

Mental Language and Mental Representation in Late Scholastic Logic

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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 following 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.

To begin with: a terminological remark with real consequences. For some years now the idea seems to have been gaining ground that “the ‘Middle Ages’ is a historiographical fiction of doubtful utility for the history of language as for all other kinds of history.”¹ Even if – as I concede – we can hardly at present avoid using the term ‘medieval’ (be it for reasons of terminological convenience or of indolence), we should nevertheless use it with care. In the present context, then, we will make use of the helpful term ‘late scholastic’, which, it should be noted, must not be misread as ‘late medieval’ – as it in fact has often been and is still. This misreading has had the unfortunate consequence that the “really late” scholastic tradition of the later sixteenth, the seventeenth, and the early eighteenth centuries – falling outside the domains of not only Medieval and Renaissance but also Early Modern studies, is still a historiographically underdeveloped area of the great Latin philosophical tradition. This is unfortunate, in my opinion, for we may find in this later period of scholasticism the revival and continuation – and the development and modification – of many, if not most, of the logical, theological, and metaphysical discussions of the fourteenth, fifteenth, and sixteenth centuries. The following notes on some late-scholastic debates concerning mental language and mental representation may serve as an illustration of this.

1. The Present-Day Setting of the Problem

A look at the modern debates on mental representation shows the intellectual battlefield divided mainly into two camps – leaving aside the so-called “connectionist” theories that attempt to substitute

the activity of neuronal networks for the concept of mental representation. On the one hand, there are the so-called “descriptivist” or “propositionalist” theories (e.g. Fodor, Katz, Pylyshyn) whose analysis of thought emphasizes the importance of linguistic structures and linguistic elements. Essentially, these theories are based on the following two ideas: 1) we should characterize mental processes (and particularly thought processes) as forms of “inner speech” rather than ways of using mental images; 2) all theories operating with the existence of pictorial representations can be reduced to theories assuming solely the existence of propositional mental representations. On the other hand, we have the so-called “pictorialist” or “imagist” theories (e.g. Paivio, Kosslyn) claiming that, besides other types of mental representations, recourse to pictorial representations is necessary for a sufficient explanation of at least some cognitive processes. These debates between the modern propositionalist and pictorialist account of mental representation as well as some of the arguments advanced by the two sides are part of a long, though mostly unstudied, tradition, some aspects of which will be at issue in what follows.

The back and forth of the present-day debate over the nature of mental representation gives abundant evidence of the many problems that are implicit in each of these main accounts of mental representation. And these problems even seem to multiply when the pictorial and the propositional paradigm are not taken as *alternative* forms of representation but rather are *fused* together so that one and the same mental representation, concept, or *verbum mentis* is taken as both a similitude or image of a thing (*similitudo vel imago rei*) and an element of mental language or inner speech. The following remarks will focus on some of the problems resulting from the tension between these two approaches.

2. Some Historical Notes on the Concept of Internal Language²

The practice of describing thought processes in linguistic terms has a long tradition going back at least to Plato’s characterization of thought (*dianoia*) as an “internal dialogue of the soul with itself” (*entos tês psychês pros hautên dialogos*).³ Aristotle, seeing mental concepts as *homoiômata*, is not only the main source for the medieval view of concepts as images or likenesses of things, he also distinguishes between an external *logos* and an internal discourse in the soul (*esô logos en tê psychê*),⁴ and this can be seen as the historical background of the influential, presumably Stoic, distinction between interior discourse and spoken discourse.⁵ Extended to a tripartite distinction of written, spoken, and mental speech it entered the late antique commentaries on the Aristotelian *Organon*,⁶ from where the idea of a “triplex oratio” was taken over by Boethius,⁷ who in turn transmitted it to the scholastic tradition.

Yet another view of pivotal importance in the history of mental language is Augustine’s doctrine of the *verbum mentis* (also known as *verbum cordis* or *verbum interius*), distinguishing the mental words or “locutiones cordis”⁸ from the external sounding word (*verbum quod foris sonat*)⁹ as well as from the imaginative representations of the spoken words, the “imagines sonorum”. The way in which Augustine characterizes the inner word differs sharply from any ordinary use of the term ‘word’. The inner word or speech (*locutio interior*) is described by Augustine interchangeably as “cogitatio”,

“visio”, and “auditio”, because speaking, thinking, hearing, and seeing are, according to Augustine, one and the same thing in the sphere of the mind.¹⁰ Thoughts (*cogitationes*) are performed in mental words. The *verbum mentis*, corresponding to what later was called the *conceptus mentis* or *intellectus*, is by no means a “linguistic” entity in the proper sense, for it is “nullius linguae”, which means that it does not belong to any particular spoken language like Latin or Greek.¹¹ So we are confronted with the paradoxical situation that linguistic terminology (e.g. *verbum*, *locutio*, *oratio*, *dicere*, etc.) is used to describe a phenomenon whose independence from any language is strongly emphasized at the same time.

Of particular importance for later interpretations of the *verbum mentis* was the way in which Anselm of Canterbury revived the Augustinian doctrine, combining it with the Aristotelian view on mental concepts outlined in the opening chapter of *Peri hermeneias*. Thus, the two aspects of the mental word – which are found more or less implicitly in Augustine’s work already – became explicit in Anselm. First: mental words are natural words and thus identical for all human beings (they are “verba ... naturalia ... et apud omnes gentes eadem”);¹² and second: they are similitudes and mental images of things (*similitudines et imagines rerum*).¹³

From this point on, the *verbum mentis*, functioning as a key notion in medieval theories of mental representation, was both word and image, and thus amalgamated precisely the two aspects that in the present-day discussion mark the opposed approaches of the descriptivist and the pictorialist theories. The account of thought as a kind of “non-linguistic”, or rather “trans-linguistic”, mental speech (termed *oratio* or *propositio mentalis*,¹⁴ or *locutio in mente*¹⁵), can be found already in several passages of Abelard and Roger Bacon. But it was William of Ockham who developed a comprehensive theory of mental language governed by a transidiomatic mental grammar transposing the theorems of terminist logic to a theory of thought processes.¹⁶ But, of course, there were – as there still are – people who saw quite a few problems inherent in such a notion of a natural mental language. A number of well known late-medieval discussions, involving, among others, Hugh of Lawton, William Crathorn, and John Buridan bear witness to this.

3. Propositions out of Images?

A frequently recurring issue in these medieval discussions of mental representation and mental language concerns the compatibility of the two aspects of *verbum mentis* as *imago rerum* and *locutio mentis*. How could any language be build up out of elements that were to be seen as *similitudines* or *imagines rerum*? Even if Nelson Goodman is right to stress the importance of a syntactic approach to the issue of pictorial representation, it is quite clear that images are not appropriate for modelling the grammatical or syntactic features of spoken language. Thus, if concepts were at once mental images of external objects and elements of mental propositions, questions like the following might arise: what does an image of a donkey in the genitive case looks like? Or to put it in another way and more generally: how can propositions be made up out of images? The saying goes: “a picture’s worth a

thousand words” – nevertheless it is clear that from a logical point of view the opposite is true: a sentence says more than a thousand images, because it is only through a sentence that a statement can be made. A sequence of images will at best make up a movie, never a proposition in the proper sense. The arguments of Hugh of Lawton and William Crathorn against Ockham’s notion of an *oratio mentalis* followed roughly this line of reasoning. No similitude subjectively existing in the mind, Lawton argued, could ever exercise logical functions like suppositing for some thing (*supponere pro aliqua re*).¹⁷ Crathorn’s main objection to Ockham’s view of natural mental propositions was also based on the thesis that the *verbum mentis* in the sense of *similitudo rei* could neither constitute nor be the part of any proposition (“nulla propositio mentalis ... fit ex terminis mentalibus, quae sunt similitudines rerum”).¹⁸ Thus, in Crathorn’s view, Ockham had misinterpreted all the passages in which Augustine wrote of *verba nullius linguae*. This formula was not meant, Crathorn maintained, to be an affirmation of the ‘transidiomatic’ nature of mental words but rather as an overall denial of their linguistic character.¹⁹

At least as far as general cognition is concerned, Crathorn was advocating some sort of extreme descriptivism, or – and this is much the same – a vocalist version of nominalism. The notion of “similitudo rei”, though central to his theory of sensory perception, has not the least explanatory value regarding general or abstract cognition. For, taking a general concept, e.g. the concept of color, to be a “similitudo rei” would result in the seemingly absurd consequence that one and the same concept would have to be a likeness not only of different but even of opposite things, for example the colors black and white.²⁰

Whereas the mental representation of concrete colors like black and white, according to Crathorn, is performed by mental words that are *similitudines rerum* but as such cannot be elements of any kind of language, the mental representation of color as such can only be performed by a kind of mental word that is not a *similitudo rei* but rather a similitude of the spoken or written term ‘color’. Thus, for Crathorn, all general cognition is fundamentally based on the use of conventional language. But the nature of similitude was not the only object of ardent debates concerning the *verbum mentis*.

4. The Structure of the *verbum mentis*

Introducing his idea of *oratio mentalis*, Ockham explicitly referred to Augustine’s *verbum mentis*: “isti termini concepti et propositiones ex eis compositae sunt illa verba mentalia quae beatus Augustinus ... dicit nullius esse linguae.”²¹ By identifying Augustine’s *verbum mentis* with the basic units of mental language (the *termini concepti*), Ockham was working into his theory of mental language a cognitive element that had already been the subject of long debates centering on the internal structure of mental representation. In this context, the main question had been what function the *verbum mentis* had within the process of intellectual cognition.

In Thomas Aquinas’ view the *verbum mentis* or the *intentio*, *notitia*, or *conceptio* – these terms he employed interchangeably – is the term and product of an intellectual act or operation (“conceptio

consideratur ut terminus actionis, et quasi quoddam per ipsam constitutum”),²² functioning both as the primary object of intellectual cognition and as that “in which” (“in quo”) the mind grasps the external object.²³ Thus, the *conceptio* or *verbum mentis* is different both from the *species intelligibilis (impressa)* that marks the starting point of the intellect’s action (“principium actionis intellectus”) and from the intellectual act itself.²⁴

Whereas the thesis of a real distinction between the *verbum mentis* and the intellectual act was supported by Thomistic authors like John of Paris, Thomas of Sutton, Giles of Rome, and Hervaeus Natalis, a group of mainly Franciscan authors – for instance Peter of John Olivi, Henry of Ghent, William of Ware, and John Duns Scotus – denied that it was a *medium in quo* and conceived the *verbum mentis* not as product and object of the intellectual act but rather as the intellectual act itself.²⁵ This medieval discussion was continued in sixteenth- and seventeenth-century post-Tridentine philosophy. Here, the Thomists still saw the *verbum mentis* as the ultimate product of the intellect and as a *medium in quo*,²⁶ i.e. as a medium that, by being itself the immediate object of intellection, provides the means of mentally representing the external thing. In contrast, the Scotists and the majority of the Jesuits advocated identifying the *verbum mentis* with the intellectual act. In their view the mental concept functioned neither as a “medium in which” (*medium in quo*) the object was known nor as a substitute for the object (“dicendum ... non esse id, in quo fit cognitio, aut supplere vicem objecti”);²⁷ rather it was the act itself, “through which” the mind cognizes its object (“id, quo ipsum objectum cognoscitur”):²⁸ “Conceptus formalis dicitur actus ipse, seu (quod idem est) verbum quo intellectus rem aliquam seu communem rationem concipit ...”²⁹ Thus, e.g. Suárez claimed that there can be at most a *modal* distinction³⁰ between the *verbum mentis* as the fully executed act of cognition (“actus cognoscendi in facto esse”) and the ongoing process of cognition (“actio cognoscendi in fieri”)³¹; this stood in stark contrast to the Thomistic doctrine of a *real* distinction between them.

What does this have to do with the conflict between the two approaches to mental representation, the imagist and the descriptivist? As I see it, the quarrel about the correct interpretation of the *verbum mentis* was at least partially the result of thinkers emphasizing one approach to the *verbum mentis* or the other, i.e. either the *verbum mentis* as an *imago rei* or the *verbum mentis* as an act of mental speaking. Whereas the Thomistic account of the *verbum mentis* generally followed the paradigm of image cognition or of seeing an object in a picture, the Jesuits mainly took the act of saying as the model for explaining the structure of the *verbum mentis*. So it is not by chance, I take it, that for instance Gabriel a Sancto Vincentio, a seventeenth-century representative of the Thomistic position, when answering the question “quomodo verbum intelligatur, aut terminet intellectionem, ut quo tantum, an etiam ut quod”, referred to the example of the two ways in which the image of Caesar (“imago Caesaris”) is perceived: in one way as a certain thing with a particular figure and disposition of colors (*ut quod*), in the other way as showing Caesar (*ut quo*).³²

In contrast, the Jesuit Petrus Hurtado de Mendoza (1592-1651) denied that the *verbum mentis* that I say is distinct from my complete act of saying it, thus going even farther than, e.g., Suárez’ claim that

they are modally distinct. Hurtado claimed that “the word is that through which we say something; but we speak only (*praecise*) by our act (*actionem*) and its term; and thus the word is nothing other than the act and its term.”³³

The point of contention in this debate over the correct interpretation of the *verbum mentis* was the internal structure of mental representation on the level of the individual mental concept, i.e. on the level of the first operation of the intellect (*prima operatio intellectus*) or the *simplex apprehensio*. Somewhat different were the issues that appeared on the level of the second operation of the intellect (*secunda operatio intellectus*), where mental concepts are considered to be elements in mental propositions or judgments. Nevertheless, a closer look may show that there is a remarkable parallelism in the way in which our authors dealt with the formal structure of, on the one hand, the *verbum mentis* and, on the other, mental propositions (I shall return to this point). When focusing on the structure of mental propositions, controversies were not limited to the prominent question of just how similar or dissimilar the grammar of mental language was to the grammars of spoken languages. Here I will concentrate on a more fundamental metaphysical question that was raised in the context of these discussions: can the essentially composite structure of spoken and written language serve at all as a model for mental propositions or thought processes? In other words: can there be a structural similitude or an isomorphism between spoken and mental propositions?

5. Is the Composite Structure of Spoken Language Applicable to Mental Propositions?

Even if Ockham precisely differentiated between the grammatical structure of mental and spoken language, he was nevertheless advocating – at least in the *Summa logicae* – a strict analogy between the structure of mental and spoken propositions. This is because, according to Ockham, a mental proposition is composed out of intentions or cognitive acts in just the same way that the corresponding spoken proposition is made up out of spoken words.³⁴ Buridan and many fourteenth-century authors shared this view with Ockham. But, of course, not all did so. The main opponent of this compositional or complex account of mental propositions was Gregory of Rimini (d. 1358), who claimed that the composite structure of propositions, as this structure appeared in spoken language, was incompatible with the ontological simplicity of the indivisible mind. In the prologue to his *Commentary on the Sentence*, Gregory poses the question whether a mental proposition is essentially composed out of various simple acts of knowing, one of which was subject, one predicate, and one copula, or whether the mental proposition is rather a single act, not made up out of any parts.³⁵ Rimini opted for the second alternative, arguing that if the mental proposition were merely constructed out of its component concepts, absurd consequences would result, e.g. the very same elements could constitute propositions with different modal states and opposite truth values. As an example, widely known later on, Rimini took the two propositions, ‘omne album est ens’ and ‘omne ens est album’. Whereas the former proposition is a contingent truth, the latter is necessarily false.

According to Rimini, the description of a mental proposition as a mere *compositum* or aggregate of its component concepts would entail that the same elements always compose the very same mental proposition. This is because, whereas within spoken language the linear structure of speech provides the possibility of differentiating propositions with identical constituents on the basis of variant word orderings, such a syntactic device must be precluded from mental language because of the alleged simplicity and non-linear structure of the mind and its operations. In Rimini's view, the only alternative that remained was to conceive the whole mental proposition as a "simplex qualitas", and this thesis became the object of a great deal of attention in later discussions of mental language. The vast and extremely subtle early sixteenth-century debate on this topic is well documented and precisely described in Gabriel Nuchelmans' and, particularly, in Jennifer Ashworth's studies on late medieval theories of the proposition. For detailed analysis, I refer to these works.³⁶ They show that, even if some authors like d'Ailly, Pardo, or Bacilerius subscribed in one way or another to Gregory's non-compositional theory of the mental proposition, the compositional account was nonetheless the prevalent position in the early sixteenth century.³⁷

6. The Change of the *communis opinio* Concerning the Ontological Structure of Mental Propositions

The question about the composite or non-composite structure of the mental proposition, or "enuntiatio mentalis" as it was mostly called later on, remained a standard topic even in seventeenth-century logical textbooks.

Post-Tridentine philosophy, however, saw a remarkable change of the *communis opinio* concerning this question. The *Summulae* of Domingo de Soto seems to have played a crucial role in bringing about this change. It is true that Soto correctly noted that the "opinio communis est, propositionem in mente esse composita perinde atque in voce",³⁸ and conceded that the composite structure of the mental proposition was more intelligible or appropriate for the needs of beginners ("ad usum summularum perspicatior").³⁹ Nevertheless, he acknowledged and strengthened the plausibility of Rimini's main argument, based on the conviction that the syntactic feature of varied word ordering, essential as it is for spoken or written propositions, could not be transferred to mental propositions.⁴⁰ Thus, Soto judged Rimini's *qualitas simplex* theory of propositions to be the "probabilissima opinio"⁴¹ – not without stating, however, that Thomas Aquinas had never explicitly decided in favour of one of the two positions, "no matter what the Thomists say" ("quicquid dicant Thomistae").

In this way, Soto, followed on this point by Toletus,⁴² paved the way for the success of the *qualitas simplex* theory of mental propositions, which seems to have been the prevailing opinion throughout the entire seventeenth century. Quite a number of explicit statements confirm this impression. Already at the beginning of the century the Jesuits of Coimbra say that this opinion is "a pluribus auctoribus hodie approbata".⁴³ According to Juan Caramuel and John Punch (Poncius), both writing at mid-century, this is the common opinion ("sententia hoc aevo communis est"),⁴⁴ and towards the end of the

century the Italian Jesuit Giovanni Battista de Benedetti reports that “pro simplici actu pugnant recentiores turmatim”.⁴⁵ So, the questions arises: what are the reasons for the late success of Gregory of Rimini’s view? Why did so many seventeenth-century authors agree with Martin Smiglecius, who says: “Dico igitur sententiam Gregorij veram esse”?⁴⁶

One reason is to be seen in the success of another thesis, which in Gregory’s *Sentence commentary* was closely connected with his *simplex qualitas* account of mental propositions. Contrary to Ockham’s and Buridan’s insistence on a clear cut distinction between mental propositions and mental acts of assent or judgment,⁴⁷ Gregory advocated the view that mental propositions properly so called were identical to the acts of assenting or knowing.⁴⁸ As late as the early sixteenth century, Bartholomaeus Arnoldi of Usingen could truthfully report that this opinion “paucos habet imitatores”.⁴⁹ But simultaneously, and directly connected with the increasing acceptance of the noncomposite account of mental propositions, the *propositio* or *enuntiatio mentalis* began to be considered to be an act of mental judging or apprehending. In this way, the simplicity of the act of judging or assenting, which had been basically uncontroversial, was transferred to the *enuntiatio mentalis* itself. This phenomenon is already clearly witnessed in the way the Conimbricenses put the question: “Utrum mentalis enuntiatio, quam a iudicio non distinguimus, sit una simplex qualitas?” And it is not surprising that, given these circumstances, they – just like Vallius, Arriaga, Lynceus, Poncius, Frassen, and many others – favored the affirmative answer.⁵⁰

Another reason for the success of the *qualitas simplex* thesis is to be seen in the fact, mentioned above, that several authors took the Thomistic version of *verbum mentis* as a model for describing the structure of mental propositions. This becomes more evident when we contrast the sort of *qualitas simplex* theory advocated by John of St. Thomas (alias John Poinsot) with the compositional account. John gives a list of four positions, each of which, in a manner of speaking, offers a special blueprint for the production of mental propositions:

(1) Quidam ... existimant non requiri aliud ad formationem enuntiationis quam plures conceptus esse ordinatos inter se, sicut omnes fatentur in tertia operatione ... non dari aliquam qualitatem seu conceptum resultantem ex ordinatione propositionum... (Johannes a Sto. Thoma, *Cursus philos. thomist.* I: 151a)

The first position holds that nothing more is required for the formation of a mental proposition than the arrangement of its component concepts. Thus, a proposition is only the aggregate of its parts – just as Ockham had held that, e.g., “ordo sunt res ordinatae” (or, in a theologico-political context, “ordo sunt monachi”). Just as the non-Thomistic concept of the *verbum mentis* identified the mental word with the intellectual act, here a proposition is held to be identical with the complex formation of the proposition. Whereas this account represents the compositional approach to the mental proposition, the following three positions are but variants of the *qualitas simplex* theory:

(2) Alii vero existimant formari enuntiationem per aliquem conceptum ordinantem conceptus simplices vel ex illis ordinatis resultantem. (ibid. 151a).

The second opinion holds that the mental enunciation essentially consists in some simple concept which either arranges the component concepts or else is the result of their having been arranged.⁵¹

(3) ... aliqui existimant solum dari unicum actum, qui non solum dirigat et ordinet conceptus simplices, sed etiam qui repraesentet totam propositionem. [151b]

The third position concurs with the second, but adds that this particular concept not only arranges the component concepts but also represents the whole proposition as some sort of an image.⁵²

(4) Alii vero ponunt quatuor actus, tres qui repraesentent subiectum, praedicatum et copulam secundum se, et quartum, qui illos conceptus dirigat et ordinet inter se; et in hoc solum formaliter consistit propositio, in aliis vero praesuppositive.

The fourth and last position, which John of St. Thomas himself adopts, maintains that there are four distinct acts, three of which represent the subject, predicate, and copula respectively, whereas the fourth act, the one the proposition essentially consists of, arranges the three others, which function only as prerequisites for the production of the proposition. In a structural analogy to the Thomistic real distinction between the mental act of cognition and the *verbum mentis* as the term and product of this act, the three concepts of subject, predicate, and copula are here considered to be only the preconditions for the subsequent production of the mental proposition as a simple act. Along these lines, Domingo de Soto had already claimed:

... licet successive formemus plures conceptus cum audimus 'homo est animal': illi tamen plures non significant hominem esse animal unica significatione totali: sed in fine producitur una simplex qualitas quae hoc significat.⁵³

The simple quality that Soto mentions here is the mental proposition properly so called, by which (as John of St. Thomas said) the predicate, the subject, and the copula are represented "per modum identitatis et unitatis totius" just like "in specie montis aurei repraesentatur mons et aurum, et in specie totius domus fenestrae et columnae etc."⁵⁴

Considering these essentially psychological accounts of the mental proposition, one can see why in post-Tridentine logic theoretical considerations of the issue were drawn still farther away from Ockham's logical approach to mental language and mental grammar.

7. Modifications of the Concept of *similitudo*

It is apparent that the meaning of "linguistic" vocabulary like *verbum*, *locutio*, *propositio*, *enuntiatio*, etc., changed as a result of its being used for the description of mental operations. Likewise the notions of 'image' and 'similitude' did not remain unaffected by their application to mental processes. Even if it is (and probably will continue to be) the case that authors can be found at all times who operate with rather naive or unconsidered concepts of similitude or image, nevertheless we do have certain indications that the concepts of *imago* and particularly of *similitudo* became increasingly refined in

later medieval philosophy – resulting in concepts of cognitive similitude that form the basis of master arguments like those we have seen advanced by Lawton and Crathorn.

Already in Ockham ‘*similitudo*’ is not to be understood to be identical with pictorial representation. Even if in logical contexts the concepts of *significare* and *supponere* replace the notion of similitude, one should not conclude from this that these were mutually exclusive concepts in the sense that describing the relation between concepts and things in terms of signification and supposition would imply that there could be no similitude. In fact, the contrary seems to be the case. As Ockham argues in *Quodlibet* IV, the logical functions of simple mental acts, like to signify or to stand for an external thing, are based on the very fact that concepts are similitudes of things.⁵⁵ Perhaps the most radical response to the problems involved in the account of mental concepts as *similitudines rerum* was the denial that mental concepts were such similitudes at all. But this extreme position is seldom to be found. Besides Crathorn’s above-mentioned replacement of the *similitudines rerum* by *similitudines vocum*, I know only of Johann Eck, who, pointing to the difficulty of explaining how cognition as a “merely immaterial thing” (*res mere immaterialis*) could be similar to any material, extended thing (*res materialis et extensa*), explicitly – and, it is to be noted, explicitly against Ockham – held that the signification of mental concepts was not based on natural similitude but rather on some sort of natural relation or habit (*conceptus significare ex naturali habitudine, sed non ex naturali similitudine*).⁵⁶

The general way employed to deal with this objection, however, was not to dismiss but to modify or to differentiate what was meant by ‘similitude’. Already in the fourteenth century, Andreas de Novocastro (fl. 1358) had made a distinction between a “*similitudo secundum configurationem et convenientiam*” and the particular form of mental similitude which allowed for one and the same concept to be – Crathorn held this to be impossible – “the similitude or the natural image of utterly dissimilar things” (*similitudo et imago naturalis rerum summe dissimilium*).⁵⁷

This way of differentiating several meanings of ‘similitude’ reappeared in the sixteenth century in the form of the terminological distinction between *similitudo linealis*, on the one hand, and *similitudo intentionalis* or *similitudo obiectiva*, on the other. This type of distinction is to be found, for instance, in William Manderston⁵⁸ and Domingo de Soto. This intentional similitude is marked by an inversion of the standard relation between *similitudo* and *repraesentatio*. For it is not the similitude that provides the basis for representation; rather, on the contrary, mental concepts are said to be *similitudines rerum* on account of the fact that they are natural representations of things.⁵⁹ Thus, the reason why a particular concept is the natural cognitive similitude of a particular object is not the concept’s qualitative or figural conformity with its object, nor is it because the concept has a direct causal dependence on its object. In other words, the concept is – to use modern semiotic terminology – neither an icon nor an index in its proper sense. It is rather to be characterized as *naturalis similitudo obiectiva* only because it is a natural form representing on its own account (*per se*) the object. And this in turn is based on particular nature of its being, which is produced by an intellect informed by a species. Similitude, according to this interpretation, is not a two-term relation but rather (at least) a

triadic relation: a concept is the *similitudo obiectiva* of x because it has been produced by an intellect that itself is affected by x in a certain way.⁶⁰

Even if this might not provide a satisfactory answer to the question of the nature of mental representation, it makes evident that by no means all late medieval authors advocated a naive theory on which cognitive similitude was some sort of pictorial likeness. Instead of trying to give a detailed explanation for mental representation, however, they rather took to be axiomatic that mental concepts are natural similitudes. There is, as Pedro Sanchez Ciruelo claimed, no reason to be sought for the fact that “mental dictions” (*dictiones mentales*) are natural similitudes of things. On the contrary, they are the ultimate ground of all signification.⁶¹

8. The Influence of Conventional Language on Thought Processes

Looking back, we can say that Ockham’s concept of *oratio mentalis* began a long process in which logical semantics and epistemology became increasingly closely connected or amalgamated. Particularly in the sixteenth century this process gained momentum – as Jennifer Ashworth has shown – through defining the term ‘*significare*’ as making known or representing to the cognitive faculty, so that, “when early sixteenth century logicians were discussing mental language they took it that they were concerned with philosophy of mind.”⁶² This tendency grew even stronger in the seventeenth century, when mental propositions were primarily conceived not as instantiations of a grammatically well defined mental language but rather as simple acts of mental apprehension or judging, and thus became a simply psychological or epistemological issue. As a result of this, the topics of mental language and mental grammar gradually disappeared. The object of seventeenth-century reflections on language was not so much natural mental language and its relation to spoken language but rather – and increasingly so – the question of possible influences of conventional language on thought processes.

Already in the fourteenth century Pierre d’Ailly had maintained that there was a close habitual connection between conventional and mental language. In order to explain the process of understanding spoken or written words, he claimed that the habitual connection and concomitance between the concept of the thing and the concept of its verbal expression (“*colligantia seu mutua concomitantia inter conceptum naturalem ... et conceptum ... vocis*”) is so close, that by stimulating one of these concepts the other is always immediately stimulated as well (“*uno conceptu moto per obiectum suum ... statim movetur alius conceptus*”).⁶³ According to this view, which already was anticipated in some way in the midthirteenth-century *Commentum super Priscianum maiorem* of Ps.-Robert Kilwardby,⁶⁴ the two levels of inner speech appear to be strictly parallel, distinct from each other and without mutual interaction.

The seventeenth-century Jesuit logician Giovanni Battista Giattini (1601-1672) conceived the correlation of language and thought as slightly closer still. According to his account of language acquisition, upon hearing certain words frequently and in combination with the sensory perception of their significata, a “complex species” is generated, and this species comprises – just like the

Saussurean sign – the sound-image as well as the concept of its correlate object (“... generantur ... species complexae talium vocum simul et talium obiectorum ex ipsa consuetudine”).⁶⁵

Such considerations seem to have paved the way for the idea that even the form of mental discourse itself might be influenced or affected by the structure of the spoken language we are accustomed to. Within the framework of scholastic logic the thesis that the structure of mental language may vary according to the different grammatical structures of the various national languages was already formulated in 1599 by Dominicus Bañez (1528-1604). According to him, whereas the simple concepts that are the elements of mental language are the same for all men (*eidem apud omnes*), this does not hold in all cases on the level of mental compositions (*mentales compositiones*). For there is, as he claims using as an example the “lingua Vasconia” (Basque), a “mental phraseology” proper to each of the various languages and nations, and this results not only in different ways of speaking but also in different ways of conceiving the same truths.⁶⁶

Even if such explicit statements are rather rare, one is, I think, justified in saying that, in the seventeenth century, reflections on language become much less inclined towards developing speculative theories on transidiomatic mental language and its underlying grammatical rules than towards taking into account observations of the concrete use of conventional language.

Notes

1 Ebbesen 1995: xi.

2 A comprehensive examination of the history of this concept is now to be found in the brilliant Panaccio 1999.

3 *Soph.* 263 e 2-4.

4 *Anal. post.* A 76b24; *Categ.* 4b34.

5 See Mühl 1962. In fact, it is not quite certain whether this particular distinction is Stoic in origin. The oldest testimony for this terminology is in Philo of Alexandria. Sextus Empiricus mentions it as a distinction used by the dogmatic philosophers. It appears that Porphyry was the first to explicitly ascribe it to the Stoa. See Hülsner 1987: 582sq.

6 Cf. Porphyrius, *In Cat.* 1887: 64, 28-30; Ammonius, *In de Int.* 1897: 22, 13-21; 23, 12-15.

7 A. M. S. Boethius, *In de int. sec. ed.*, 1880: 29, 17-21: “... Peripatetici rectissime posuerunt tres esse orationes, unam quae scribi possit elementis, alteram quae voce proferri, tertiam quae cogitatione coneccti unamque intellectibus, alteram voce, tertiam litteris contineri.” *Ibid.* 36, 10sq.: “Porphyrius ... tres posuit orationes, unam quae litteris contineretur, secundam quae verbis ac nominibus personaret, tertiam quae mentis evolveret intellectus.” Cf. *ibid.*, 42, 15sq.

8 Augustinus, *De trin.* XV, 10, 18, 36 (1968: 484).

9 *Ibid.* XV, 11, 20, 1 (1968: 486).

10 *Ibid.* XV, 10, 18 (1968: 485). Sirridge 1999, “‘*Quam videndo intus dicimus*’: Seeing and Saying in *De Trinitate XV*”, in S. Ebbesen and R.L. Friedman (eds.), *Medieval Analyses in Language and Cognition* (Copenhagen, 1999), pp. 317-30.

11 *Ibid.* XV, 10, 19, 66sq. (1968: 485): “... ad nullam pertinet linguam, earum scilicet quae linguae appellantur gentium...”

12 Anselm of Canterbury, *Monolog.* 1968: 25.

13 *Ibid.* 48: “... omnia huiusmodi verba, quibus res quaslibet in mente dicimus, id est cogitamus, similitudines et imagines sunt rerum, quarum verba sunt.”

14 Cf. Roger Bacon, *Summa gram.* 1940: 64: “... Intellectus ... simplices sunt dictiones et termini mentales, intellectus compositi sunt orationes, propositiones et argumenta.”

15 Peter Abelard spoke (*Theol. christ.*, lib. I, 20, ed. Buytaert, p. 79, 235-36; *Patrologia Latina* 178, col. 1130A [= lib.I, cap. 4]) of “quaedam intelligentiae locutio quae in mente formatur”.

16 Cf. Panaccio 1992b: 67.

17 Hugh of Lawton in William Crathorn, *Quäst. zum ersten Sent.*, 174: “Nulla similitudo, quae est subiective in anima, potest supponere pro aliqua re. Igitur nulla talis similitudo potest esse pars propositionis.” See Gelber 1984.

18 William Crathorn, *Quäst. zum ersten Sent.*, 158; see also 201: “Igitur verbum mentis, quod est similitudo rei, quae non est propositio nec pars propositionis, sed id de quo propositio formatur, non est propositio mentalis nec pars eius.”

19 *Ibid.* p. 171.

20 *Ibid.* p. 169.

21 William Ockham, *SL I*, 1, OP I, 7.

22 Thomas Aquinas, *Quaest. disp. de pot.*, q. 8, a.1 c, 1953, 215.

23 Thomas Aquinas, *Super Evang. S. Joannis, lect. I*, 1, 1952: 8a; cf. Müller 1968: 56.

24 Thomas Aquinas, *Quaest. disp. de pot.* q. 8, a. 1 c, 1953, 215: “conceptio a tribus ... differt. A re intellecta, quia res est interdum extra intellectum; conceptio autem intellectus non est nisi in intellectu. ... a specie intelligibili: nam species intelligibilis ... consideratur ut principium actionis intellectus ... ab actione intellectus: quia ... conceptio consideratur ut terminus actionis, et quasi quoddam per ipsam constitutum. ... Haec autem conceptio intellectus in nobis proprie verbum dicitur.”

25 Cf. Panaccio 1992a; Meier-Oeser 2001.

26 E.g. Francisco de Araújo, *Comment. in univ. Arist. Met.*, 1617: 364a.

27 E.g. Franciscus Suárez, *Tract. de anima*, in *Op. omn.* 3, 633.

28 *Ibid.*

29 Franciscus Suárez, *Disp. met.* 2,1,1, *Op. Omn.* 25, 64b.

30 Franciscus Suárez, *Tract. de anima*, in *Op. omn.* 3, 632.

31 *Ibid.*

32 Gabriel a Sancto Vincentio, *In lib. de an.*, 1670: 444a: “Sed quaeres ... quomodo verbum intelligatur, aut terminet intellectionem, ut quo tantum, an etiam ut quod? ... dicendum est quod verbum potest cognosci ut quo et ut quod, ut enim habet propriam immaterialitatem, et cognoscibilitatem, cognoscitur ut quod, ut autem est forma intentionalis, et imago obiecti cognoscitur ut quo, cum hoc modo sit id quo obiectum cognoscitur. Exemplum habemus in imagine Caesaris, quae potest duobus modis cognosci ut quod quatenus est quaedam res, composita ex tali figura, et tali colorum dispositione, et varietate ut sit se ipsa visibilis, quo modo videtur ab illis qui nesciunt esse imaginem Caesaris. Et cognoscitur ut quo, quatenus cognoscitur ut imago Caesaris, tunc enim idem est motus in imaginem et in id cuius est imago. Idem dicas de verbo quod scilicet cognoscitur ut quod est quaedam res immaterialis, cognoscibilis, etc. et ut quo, ut est imago, seu prout exercet officium imaginis, tunc enim cognoscitur ut quo.”

33 Petrus Hurtado de Mendoza, *Disp. de universa philos.*, 1617: 792: “Dico primo, quando intellectus verbum efformat, illud est idem cum specie expressa producta per actionem intelligendi: est communissima sententia P. Suarez ... probatur primo a priori, verbum est, quo aliquid loquimur: sed praecise per actionem, et eius terminum loquimur: ergo verbum nihil est praeter actionem, et eius terminum: minor probatur, loqui nihil est aliud, quam potentiae intellectivae rem proponere, et indicare, ut patet in locutione vocali, quae nihil est praeter manifestationem conceptuum: sed actio intellectiva cum suo termino rem intellectui manifestat: ergo per illam loquitur intellectus.”

34 This is at least the position Ockham advocates in *SL I*, 12. OP I, 41sq.: “Illud autem existens in anima, quod est signum rei, ex quo propositio mentalis componitur ad modum quo propositio vocalis componitur ex vocibus, aliquando vocatur intentio animae, aliquando conceptus animae, aliquando passio animae, aliquando similitudo rei...” Cf. *Quodl.* III, q. 12, OT IX, 247sq.: “... sicut oratio in scripto componitur ex dictionibus scriptis et propositio in voce componitur ex vocibus, ita propositio in mente componitur ex intellectibus...” Cf. Walter Chatton: *Rep. et Lect. super Sent.*, prol., q. 1 art. 1, 1989: 22: “... suppono ... quod propositio in mente componatur ex intentionibus sicut propositio in voce ex vocibus, sicut alias ostendetur. Suppono etiam, quod eodem ordine, quo proferuntur in voce voces illae, quae sunt partes propositionis in voce,

una vox post aliam successive, quod eo ordine et successive potest intellectus formare suos conceptus correspondentes, qui componunt suam propositionem.” For an alternative account on the formal structure of mental propositions of Ockham, see n. 37** below.

35 Gregorius Ariminensis, *Lectura super primum et secundum Sententiarum*, prolog., q. 1, art. 3 (1979-1984, I [1981], 33-35) For more on this point, see also Maierù’s contribution to this volume, at and around nn. 24-32.

36 See Nuchelmans 1980: esp. 94ff; Ashworth 1981; 1982.

37 Cf. Johannes Dullaert, who, pointing to Ockham, Heytesbury and Paul of Venice, reports (*Quaest. super Peri herm.*, fol. 109vb): “opinio hoc tempore communis tenet quamlibet enunciationem mentalem ... compositam esse ex pluribus noticijs quarum una est subiectum alia copula alia praedicatum.” We find the same in Johann Eck, stating (*Arist. ...Dial. I*: fol. 75rb sq.): “... est Vuilhelmi de Ocham, Marsilii et communis viae [opinio] quod sicut propositio vocalis est composita ex distinctis vocibus: ita propositio mentalis est composita ex distinctis noticijs quarum una est subiectum alia praedicatum...”. Eck’s own answer to that question, however, is slightly more differentiated when he claims: “propositionem mentalem esse compositam: quamvis eam esse simplicem non sit impossibile.” Moreover, he is right to appeal to Ockham in support of the second part of his thesis (“Secunda Pars [i.e. the possibility of simplicity] patet per Vuilhelmum Ocham qui xv secundi habitatus enim potest unico actu concipere hoc totum, deus est: et tunc illa actus simplex erit propositio aequivalenter: imo quod plus est in q. 1 dis. 1 primi sentit intellectum maxime habitatum posse unico actu intelligere totum syllogismum et demonstrationem...”). Ockham’s position on this issue is by no means unambiguous. Thus, even if it is historically correct to say that “all the subsequent discussions stemmed from Gregory’s analysis” [Ashworth 1981: 74], it should be noted that already Ockham seems to have clearly seen the problems implied in transposing the syntactical structures of spoken language to the sphere of the mind. Thus, it was in fact Ockham who – as far as I know – was the first to formulate the arguments that later became prominent under the name of Gregory of Rimini. Cf. Ockham, *Quaest. in lib. physic. Arist.* q. 6, OP VI, 407sq.: “Si dicas quod actus sciendi propositionem non est aliquis unus actus simplex, sed actus compositus ex multis actibus, quia omnes actus faciunt unam propositionem; contra: tunc istae propositiones ‘omne animal est homo’ et ‘omnis homo est animal’ non distinguerentur in mente, quia non est aliquis actus particularis in una propositione [408] quin sit in alia, nec diversitas ordinis impedit sicut est in prolata et voce, igitur etc. ... dico primo quod propositio in mente est unum compositum ex multis actibus intelligendi ... *Aliter potest dici quod propositio in mente est unus actus aequivalens tribus talibus actibus simul existentibus in intellectu*, et secundum illum modum dicendi propositio non est aliquod compositum realiter sed tantum per aequivalentiam, quia aequivalet tali compositum. [409] Sed tunc est dubium: *quomodo istae propositiones distinguantur in mente ‘omne animal est album’, ‘omne album est animal’, quia in mente non distinguantur propter diversum ordinem sicut in voce*, quia coniunctio signi cum una voce prolata vel cum alia redit manifeste propositionem diversam? Sed hoc non potest poni in mente, quia tales actus in mente simul sunt in eodem subiecto indivisibili, ideo non possunt habere talem ordinem diversum, nec potest idem actus intelligendi plus componi cum uno quam cum alio.” (Italics mine.) Cf. Normore 1990: 62sq.

38 Domingo de Soto, *Summulae*, 1556: f. 26va.

39 Cf. *ibid.* f. 27rb: “Sit ergo problema hoc: licet ad usum summularum perspicatior sit prima opinio, et ita loquendum est illius. S. Tho. neutram opinionem expresse determinat: quicquid dicant Thomistae.”

40 cf. fol. 26vb. Already in the first edition of the *Summulae* (1529) he said: “Multi opinati sunt et satis probabiliter propositionem mentalem esse simplicem noticiam.” (f. 10va).

41 *Summulae*, 1556: f. 27ra.

42 Franciscus Toletus, *Comment. in ... de anima*, in *Op. omnia* 1615: t. 3, 161a: “An compositio Intellectus sit unicus ipsius actus?... Haec autem difficultas est eadem cum illa: an propositio mentalis apprehensiva sit una simplex qualitas, scilicet unicus Intellectus actus...? [161b] Sit igitur prima Conclusio probabilis. Propositio apprehensiva est unicus actus simplex Intellectus: id est, cum Intellectus hanc propositionem [sc. ‘homo est animal’] apprehendit, unico actu totam apprehendit. Adverte vero, quod non nego, prius singulos actus habuisse singulorum terminorum et rerum significatarum: prius enim Intellectus Hominem, et Animal, et Est singulis conceptibus percipit: tamen nullo illorum, nec omnibus simul, rem totam seu propositionem, ut propositionem apprehendit, nisi unico alio actu superveniente.”

43 Conimbricenses, *In lib. Arist. de int.*, in *Commentarii* 1607, t. 2: 143.

44 Joh. Caramuel de Lobkowitz, *Praec. log.*, 1654: 381; cf. Joh. Poncius, *Phil. ad mentem Scoti cursus integer*, 1659: 272a.

45 J. B. de Benedictis, *Philosophia peripatetica*, t. 1, 1688: 534.

46 Martin Smiglecius, *Logica ...*, 1634: 554.

47 Cf. Ockham, *Quodl.* V, q. 6, OT IX, 501sq. It must be noted, however, that, according to Ockham, this distinction seems to be restricted to the area of scientific discourse. Thus, in *Quodl.* III, q. 8 a. 1 he concedes that the “laicus sciens, quod lapis non est asinus... [assentit et scit], quod sic est in re ... mediante propositione formata in intellectu...”.

48 Gregorius Ariminensis, *Lectura super primum et secundum Sententiarum*, prolog., q. 1, art. 3 (1979-1984, I [1981], 27-30. Cf. Nuchelmans 1980: 93. Cf. Bartholomaeus Arnoldi of Usingen, *Parvulus philos. nat.*, 1499: 115rsqq: “Utrum noticia apprehensiva distinguatur realiter ab adhaesiva. De hoc dubio sunt due opiniones apud modernos. Opinio prima est Guilhelmi Ockam in quodlibeto: et communis vie moderne, quod noticia apprehensiva complexa propositionalis est realiter distincta ab adhaesiva. ... Opinio secunda est Grego[rii]. Ary[minensis]. ... quod assensus sit ipsamet propositio mentalis.”

49 Bartholomaeus Arnoldi of Usingen, *Parvulus philos. naturalis*, 1499: fol. 115v.

50 Cf. Conimbricenses, *In lib. Arist. de interpr.*, 138-143. Paulus Vallius, *Logica*, t.1, 657: “An enuntiatio mentalis sit una simplex qualitas, an vero aggregatum ex multis. Et quidem si enuntiatio haec sumatur pro illa apprehensione, vel iudicio intellectus, de illa non potest esse dubitatio; an sit una simplex qualitas; quia est unus simplex actus intellectus. ... aliqui quidem existimant non esse simplicem qualitatem ... Alij vero existimant enuntiationem mentalem esse simplicem qualitatem, quod habet Ariminensis... Durandus... Soncinus, Sotus, Toletus. [658a] ... videtur ... multo probabilior secunda sententia ... nulla est compositio conceptuum: quia quamvis apprehendamus simul praedicatum et subiectum, antequam iudicemus, illa tamen est unica apprehensio, et non multae ... [659b] ... apparet ... secundam operationem non solum ratione iudicij, sed etiam ratione apprehensionis non esse compositam ex pluribus conceptibus, sed esse quid simplex: ita ut unus sit conceptus, quo apprehendimus praedicatum et subiectum, cui accedat iudicium, quo iudicamus res compositas esse compositas...” – Richardus Lynceus, *Univ. philos. scholas.*, 1654: 335asq.: “An secunda operatio intellectus, sive iudicium sit simplex qualitas, vel potius ex pluribus apprehensionibus intrinsece componatur? ... [335b] ... existimo ..., iudicium nostri intellectus de facto semper esse simplicem, et indivisibilem qualitatem ... [336b] Fateor, propositionem externam esse speculum quoddam, et imaginem interioris, ut recte docet Plato in Theaeteto... Caeterum, cum non sit imago univoca illius, sed analogica; altera enim est spiritualis, altera materialis, una tonis, atque intervallis protracta, alia momento perfecta et successionis omnis expers; ideo non est quapropter altera simplex et indivisibilis esse nequeat, ut altera sit dividua et partibus cohaeret.” – Johannes Poncius, *Philos. ad mentem Scoti cursus integer*, 1659: 272a: “Utrum enuntiatio sit una simplex qualitas. ... Non est dubium quin prius apprehendamus extrema, quorum unum praedicamus de altero, quam feramus iudicium de unione ipsorum ... Sed controversia est, utrum quando dicimus in mente ‘homo est albus’, iudicative, praeter simplices apprehensiones hominis et albedinis unionisque ipsorum, sive plures sint, sive una, inveniantur plures alij actus, ex quibus ipsum iudicium formaliter componatur et integretur, an vero solum requiratur, et sufficiat unus alius actus, praeter istas apprehensiones; si enim requirantur plures actus, tum enuntiatio non erit una simplex qualitas, sed una qualitas composita, si autem sufficiat unus, enuntiatio erit qualitas simplex. - Conclusio: Enuntiatio est una simplex qualitas. Est communis. ... Probatur ... quia sine necessitate multiplicarentur actus, cum unus sufficeret; nec ullum est indicium sive rationis, sive experientiae, quo colligatur dari in iudicio plures actus: ergo frustra, et sine necessitate multiplicarentur.” – Claudius Frassen, *Philos. Acad.*, t. 1: 349b: “Enuntiatio formaliter est una et simplex qualitas, et unicus intellectus actus. ...necessum est, ut iudicium consistat in simplici assensu, vel dissensu mentis expresso per has particulas ‘est’, ‘non est’”. For this reason Arriaga even held that we can speak of „termini mentales“ only in an extended sense. Cf. Rodrigo de Arriaga, *Cursus philosophicus*, 1632: 4: “... adverte, si propositio mentalis non sit composita ex triplici actu, sed indivisibilis omnino, (ut ... nos .. in libris de Anima, Disp. VIa num. 83 ostendemus) in mente, seu in propositione mentali non esse proprie terminos: quia res omnino indivisibilis non potest esse extremum sui ipsius. Improperie tamen dicuntur termini mentales, quatenus per unicum actum concipimus, quae per plures terminos vocales exprimimus.”

51 Cf. Martin Smiglecius, who answers the question “in quo sit posita ratio formalis enunciationis?” by stating: “Prius apprehenditur praedicatum et subiectum, tum accedit iudicium illa componens, quod iudicium et compositio significatur per

verbum est: et in hac compositione consistit ratio formalis enunciationis. Dico ... [iudicium] non esse actum compositum, sed componentem praedicatum cum subiecto, ita ut compositio sit inter praedicatum et subiectum, seu inter conceptum praedicati et subiecti, actus autem ipse componens est in se simplex non compositus. Quare cum in iudicio enuntiativo concurrant tres actus, unus quo apprehenditur subiectum, alter quo apprehenditur praedicatum, tertius qui respondet copulae et est actus iudicii componentis praedicatum cum subiecto; ratio formalis secundae operationis non consistit in quacunq[ue] coniunctione primarum operationum, sed in ea coniunctione quae fit formaliter per iudicium compositivum....” (*Log.* 1634: 543)

According to Smiglecius, the *ratio formalis enuntiationis* is located in the non-composite but compositive mental act, vocally represented by the copula. – A more detailed account of that position is to be found in Francisco de Oviedo, who, later approved by Mastri and Bellutus (*Philos. ad mentem Scoti cursus integer*, 1708: 2), held the *propositio mentalis formalis* to consist in the “copula formalis intentionaliter annectens subiectum et praedicatum”. With regard to that formal proposition, Oviedo challenged, along the lines of Gregory’s argumentation, the adequacy of talking of ‘mental terms’. Cf. Francisco de Oviedo, *Integer cursus philos.*, 1640: 4a-b: “Extrema mentalis propositionis proprie terminos appellat communis sententia, quod apud me difficultate non vacat... Terminus propositionis est subiectum de quo aliquid dicitur, et praedicatum, quod dicitur de alio: sed in propositione mentali, quae proprie est formalis propositio, nihil est quod de alio dicitur, quia in conceptu interno respondente his vocibus ‘Petrus est animal’ non est una pars, quae de alia praedicetur, quia interna propositio partes non habet, sed est simplex qualitas ... Ergo propositio mentalis secundum se non includit intrinsece subiectum et praedicatum, sed ad haec terminatur: ergo secundum se et intrinsece non habet terminos. Duplex propositio distinguenda est: formalis, quae proprie et rigore propositio: et propositio obiectiva, quae non est proprie et rigore propositio, sed obiectum propositionis, et instituitur in esse propositionis obiectivae tanquam per formam extrinsecam. Ex his propositio obiectiva in se continet subiectum et praedicatum constituta in esse talium per propositionem formalem, et ob hanc rationem existimo in se includere extrema, quae proprie termini dicuntur, et terminos includere licet formaliter constitutos in rationes terminorum, sicuti in ratione subiecti et praedicati per formalem propositionem. Itaque cum ego dico ‘Petrus est albus’ interna et formalis propositio in se non continet subiectum et praedicatum, neque terminos; sed obiectiva, quae dicit intrinsece, et in se Petrum extrinsece constitutum in ratione subiecti, et in ratione termini per propositionem mentalem; et album seu eundem Petrum quatenus album eodem modo extrinsece constitutum per eandem formalem propositionem in ratione praedicati. ... Censeo ego propositionem ipsam formalem, non esse formam extrinsecam constituentem copulam se tenentem ex parte obiecti, sed esse ipsam formalem copulam annectentem intentionaliter et extrinsece in ordine ad nostrum intellectum subiectum et praedicatum, quem habent ratione enunciationis, cum physice sint eadem entitas, quae secum ipsa nullam unionem habet, sed est simplex entitas... Confirmatur eadem doctrina: Propositio formalis est forma constituens obiectum, quod respicit in ratione subiecti et praedicati: ergo est formalis copula illorum. Probo consequentiam: Subiectum formaliter constituitur in ratione subiecti, et praedicatum in ratione praedicati per illud, ex vi cuius annectuntur tanquam duo extrema; sed annectuntur per copulam: ergo constituuntur in ratione subiecti, et praedicati per copulam: Sed propositio mentalis est [4b] id, per quod annectuntur: Ergo propositio mentalis est illorum formalis copula.” – Whereas the copula, according to Walter Burley and Buridan, was the ‘forma’ or the ‘formale propositionis’, it has now become the ‘propositio formalis’. On Burley see Pinborg 1969 and Karger 1996.

52 Cf. Balthazar Tellez, *Summa univ. philos.*, 1642: 104sq: “Enuntiatio mentalis, seu iudicium est quaedam simplex qualitas, seu est unus actus, quo intellectus affirmat vel negat quae per simplices apprehensiones iam cognoverat. [105a] ...humanum iudicium, quamvis sit una simplex qualitas, praesupponit physice plures terminorum apprehensiones. ... Advertendum vero est, hanc simplicem qualitatem repraesentativam esse totius enuntiabilis, idest, praedicati, subiecti, et copulae, quia omnis terminus cognitionis, et omnis cognitio est imago repraesentativa sui obiecti...”

53 Domingo de Soto, *Summulae*, 1556, 27r.

54 Johannes a Sancto Thoma, *Cursus philos.*, 156b.

55 William Ockham, *Quodl.* IV, q. 35, OT IX, 474: “eo quod actus est similitudo obiecti, potest significare et supponere pro rebus extra, potest esse subiectum et praedicatum in propositione, potest esse genus, species etc.”

56 Johann Eck, *In Periherm.*, in *Aristot. ... Dial.* I, f. 71vb-72ra: “communis sententia est conceptum significare naturaliter ex naturali similitudine, ita quod conceptus est similis obiective secundum Scotus, vel subjective secundum Ockham, in

repraesentando, sicut res est in essendo, unde analogiam sumere potes in speculo, in quo relucent rerum imagines: ita in speculo intellectus similitudines ac notiones contineantur; hinc appellantur species, ideae, simulachra etc. Invenies plurima apud Cameracen. tractatu de conceptibus et in tractatu de anima: apud Ocham in multis locis sed notabiliter q. xix quodli. quarti. Sed contra hoc opposui in parvis: quia si sic [71vb] sequens esset nullum conceptum esse singularem: sequelam probo quia omnis similitudo non plus repraesentat unum simillimum quam aliud ut cuique obvium et Ocham sponte fatetur dist. iii q. ix primi. Et Cardinalis Cameracen. q. iiii primi. Ergo illi conceptus si sunt similitudines non plus repraesentabunt unum simillimum quam aliud: et ergo non singulariter significat. Nec obstant quae ex Ocham in medium aduci possent ex q. xv secundi et q. xiii quodl. i. Nam esto quod non sint plura individua simillima: adhuc tamen termino (quia similitudo) non repugnat ex parte sui significare plura, sive repugnat ex parte rei sive non: Nec valet dicere quod singulariter significet illam rem a qua partialiter causetur: Quia causalitas non tribuit termino communitatem vel singularitatem: sed bene tribuit esse: unde si ratio causalitatis est ei ratio repraesentandi, iam non significabunt ratione similitudinis: quod est propositum: Placet ergo mihi notiones animi et conceptus significare ex naturali habitudine, sed non ex naturali similitudine. [72ra] Difficile enim esset assignare quomodo res mere immaterialis sicut est cognitio esset similis rei materiali et extensae.”

57 Andreas de Novocastro, *I Sent.* d. 1 q. 1 (1514: fol. 17va), cited after W. Hübener 1968: 609: “... cum dicitur quod rerum summe dissimilium non potest esse eadem similitudo et imago naturalis, verum est de similitudine secundum configurationem et convenientiam seu propinquitatem qualitatum, non autem de similitudine et imagine quae est per obiectivam repraesentationem et exhibitionem”

58 William Manderston, *Comp. Dial. Epitome*, fol. B 7ra: “... potest uno modo dici quod totalis causa quare illa qualitas representat Sortem naturaliter proprie non est, quia est naturalis similitudo Sortis licet illa sit bene una partialis causa, sed causa precipua est, quia illa qualitas habet hoc ex sua propria natura ... Alio modo potest dici concedendo quod tota causa quare haec notitia est representativa Sortis naturaliter proprie est, quia est eius naturalis similitudo intentionalis, non autem linealis. Et quando infertur si a. est simile b. b. est simile a. distingo consequentiam, si loquaris de similitudine intentionalis nego, si vero loquaris de similitudine linealis seu protractativa concedo consequentiam, unde esse naturalis similitudo intentionalis alicuius rei nil aliud est quam representare illam rem naturaliter proprie.”

59 Cf. Domingo de Soto, *Summulae* 1554, fol. 5va: “... dicitur notitia similitudo obiecti, non quod habet similia lineamenta, sicut imago picta est simili regis: sed dicitur intentionaliter similis, propterea quod suapte natura repraesentat obiectum.”; Cf. F. Suárez, *De sanct. trin. myst.*, in *Opera* I, 744b: “Similitudo duplex intelligi potest. Una est per veram convenientiam, seu unitatem in forma, vel natura. Altera est similitudo tantum repraesentationis absque praedicta unitate. Prior reperitur in imagine naturali, ut est Filius respectu Patris, et aliquo modo in imagine artificiali, saltem quantum ad exteriorem formam, et figuram speciei maxime significativam ... Posterior similitudo attribui potest Verbo mentis nostrae, quod etiam solet imago obiecti appellari, cum quo tamen revera non habet formalem convenientiam in specifica forma, tamen quia repraesentat illud, dicitur imago illius, et idem potest considerari suo modo in phantasia, et visu, atque etiam in specie intelligibili, vel sensibili.”

60 Cf. Domingo de Soto, *Summulae* 1529: fol. 8rb: “Similitudo namque obiectiva nec consistit in aliqua essentiali proprietate nec in lineatione aut alio reali accidente nec in hoc solum quod ab obiecto fuerit producta, sed certe conceptus ex eo solet vocari naturalis similitudo obiectiva quia est naturalis forma per se repraesentativa obiecti: quod habet ex natura rei, quia videlicet ab intellectu speciebus eius informato producitur.”

61 Petrus Sanchez Ciruelo, *Paradoxae quaestiones* (1538: f. 3r); cited after Muñoz Delgado 1966: 35: “Dictum est enim quod voces et scripture non significant ex sua natura sed ex voluntaria impositione auctorum atque ex voluntaria subordinatione earum ad dictiones mentales, et denique mentales dictiones non ex voluntate humana, sed ex sua natura significant, quia sunt naturales similitudines rerum ab obiectis et a potentia causate. Et huius rei nulla est querenda ratio, sed in eis stat ultima resolutio et immediata ratio totius significationis totiusque veritatis aut falsitatis...”

62 Ashworth 1981: 95.

63 Pierre d’Ailly, *I Sent.*, q. 3, a. 1; cf. L. Kaczmarek 1988: 403sq.

64 Ps.-Robert Kilwardby, *Comment. sup. Prisc. ma.*, 1975: 59sq: “... patet quod apud animam est sermo intranee dispositus, quo quidem et ad cuius similitudinem fit prolatus. Apud animam igitur statim cum haec intentionem significabilem fit praexcoGITatio vocis, qua talem intentionem sive intelligentiam deceat vel oporteat significari, et illi intentioni vocis

applicatur intentio significabilis sicut finis ei quod est ad finem. Consequenter quia ad hoc quod huiusmodi intellectus alii manifestetur exigitur aliquod signum sensibile, quia nihil est in intellectu quod prius non fuerit in sensu, movet anima rationalis per appetitum et imaginationem membra deputata ad formationem vocis... et formatur vox sensibilis iuxta intentionem vocis praecogitatae et praeconceptae apud animam proferentis eam, et fit sermo exterior idem continens et repraesentans quod per sermonem interiorem continebatur et repraesentatur. ... Et igitur vox exterior sensibilis habet quadruplicem comparisonem: unam ad intentionem vocis interioris ad cuius similitudinem figuratur, aliam ad intellectum seu similitudinem rei, tertiam ad ipsum *sermonem interiorem complementem [complectentem?] tam speciem significabilem quam vocis intentionem*, quartam ad rem extra quae per vocem significatur intellectu movente. Respectu primi est signum naturale, quia omnis effectus naturaliter repraesentat illud cuius est effectus; sed respectu secundi, tertii et quarti est significativum ex institutione; sicut enim in voce interiori fit praecognitio vocis antequam fiat verbum mentale et deliberatur apud eam qua voce oporteat talem intellectum significari, ita vox exterior [60] sensibilis significabit illam speciem ex institutione facta apud animam deliberatione praecedente.” [italics mine] Cf. Meier-Oeser 1997: 71sq.; Panaccio 1999a, 170-76; Panaccio 1999b.

65 Johannes Baptista Giattini, *Logica*. 1651: 431: “advertendus est modus, quo pueri addiscunt primo voces tales cum existentiam talium obiectorum, v.g. audiunt pueri primo vocem ‘mamma’ saepius cum ostensione Matris, et vocem ‘Tata’ cum ostensione Patris. Sic vocem pappae cum existentia talis cibi; hinc generantur in ipsi species complexae talium vocum simul et talium obiectorum ex ipsa consuetudine; unde existentibus talibus obiectis, ipsi etiam pueri incidunt movere labia, et instrumenta loquutionis, ad quam naturaliter inclinantur, et paulatim proferunt eas voces. Deinde ijdem pueri saepius experti sunt, ut cum audierint aliquam affirmationem, reperrint rem ita esse sicuti affirmabatur, v.g. matres dicentes ‘hoc est dulce’ et vere experti sunt dulcedinem, et sic de caeteris. Quare, paulatim ipsi assueverunt etiam affirmare quam cognoscebant, et iudicabant, hoc ita esse, et negare quam iudicabant non esse; et sic ex assidua consuetudine linguam discunt. Quare in pueris voces potius se habent, ut signa ex consuetudine, quam ut signa ad placitum; quia videlicet consuetudine experti sunt cum talibus vocibus stare tales conceptus.”

66 Cf. Dominicus Bañez, *Inst. min. dial.*, 1631: 25sq.: “... est observandum, easdem quidem res esse apud omnes, eosdemque rerum simplices conceptus, verumtamen non apud omnes nationes exercentur eodem modo compositiones mentales illorum conceptuum, sed sicut in vocibus differentia impositionis invenitur, sic etiam mentalium orationum compositio varia in diversis nationibus et linguis correspondet. Sunt enim propriae mentales phrases singulis nationibus et linguis, et differentes modi dicendi, et concipiendi easdem veritates. Haec doctrina hominibus in varijs linguis peritis facile persuadet. Imo et experientia constat ei qui in Vasconia lingua nutritus est in qua nullum verbum praeter sum, es, fui, et facio, facis invenitur declinabile: sed omnia alia verba sunt infinitivi modi. Unde quod nos latina phrasi dicimus ‘Petrus bene dormuit’, dicunt Vasconici in sua phrasi ‘Dormire bene fecit Petrus’. Hinc est ut difficillime aliarum linguarum phrases addiscant. Propter phrasim mentalium compositionum, quibus assueti sunt.”

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