fodor).(1)
Nonetheless, allowing that we do not find a recognizable theory of mental language to Aquinas, I want to consider the sense in which it is appropriate toattribute to Aquinas some conception of "mental language," and then to explore whether, given that conception, a Thomistic theory of mental language would be possible, and, if so, what it might look like and how it would differ from more familiar versions.
(...)
"I will begin, then, with a brief review of some of the features of mental language theory as developed explicitly in medieval nominalism and in contemporary analytic philosophy, in relation to which we can then better appreciate the distinctiveness of Aquinas's own attention to the language-like features of thought." (p. 83)
(1) An exception to this general historical consensus is Peter King, "Abelard on Mental Language," *American Catholic Philosophical Quarterly* 81 (2007): 169–187. Claude Panaccio has responded to this in "Mental Language and Predication: Ockham and Abelard," *Analytica* 14 (2010): 183–194.

41. Holopainen, Toivo. 2011. "Mental Word/Concepts." In *Encyclopedia of Medieval Philosophy: Philosophy between 500 and 1500*, edited by Lagerlund, Henrik, 1169-1174. Dordrecht: Springer.
Abstract: "The medieval thinkers did not have any one agreed-upon term for concept as a mental entity, but it was generally assumed that there are some such units and they were often viewed as mental words of some kind. In contrast to the words of spoken languages, which vary from nation to nation, the concepts were taken to be the same for all people. Issues related to concepts or mental words were discussed in several fields of inquiry, including logic, theology, and philosophical psychology.
In logic, concepts were traditionally called "understandings" (*intellectus*), and they were supposed to have a mediating role between words and things in signification. This view goes back to Aristotle's *De interpretatione* and Boethius' commentaries on it. In theology, the mental word (*verbum*) was a prominent theme because Augustine had elaborated an analogy between the human interior word and the Word, that is, the second person of the Trinitarian God. In the tradition of philosophical psychology starting from Aristotle's *De anima*, the acquisition of concepts was a central theme. These and other influences led to intricate discussions in the medieval universities about what kind of entities in the mind relating to concepts one should postulate and how they should be described. Thomas Aquinas developed a model that includes a distinction between the intelligible species, the act of understanding, and the concept proper. There was extensive dispute about issues related to concepts in the late thirteenth and early fourteenth century, and much of it revolved around ideas presented by Aquinas.
William of Ockham developed an alternative to the *De anima*-based approach on the basis of his nominalist philosophy. The concept or mental word, identified as an act of understanding, became the basic unit in the theory of mental language that Ockham advocated." (pp. 1169-1170)

42. ———. 2014. "Concepts and Concept Formation in Medieval Philosophy." In *Sourcebook for the History of the Philosophy of Mind: Philosophical Psychology from Plato to Kant*, edited by Knuuttila, Simo and Sihvola, Juha, 263-279. Dordrecht: Springer.
"The thought of William of Ockham opens a new phase in medieval discussion on concepts. He developed an alternative to the De anima approach on the basis of his nominalist ontology. Ockham rejected the idea that intellectual cognition requires the presence of the object's form in the intellect, and he rejected the doctrine of species in all its forms, including intelligible species. He criticised the species as

speculative and unnecessary and as a representationalist hindrance to direct realism in concept formation. This criticism was put forward earlier by Olivi, Durandus and others; however, for Aquinas and Scotus, the species in the intellect is an activator of the power of understanding, rather than its object. For Ockham, concepts are acts of understanding. More precisely, concepts are abstractive acts of understanding, as opposed to intuitive acts. An intuitive act of understanding is about a present particular object as existing, whereas the abstractive act of understanding does not require the presence of the object and is universal in the sense that it is applicable to many objects (say, to all the members of a species). In Ockham's view, the human mind is so constructed that it is capable of forming concepts of the things it encounters under suitable conditions. Ontologically, concepts are qualities: they are states in which the intellect can be. There is a strong emphasis on the viewpoint of logic and semantics in Ockham's approach. He developed a theory of mental language, and concepts or mental words are among the basic units of that language: they are terms of the mental language. As terms of a language, the concepts are signs, and they have the kind of semantic properties that terms have." (p. 265)

43. Hughes, Robert D. 2017. "Oratio, Verbum, Sermo and "Les paraules de sa pensa": Internal Discourse in Ramon Llull (1271/1272-1290), its Sources, Implications and Applications." *Studia lulliana* no. 57:3-61.
Abstract: "At a time when technology companies are talking about «silent speech interfaces», it is particularly important, I believe, to look back at what the medievals said about «internal discourse» and the significatory power of concepts. In this vein, then, as much as being an «art of conversion» via dialectical argumentation and a means whereby to unite all branches of knowledge under a set of ultimate principles, Ramon Llull's Art is an «art of contemplation», born of prayer and internal discourse at the highest levels of intellect, not least in the first phase thereof (i. e. before 1290). His Art is, therefore, the technological interface whereby internal discourse can be encoded and transmitted. By examining potential antecedents (including Aristotle, St Anselm, St Augustine, Boethius, Hugh of St Victor, St Irenaeus of Lyon, St John of Damascus, St Maximus the Confessor, Peter of Spain, Priscian, St Thomas Aquinas and William of Sherwood), as well as consequents (such as William of Ockham and Erasmus of Rotterdam), I attempt to construct a literary topography wherein to situate the statements made by Llull on the topic of internal discourse and whereby to understand how the latter, in its pre-eminent angelic form, helped to shape his thinking about the superiority of thought over the spoken and written word, a position which might suggest the presence of conceptualist elements within the realism for which he is well-known."

44. Karger, Elizabeth. 1996. "Mental Sentences According to Burley and to the Early Ockham." *Vivarium* no. 34:192-230.
"The intellectual relationship between Walter Burley and William Ockham was a remarkable one. Though Ockham relentlessly criticized those who, such as Burley, admitted of common natures, he was nevertheless, in mat- ters of logic,(2) heavily indebted to the same Burley, whose early works preceded his own by some fifteen years. Burley, on the other hand, though he, of course, regarded Ockham's rejection of common natures as a major mistake, nevertheless incorporated in his later works some of Ockham's own views and analyses.(3) As a way of gaining a better understanding of both authors, it may, then, prove useful to compare their thinking, at least on some points of doctrine. I propose we do so on a subject to which both authors made an important contribution, that of mental sentences-" (p. 192, a note omitted)
(2) Thanks to S. Brown, the editor of Burley's *Tractatus de suppositionibus* (see Brown 1972) and to the authors of the introduction to Ockham's *Summa logicae* (see Gàl & Brown 1974), we know that Ockham practically copied from Burley's *Tractatus de suppositionibus* the chapter which, in the *Summa logicae*, deals with the supposition of relative pronouns and that he was heavily indebted to him for the chapters dealing with obligations and with insolubles.

(3) W. Courtenay, in Courtenay 1987, sees in the structure of Burley's *De puritate artis logicae* an influence of Ockham's *Summa logicae* . R. Wood, in Wood 1984, has pointed out that Burley, when expanding his pre-1316 commentary on Aristotle's *Physics*, which he did after Ockham had written his own commentary of that text in 1324, often relie on Ockham's commentary more than on his own earlier one. On the relationship between Burley and Ockham, on how they shared some basic views in spite of obvious disagreements, L. Baudry is still well worth reading (Baudry 1934).

References

L. Baudry 1934 - *Les rapports de Guillaume d'Occam et de Walter Burleigh*, in: *Archives d'histoire doctrinale et littéraire du Moyen Age*, 9 (1934), 155-73.
S. Brown 1972 - *Walter Burleigh's Treatise De Suppositionibus and its influence on William of Ockham*, in: *Franciscan Studies*, 32 (1972), 15-64-
W. J. Courtenay 1987 - *The reception of Ockham' s thought in Fourteenth-century England* in: A. Hudson & M. Wilks (eds.), *From Ockham to Wyclif,* Oxford 1987, 89- 107.
Gài & Brown 1974 - *Introduction to Guillelmi de Ockham : Summa Logicae*, eds. Ph. Boehner, G. Gài, S. Brown, St. Bonaventure, N.Y. 1974, 7*-73*.
R. Wood1984 - *Burley's Physics commentaries*, in: *Franciscan Studies*, 44 (1984), 275-303.

45. Kärkkäinen, Pekka A. 2011. "Mental Language." In *Encyclopedia of Medieval Philosophy: Philosophy between 500 and 1500*, edited by Lagerlund, Henrik, 1160-1165. Dordrecht: Springer.

Abstract: "William of Ockham has been considered the first thinker to develop a theory of mental language with grammatical structures. Ockham’s early views built upon Augustine’s and Boethius’ twofold concept of a mental word: a concept common to all people and a resemblance of words to actual spoken and written languages. Ockham understood mental language to be identical with thinking. The spoken and written words are subordinated to their mental counterparts and therefore share their signification. According to Ockham, mental language does not contain figurative speech, grammatical genders, synonyms, or equivocations but does contain most other features of external languages, including suppositions of terms and certain fallacies related to the suppositions. John Buridan diverged from Ockham’s view at this point and used the notion of modes of thinking to discuss related problems. Gregory of Rimini modified the view of mental language in several respects.

He considered the major part of mental language to consist of a mentalized conventional language, with only the act of assenting to a mental proposition, which he considered to be the mental proposition itself, being independent of conventional languages. Peter of Ailly further developed Gregory’s and Ockham’s ideas. In Italy, Peter of Mantua and Paul of Venice discussed the problems of word order and mental language that William of Heytesbury had raised earlier. The former was mainly critical of Heytesbury, while the latter for the most part shared Heytesbury’s views.

Several later fifteenth- and sixteenth-century logicians continued the discussions." (pp. 1160-1161)

46. Kelley, F.E. 1978. "Some Observations on the "Fictum"Theory in Ockham and Its Relation to Hervaeus Natalis." *Franciscan Studies* no. 38:260-282.

"It is not clear whether or not William of Ockham, the Oxford Franciscan, ever read what Hervaeus Natalis,1 the Paris Dominican, had to say a decade or so earlier about the universal. Codex Vat. Pal. lat. 998 includes two short questions dealing with Hervaeus' doctrine regarding the ens rationis which fall between some logic commentaries belonging to Ockham and a "Quaestio de universali secundum viam et doctrinam Guillelmi de Ockham/'2 This juxtaposition may indicate someone's interest in the comparative views of Ockham and Hervaeus on the topic, or may even be a reflection of Ockham's own familiarity with Hervaeus' work. Be that as it

may, the thought of these two men who wrote in the early years of the fourteenth century on this question reveal some remarkable similarities." (p. 260)
(...)
"While it may be the case that William of Ockham never examined what Hervaeus Natalis wrote regarding the universal, it is safe to suppose that he would have found his work interesting reading. One major difference between the two men can be noted. In contrast to Ockham' s hesitation and shifting, Hervaeus presents a single analysis without reversals. The curious blend of resemblances and differences in their respective accounts makes it all but impossible for us to imagine what might have been Ockham's assessment, had he made one. Being the critic that he was, it is hardly likely that the Venerable Inceptor would have found himself cornered, without room to argue further. This sort of debate, as we know, had a way of going on." (p. 279)