

# Mental Language and Italian Scholasticism in the Fourteenth and Fifteenth Centuries

ALFONSO MAIERÙ\*

*Summary:* Italian universities of the fourteenth and fifteenth centuries took part in the scholastic debate concerning mental language, which first arose at the universities in Oxford and Paris in the early fourteenth century. Peter of Mantua (d. 1400) and Paul of Venice (d. 1429) were the prominent Italian masters in this respect; their opinions continued to be cited at the European universities of the early modern period. Two main conclusions are reached here: that there is an obvious continuity between medieval and modern ideas concerning mental language; and that further research is needed in order to establish the respective roles of Paris and Oxford in the development of the debate at the beginning of the fourteenth century.

In a recent book on the genesis and development of Benedetto Croce's linguistic theory, Luciano Dondoli<sup>1</sup> has drawn attention to a passage from the *Principi di scienza nuova* (1744 edition) by Giambattista Vico (1668-1744), in which the Neapolitan philosopher affirmed that "[t]here must in the nature of human institutions be a mental language common to all nations, which uniformly grasps the substance of things feasible in human social life." In Vico's opinion, this common mental language was the language of his new science itself, "by whose light linguistic scholars will be enabled to construct a mental vocabulary common to all various articulate languages living and dead."<sup>2</sup> It is not necessary here to focus on the project for which Vico used the notion of mental language,<sup>3</sup> but I wanted to mention his views in order to underline the continuity of an idea that he had taken from a late medieval author, as can be proved by a remark made by Vico himself. In his autobiography, Vico described in detail the studies he had been engaged in during his youth. After reading *De institutione grammatica* by Manuel

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1. Cf. Dondoli 2000: 249-50.

2. Giambattista Vico, *Principi di scienza nuova*, I, sez. II, XXII (ed. Nicolini: 80, English transl.: 25).

3. Cf. Apel 1963: 374-80 (Italian transl.: 472-78), and Dondoli 2000: 249-51 and 266-70.

Alvares (the first edition of which is dated Lisbon 1572), Vico went on to the study of logic and committed himself to reading the *Summulae* of Peter of Spain. When his master, the Jesuit Antonio del Balzo, told him that “Paul of Venice was the most subtle of all writers of summas”, Vico began to study Paul’s *Summulae* (the *Logica parva*), but soon had to give it up because his skill was still too weak and he became confused (the result was that he abandoned his studies for a year and a half).<sup>4</sup> Now, at the beginning of the *Logica parva* by Paul of Venice, several distinctions between types of terms are presented; the second of these distinctions is between terms that signify naturally and terms that signify by convention. The first type, Paul tells us, is the mental term, “which is representative of the same for everyone”; a term of the second type, on the other hand, “is not representative of the same for everyone, e.g. the term ‘man’ in speech or in script which among us signifies men and among certain other nations signifies nothing, for example among those who are Greeks or Hebrews.”<sup>5</sup>

Again, I intend neither to reconstruct Vico’s views on logic, nor to speak about the logical texts circulating in Italy in his day. I wish, rather, to focus on the debates about mental language that took place in Italian universities during the fourteenth and the fifteenth centuries. I have examined the works of two authors above all others, Peter of Mantua (d. 1400)<sup>6</sup> and Paul of Venice (d. 1429)<sup>7</sup>, as well as some commentaries on some works of the latter by Mengo (Domenico) Bianchelli from Faenza (d. after 1520),<sup>8</sup> Giacomo Ricci from Arezzo (*fl.* in the second half of the fifteenth century),<sup>9</sup> and Manfredo Medici, professor at Pavia University (d. ca. 1493).<sup>10</sup> Views of Peter of Mantua and Paul of Venice were quoted and discussed by sixteenth-century authors, as E.J. Ashworth has shown in her studies on mental language in the works of

4. Giambattista Vico, *Autobiografia* (ed. Nicolini: 5).

5. Paulus Venetus, *Logica parva*, I, cap. 1 (ed. Venetiis 1542: f. 4ra): “Secunda diuisio est ista. Terminorum quidam significant naturaliter et quidam ad placitum. Terminus naturaliter significans est ille qui apud omnes eiusdem est representatiuus, sicut ly ‘homo’, ly ‘animal’ in mente. Terminus vero ad placitum significans est ille qui non apud omnes eiusdem est representatiuus, sicut ille terminus ‘homo’ in voce vel in scripto, qui apud nos significat hominem, sed apud aliquas certas nationes nihil significat, vt sunt Greci et Hebrei” (English transl.: 121-22).

6. Cf. Maierù 1974: 136.

7. Cf. Conti 1996: 9-20.

8. Cf. Vasoli 1968.

9. Cf. Chevalier 1905-1907, II: col. 3945; Cosenza 1962, IV: 3044.

10. Cf. Chevalier 1905-1907, II: col. 3178; Cosenza 1962, III: 2280.



logicians from the beginning of that century.<sup>11</sup> In turn, the texts by Peter of Mantua and Paul of Venice clearly have a frame of reference in common with the ideas of William Heytesbury, who in his first sophism put forward a precise conception of the structure of mental propositions. It will be seen that many of the arguments developed by later authors had already been used by these writers.

## 1. William Heytesbury (Gregory of Rimini and John Buridan)

At Oxford in the 1330s, Heytesbury took up the discussion of the structure of the proposition by comparing the two propositions ‘homo est omnis homo’ and ‘omnis homo est homo’. It seems likely that the maxim affirming the equivalence between the indefinite and the universal propositions (“indefinita aequipollet universalis”) provided the occasion for the development of the third part of his first sophism.<sup>12</sup> Heytesbury’s argument is this: both propositions are made up of the same four terms and all that is in the one is also in the other; nevertheless, the first is particular and the second is universal, and the particular proposition is not identical to the universal one.<sup>13</sup>

What distinguishes the two propositions is the order of the words that

11. Cf. Ashworth 1978, 1981, 1982.

12. Cf. Colli 1990: 242, where the canonist Richardus Anglicus is quoted claiming that this *brocardum* “regulare est in iure, quamvis distinguatur in artibus”; warm thanks to Vincenzo Colli for advising me of the origin and the use of that *brocardum* for explaining some passages of the *Digestum*; the *brocardum* was included in the Accursian *Glossa ordinaria*. Cf. also John Gerson: “ponetur una *indefinita quae apud morales aequivalet universalis*”, and Pierre d’Ailly: “*secundum philosophos morales et iuristas, in materia morali indefinita aequipollet universalis*”, both quoted in Kaluza 1994: 231 and note.

13. Gulielmi Hentisberi *Sophismata*, I (‘Omnis homo est omnis homo’), third part (ed. Joannes M. Mapellus: f. 78rb): “Preterea homo est omnis homo, ergo etc. Assumptum arguitur, quia hec est necessaria sic significando ‘omnis homo est homo’; sed eadem est ista ‘homo est omnis homo’; igitur hec est necessaria ‘homo est omnis homo’. Antecedens arguitur pro secunda parte, quia illa propositio ‘omnis homo est homo’ est isti quatuor termini ‘omnis’ ‘homo’ ‘est’ ‘homo’; sed isti quatuor termini sunt illa propositio ‘homo est omnis homo’; igitur etc. Si negatur ista consequentia sicut communiter negatur a minus bene intelligentibus, contra tunc arguitur: isti termini sunt illa vniuersalis propositio ‘omnis homo est homo’, et etiam isti termini sunt hec particularis propositio ‘homo est omnis homo’; et tamen hec particularis non est ista vniuersalis.”

constitute them; to obtain two different propositions using the same words, they must have different word orders. Propositions can be differentiated according to word order whether they are spoken (in which case the order is determined by succession in time) or written (so that the various parts are arranged on the page or on the wall according to the place or relation between the parts).<sup>14</sup> This, however, does not apply to mental propositions (*in conceptu*), whose parts have order neither with respect to each other nor with respect to place. To overcome this difficulty, Heytesbury suggests that we think of a categorical mental proposition as the result of at least two intentions or concepts of things in addition to an act by which the thinker composes (for instance, ‘homo est animal’) or divides these concepts (for instance, ‘homo non est asinus’).<sup>15</sup> According to the author, copula plus negation in spoken

14. Gulielmi Hentisberi *Sophismata*, I, iii (ed. Joannes M. Mapellus: f. 78va): “Ideo ad hoc sic respondetur, quando arguitur primo quod hec sit necessaria ‘homo est omnis homo’ sic significando, dicitur negando consequentiam. Et ad argumentum quando arguitur quod hec propositio particularis ‘homo est omnis homo’ est illa vniuersalis ‘omnis homo est homo’, negatur antecedens, quia dico quod quodcumque isti termini ‘omnis’ ‘homo’ ‘est’ ‘homo’ sunt ista propositio vniuersalis ‘omnis homo est homo’, tunc non sunt hec particularis ‘homo est omnis homo’. Et vniuersaliter hoc est verum tam in voce quam in scripto, quia nunquam sunt idem termini simul due tales propositiones, et causa est ista, quia ad hoc quod isti termini ‘omnis’ ‘homo’ ‘est’ ‘homo’ sint hec vniuersalis ‘omnis homo est homo’ requiritur quod habeant ordinem talem ad inuicem iuxta communem modum proferendi vel scribendi talem propositionem; et ad hoc quod ipsi sint hec propositio ‘homo est omnis homo’ requiritur quod habeant ordinem retrogradum. Unde qualitercumque concipiuntur diuersimode simul illi termini, adhuc non habent nisi vnum ordinem; ideo qualitercumque legantur vel concipiuntur, semper simpliciter sunt vna propositio et non simul due tales. Conceditur tamen quod hec vniuersalis in scripto poterit esse illa particularis, et e contra, sed semper negatur quod illa particularis est illa vniuersalis. Conceditur etiam quod in casu est possibile quod illa particularis fuit vel erit illa vniuersalis, et e contra, nunquam tamen est concedendum quod illa est ipsa vniuersalis” (can the two *Conceditur* have to do with juridical discussions?).

15. Gulielmi Hentisberi *Sophismata*, I, iii (ed. Joannes M. Mapellus: f. 78va): “De propositionibus tamen in conceptu aliud apparet dicendum, quod iste nec habent ordinem ad inuicem nec situm sicut propositiones in scripto. Ideo ibi videtur argumentum difficilium. Consimiliter tamen respondetur ibi sicut hic, dicendo quod propositiones in conceptu sunt intentiones rerum extra conceptum vna cum actu concipientis, quo actu concipiens componit vel diuidit ad inuicem vnam intentionem ab alia. Vnde illa propositio ‘homo est animal’ est iste due intentiones ‘homo’ ‘animal’ et ille actus quo concipiens hanc propositionem componit hanc intentionem ‘animal’ cum hac intentione ‘homo’. Et hec propositio ‘homo non est asinus’ est iste due intentiones ‘homo’ ‘asinus’ et actus ille quo diuidens negat[ur] vel remouet hanc intentionem ‘asinus’ ab hac intentione ‘homo’.”



or written language correspond to a single negative or dividing act.<sup>16</sup> Still speaking of categorical propositions – the only type he examines – Heytesbury shows that more complex propositions require several acts: one act that composes or divides, one or more others by which, e.g., the meaning of the privative terms are conceived, the marks of distribution are conceived, and so on.<sup>17</sup> Gaetano of Thiene (professor in Padua between 1422 and 1465) and Paul of Pergula (teacher at the School of Rialto in Venice, 1421-54, d. 1455),<sup>18</sup> commenting on this sophism, both say that Heytesbury

calls verbs, quantifiers, and other syncategoremata, acts, although they have different functions (*diuersa officia*). The copula, in fact, is an act that links intentions to one another; adverbs determine the copula; universal and particular quantifiers determine the intentions, inasmuch as they are conceived in a universal or particular way; conjunctions connect; and so on.<sup>19</sup>

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16. Gulielmi Hentisberi *Sophismata*, I, iii (ed. Joannes M. Mapellus: f. 78va): “Unde sicut est vnus actus quo componit componens, ita est vnus actus quo diuidit diuidens. Et non est ponendum quod hec propositio ‘homo non est asinus’ sit quatuor intentiones rerum, quarum due sunt illa copula ‘est’ et illa nota negans, scilicet ‘non’, sed pro istis duabus est ponendus vnus actus istius diuidentis quo remouet predicatum a subiecto.”
17. Gulielmi Hentisberi *Sophismata*, I, iii (ed. Joannes M. Mapellus: f. 78va-b): “Verumtamen aliquando ad vnam propositionem habendam requiruntur plures actus, quando scilicet propositio illa componitur ex pluribus intentionibus priuatiuis vel distributiuis, vt ‘primus motor est prima substantia abstracta ab omni materia, indiuisibilis, impartibilis, nullam habens magnitudinem’, ‘punctus est indiuisibilis situ-/78vb/-atus’; similiter ‘omnis homo est omnis homo’, et sic de talibus propositionibus vniuersaliter. Et in omni tali propositione sunt plures actus: vnde vnus est actus quo componit vel diuidit intus intentiones, et aliquis est alius quo concipit significatum termini priuatiui vel signi distributiui et sic de aliis.”
18. Cf. Silvestro da Valsanzibio 1949 for Gaetano, and Nardi 1957 for Paul of Pergula.
19. Gaetani de Thienis *Super primum sophisma* (ed. Joannes M. Mapellus: f. 81vb): “Aduertendum quod Hentisber ponit propositionem mentalem componi ex intentionibus et ex actu vel actibus, vnde conceptus representatiuus rerum vocat intentiones, sed verba ac signa et cetera sincategoremata vocat actus. Habent tamen diuersa officia. Nam actus qui est copula intentiones (intentionis *ed.*) inuicem copulat, aduerbia determinant copulam, et signa vniuersalia vel particularia determinant intentiones prout vniuersaliter vel particulariter concipiuntur, et coniunctiones habent coniungere, et sic de ceteris. Dicit tamen quod aggregatum ex aduverbio et verbo in voce vt ly ‘non est’ subordinatur vni simplici actui diuisiuo existenti in mentali propositione correspondenti huic vocali in qua ponitur ly ‘non est’, vt esset illa ‘homo non est asinus’”; Paulus Pergulensis, *Super sophismata*, I, iii, Venice, B.N. Marciana, ms. lat.

Heytesbury refers to the authority of Aristotle in *De interpretatione* 3, 16b24: the propositional copula, e.g. the verb 'est', "signifies some combination, which cannot be thought of without the components."<sup>20</sup> Heytesbury adds that every different composition requires a different act of the intellect. Finally, the element that distinguishes spoken or written propositions is the order or the place (i.e. the position) of the terms that compose them, while to distinguish mental propositions from one another it is necessary to consider the act of the thinker's intellect, in addition to the mental terms or concepts.<sup>21</sup> This is the fundamental position of the English author. Heytesbury then discusses an objection to the effect that it is impossible for someone to conceive two propositions at the same time (*simul*) or to conceive a single proposition for a certain amount of time (*per tempus*); given that the mental act of composing or dividing is instantaneous, it is possible only to conceive a single proposition for an instant (*per instans*). For the same reason, nobody can have two acts of composing or dividing nor know two propositions at the same time. Heytesbury rejects this view, insisting that someone can have different compositions at the same instant and can also produce different compositions simultaneously for a certain

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Cl. VI, 160 (2816), f. 182rb: "Aduertendum quod ponit Hentisber propositionem mentalem componi ex intentionibus et ex actu vel actibus, vnde tam aduerbia quam verba ac signa et omnia sincategoremata vocat actus, sed diuersa habent officia. Actus enim qui est copula copulat intentiones vnam cum alia (vnde tam aduerbia quam verba *add. et exp. ms.*), sed aduerbia habent determinare copulam; signa, intentiones prout vniuersaliter vel particulariter. Debent enim omnia sincategoremata preter copulam subordinari <\*\*\*> ita omnis concipitur." For Heytesbury's *Sophismata* and commentaries upon them cf. Wilson 1960: 153-63, and see Braakhuis 1982: 345 and 355.

20. Aristotle's *De interpretatione*, 3, 16b24 (English transl.: 45).

21. Gulielmi Hentisberi *Sophismata*, I, iii (ed. Joannes M. Mapellus: f. 78vb): "Vnde non est possibile quod alique intentiones sint vna propositio in conceptu. Semper enim requiritur actus aliquis componendi vel diuidendi qui non est intentio alicuius, et illud satis apparet per Philosophum primo Perhiermenias, vbi dicit quod copula propositionis, puta hoc verbum 'est', significat quandam compositionem quam sine extremis non est intelligere. Et semper ad diuersam compositionem intellectus requiritur diuersus actus. Ideo non conceditur quod propositio necessaria in conceptu erit propositio impossibilis, nec e contra, sicut conceditur de propositione necessaria in voce vel in scripto quod erit impossibilis, quia illi termini possunt habere alium ordinem, et nihil aliud requiritur ad hoc quod illi termini sint alia propositio nisi quod ipsi habeant alium ordinem iuxta quem aliter significant quam prius. Sed sic de propositionibus in conceptu non est, quoniam preter illas intentiones requiritur aliquid aliud."



amount of time.<sup>22</sup> As a corollary of his position, it follows that for Heytesbury every spoken or written proposition *de secundo adiacente* ('homo est') corresponds to a mental proposition *de tertio adiacente* ('homo est ens'), since both intentions must be presupposed in order for them to be composed.<sup>23</sup>

Heytesbury's text must have been known in Parisian circles at least before 1343, when the theologian Gregory of Rimini, in his commentary on the *Sentences*, took a stand against the theory of the composition of mental propositions, probably with Heytesbury in mind. A marginal note, which the editors of the recent critical edition attribute to Gregory

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22. Gulielmi Hentisberi *Sophismata*, I, iii (ed. Joannes M. Mapellus: f. 78va): "Sed si arguitur ex illo quod nullus homo potest habere duas propositiones simul in conceptu, nec aliquam propositionem per tempus, sed solum per instans, quia actus ille non manet nisi quando componit vel diuidit, sed solum componit vel diuidit subito seu in instanti; igitur etc.: similiter, <quod> nunquam aliquis habet duos actus tales simul, quia non simul componit diuersas compositiones, igitur nunquam scit aliquis duas propositiones, quod est inconueniens. Ad hoc respondetur coniunctim sic dicendo, quod simul habet aliquis diuersas compositiones et simul componit diuersas compositiones per tempus. Per tempus enim componere non est aliud quam affirmare vnam intentionem de alia; diuidere, negare vnam ab alia. Et ideo, quia aliquis sciens per tempus affirmat diuersas intentiones de diuersis, ideo per tempus simul componit diuersas compositiones."
23. Gulielmi Hentisberi *Sophismata*, I, iii (ed. Joannes M. Mapellus: ff. 78vb-79ra): "Sed adhuc arguitur contra hoc: videtur enim quod aliqua sit propositio in conceptu que non sint multe intentiones et actus anime componendi vel diuidendi, quia capiantur he propositiones in conceptu 'aliquid est', 'ens est' et sic de talibus: nulla illarum habet plures intentiones, sed solum vnam et vnum actum. Igitur ibi breuiter non aliter affirmatur aliquid de aliquo, quia ibi non <est> actus nec intentio alia, [quia ibi non est intentio alia] nec eadem de se ipsa affirmatur, quia tunc sequitur quod ille propositiones essent omnino eedem in conceptu 'homo est' et 'homo est homo', et eadem ratione iste 'quodlibet est' et 'quodlibet est quodlibet', quod non est verum. Ideo ad hoc respondetur consimiliter sicut ponitur de terminis priuatiuis, quod ipsi simul consignant actum et intentionem rei vel conceptum, sic[ut] etiam dicitur quod tales propositiones in conceptu 'aliquid est' et 'homo est' et sic de aliis sunt multe intentiones et iste actus componendi. Et ad argumentum quando arguitur: ibi non est alia intentio quam illa intentio 'homo', dicitur quod sic: est enim vna intentio generalis quam dat intelligere hec nota compositionis 'est', et est illa intentio generalis 'ens'; et ibi componitur et affirmatur illa vniuersalis intentio 'ens' de hac intentione 'homo' vel 'aliquid', et sic de aliis. Vnde sicut terminus priuatiuis, vt prius dicebatur, simul dat intelligere actum et intentionem habitus, ita hoc verbum 'est' cum predicet secundum adiacens dat intelligere actum componendi et hanc intentionem vniuersalem 'ens'."

himself, refers to the first sophism “in tertio principali”,<sup>24</sup> and the name of Heytesbury is included in the analytical index among the “Auctoritates a Gregorio allegatae”. The four occurrences mentioned are all in the first book and all refer to Heytesbury’s first sophism.<sup>25</sup>

Gregory affirms the unity of the mental proposition, in the sense that, in his opinion, it is an act not composed of parts but produced *simul* by the intellect. In his argumentation aimed at refuting the theory of the composition of the mental proposition, Gregory refers to the fact that, of the two mental propositions ‘omnis albedo est entitas’ and ‘omnis entitas est albedo’, one is possible and the other is impossible; and yet they are composed out of the very same terms.<sup>26</sup> Moreover, since both propositions are found in the same indivisible subject, i.e. the soul, there can be no situational relations internal to them that might be capable of introducing factors of differentiation between them.<sup>27</sup> In Gregory’s view, the composition of a proposition cannot be explained by simple *notitiae* supplemented by some new concept, whether it be categorematic or syncategorematic.<sup>28</sup> Nor is it possible to explain why one part of a proposition is the subject and another the predicate, since both parts inhere in the same indivisible subject and can both naturally act as either subject or predicate. In the indivisible soul, either both parts can equally well be the subject or the predicate, or neither can.<sup>29</sup> Gregory proposes a possible answer to this difficulty: that the function of the parts, and consequently the difference between propositions, depends on the different order in which the parts are produced (*propter ordinem diversum productionis*). Nevertheless he considers this answer irrational, because in his opinion the intellect can produce simultaneously several different acts, and therefore it can produce simultaneously (*simul*) a whole proposition;<sup>30</sup> moreover, God can produce in the mind

24. Cf. Gregorii Ariminensis OESA *Lectura super primum et secundum Sententiarum* (ed. Trapp-Marcolino: vol. I, XII for the lecture on the *Sentences*, 33 n. 4 for the marginal note). See also Meier-Oeser’s contribution to this volume, esp. §§ 5-6.

25. Gregorii Ariminensis *Lectura* (ed. Trapp-Marcolino: vol. VII, 348).

26. Gregorii Ariminensis *Lectura*, pro., q. 1, art. 3 (ed. Trapp-Marcolino: vol. I, 33, 9-20).

27. Gregorii Ariminensis *Lectura*, pro., q. 1, art. 3 (ed. Trapp-Marcolino: vol. I, 33, 20-27).

28. Gregorii Ariminensis *Lectura*, pro., q. 1, art. 3 (ed. Trapp-Marcolino: vol. I, 33, 28-34,4).

29. Gregorii Ariminensis *Lectura*, pro., q. 1, art. 3 (ed. Trapp-Marcolino: vol. I, 34, 5-13).

30. Gregorii Ariminensis *Lectura*, pro., q. 1, art. 3 (ed. Trapp-Marcolino: vol. I, 34, 14-23).



the parts of a proposition simultaneously, and the same difficulty arises.<sup>31</sup> Finally, Gregory denies that affirmation and negation can be called “actus compositi vel complexi in vero sensu” since they are composed of distinct partial notions; he instead maintains that they are composite or complex acts only in the sense that they are equivalent *in significando* to a plurality of words composing a spoken or written proposition.<sup>32</sup> (The phrase “actus complexus”<sup>33</sup> and the idea that, in this case, one act of understanding is equivalent to the whole proposition made up of distinct elements ordered as they are in the corresponding spoken proposition, could already be found in Ockham).<sup>34</sup>

In the same Parisian milieu in which Gregory worked, John Buridan was teaching in the Arts Faculty. One of the texts in the first treatise of his *Summulae* suggests an interpretation of the mental proposition very similar to that of Heytesbury. Buridan maintains that the mental proposition is the result of simple concepts with the addition of a “complexive” concept (*conceptus complexivus*) by which the intellect asserts or denies the predicate of the subject. The simple concepts constitute the “matter of the proposition”, while the copula constitutes the form: the word *est* is an affirmative complexive concept, while *non est* is a negative one. Ultimately, the intellect cannot form a complexive concept without a subject and predicate being at its disposal: according to Aristotle’s teachings, the copula is part of a composition that cannot be understood without the other elements.<sup>35</sup> In Buridan’s view, categor-

31. Gregorii Ariminensis *Lectura*, proL., q. 1, art. 3 (ed. Trapp-Marcolino: vol. I, 35, 1-5).

32. Gregorii Ariminensis *Lectura*, proL., q. 1, art. 3 (ed. Trapp-Marcolino: vol. I, 35, 12-20).

33. Guillelmi de Ockham *Quaestiones in librum secundum Sententiarum (Reportatio)*, qq. XII-XIII: “Sed actus terminatus ad copulam est complexus quatenus terminatur immediate ad totum complexum. Et iste dicitur compositio et divisio” (ed. Gál-Wood: 280, 9-11).

34. Guillelmi de Ockham *Expositio in Librum Perihermenias Aristotelis*, I, prooemium (ed. Gambatese-Brown: 356, 129-133): “Ad istud potest dici quod propositio potest esse actus intelligendi aequivalens toti uni propositioni compositae ex realiter distinctis, si talem ordinem haberent qualem habent in voce. Et tunc erunt propositiones distinctae secundum quod distinguerentur propositiones correspondentes si termini earum seu partes aliter et aliter ordinarentur.” Cf. Normore 1990: 63-64, and Maierù 2002: 7-9.

35. Johannes Buridanus, *Summulae*, I.3 (Vatican City, Biblioteca Apostolica Vaticana, ms. Palat. lat. 994, f. 4rb-va): “Sed tunc occurrunt dubitationes. Prima est quid significat talis copula. Secunda, utrum sit pars principalis propositionis categorice. [...] Ad primam dubitationem dicendum est quod propositio vocalis debet significare mentalem propositionem, sicut ante dictum est, propositio autem mentalis consistit

matic terms signify concepts of things and, by means of these, the things themselves; syncategorematic terms are complexive concepts (also called *modi complectendi*) that relate to the second act of the intellect, and they signify nothing outside the mind.<sup>36</sup> Unlike Peter of Spain,<sup>37</sup> Buridan maintains that a proposition is made up not of two principal parts, but of three, i.e. subject, predicate, and copula.<sup>38</sup>

This theory had already been formulated at the beginning of the thirteenth century, when it was stated in the *Summe Metenses* that “tria sunt in propositione, scilicet subiectum et predicatum et compositio”.<sup>39</sup> It seems, however, that Buridan’s position on mental language emerged in his various works through a confrontation with specific problems. In

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in complexione conceptuum; ideo presupponit (pre- *s.l.*) conceptus simplices in mente et super hos addit conceptum complexivum, quo intellectus affirmat uel negat unum istorum conceptuum de reliquo. Illi ergo conceptus presuppositi sunt subiectum et predicatum in propositione (mentali *add. in intercol.*), et vocantur materia propositionis mentalis, quia presupponuntur formationi propositionis, sicut materia in generatione substantiali (?) presupponitur formae; ille autem conceptus complexivus dicitur copula et tanquam formale in propositione mentali. Et tunc apparet quod subiectum et predicatum propositionis vocalis significant in mente predicatum et subiectum mentalis; hec autem copula ‘est’ significat conceptum complexivum affirmativum, et hec copula ‘non est’ significat conceptum complexivum negativum. Et intellectus non potest formare illum conceptum complexivum nisi formatis illis que sunt subiectum et predicatum, quia non est possibilis complexio predicati ad subiectum sine predicato et subiecto. Et hoc signabat Aristoteles dicens quod ‘est’ significat quamdam compositionem, quam sine compositis non est intelligere.”

36. Johannes Buridanus, *Summulae. De suppositionibus*, 4.2.3 (ed. van der Lecq; 20, 4-10): “Et etiam illae copulae ‘est’ et ‘non est’ significant diversos modos complectendi terminos mentales in formando propositiones mentales, et illi modi complectendi sunt conceptus complexivi pertinentes ad secundam operationem intellectus, prout ipsa addit supra primam operationem. Et ita etiam istae dictiones ‘et’, ‘vel’, ‘si’, ‘ergo’ et huiusmodi designant conceptus complexivos plurium propositionum simul vel terminorum in mente et nihil ulterius ad extra.” Cf. Roncaglia 2000: 238.
37. Peter of Spain, *Tractatus*, I, 7 (ed. De Rijk; 3, 25-26): “Categorica est illa que habet subiectum et predicatum principales partes sui, ut *homo currit*.” Cf. Pérez-Illarbe’s contribution to this volume, at and around nn. 8-13.
38. Johannes Buridanus, *Summulae*, I.3 (Vatican City, Biblioteca Apostolica Vaticana, ms. Palat. lat. 994, f. 4va): “Ad secundam dubitationem [*sc. utrum copula sit pars principalis propositionis categorice*] dicendum est quod illa (copula vere *add. in mg.*) est pars principalis categorice, quia sine illa non potest esse categorica propositio, et habet se per modum forme ad subiectum et predicatum, et forma est principalis pars compositi. Ideo bene suppleunt secundam clausulam uel tertiam dicentes quod propositio categorica est illa que habet subiectum et predicatum et copulam principales partes sui.”
39. Quoted in Roncaglia 1996: 111.



what is described in the manuscripts as his “last lecture” on Aristotle’s *Physics* (from the late 1350s), for instance, Buridan confronts a view according to which the four terms of the mental proposition ‘*omnis homo est animal*’ do not have a spatial order because they are in the intellect which is indivisible, and that therefore they can just as well constitute a proposition that is (universal and) true as a proposition that is (indefinite, in the form: ‘*animal est omnis homo*’, and) false.<sup>40</sup> In his reply, Buridan does not appeal to complexive concepts in order to distinguish mental propositions from each other, but to a plurality of acts that are modes of understanding (*modi intelligendi*). As a matter of fact he maintains that the term *animal* has a different kind of supposition in the first proposition, where it constitutes the predicate, than it does in the second one, where it constitutes the subject, and he explains that different modes of understanding added to the mental term (*animal*) cause it to have the different kinds of supposition that its corresponding term has in the two spoken propositions. These *modi intelligendi* are integral parts of propositions according to Buridan, and make them different.<sup>41</sup>

40. Johannes Buridanus, *Subtilissime questiones super octo Physicorum libros*, I, q. 9 (ed. Johannes Dullaert: f. xiira): “Vltimo hec propositio mentalis ‘omnis homo est animal’ esset simul vera et falsa, quod est impossibile. Consequentia patet, quia in mente est vnum totum congregatum ex quattuor partibus correspondentibus istis quattuor vocabulis ‘omnis’ ‘homo’ ‘est’ ‘animal’, et iste quattuor partes in intellectu non habent ad inuicem ordinem situs propter indiuisibilitatem (indiuiduitatem *ed.*) intellectus; ideo qua ratione illud totum in mente esset hec propositio ‘omnis homo est animal’, eadem ratione esset ista propositio ‘animal est omnis homo’, et tamen hec est vera et ista falsa; ergo etc.” For the argument, cf. Gregory of Rimini referred to above, n. 29; for Buridan’s text cf. Michael 1985: 578-93, 253 n. 44, and 261.

41. Johannes Buridanus, *Subtilissime questiones super octo Physicorum libros*, I, q. 9 (ed. Johannes Dullaert: f. xiirb-va): “Ad vltimam ego dico quod suppositioni confuse vel distributiue et determinate in propositionibus vocalibus correspondent in mente quidam diuersi modi intelligendi additi conceptibus categor<emat>icis secundum quos modos intelligendi illi termini mentales aliter supponunt, et illi modi intelligendi sunt de integritate propositionum [...]. Ideo non ex omnibus eisdem partibus iste due mentales componuntur, propter quod hec non est illa, sed hec est vera et illa falsa.” See also Heytesbury’s text quoted above, n. 17. This Buridanian position is mentioned by Johannes Dullaert in his commentary on *Perihermeneias* and discussed by other authors quoted in Ashworth 1981: 82, n. 73.

## 2. Peter of Mantua

In his commentary on Heytesbury's first sophism, Paul of Pergula mentions by name Peter of Mantua as a supporter of the opinion according to which, given two propositions made up of the same four terms, one proposition universal and the other indefinite, the universal proposition is granted and the particular one is denied.<sup>42</sup> For his part, Gaetano of Thiene gives a number of criticisms of Heytesbury's theory according to which the proposition results from an act of the intellect, either affirmative or negative, added to the intentions, i.e. the subject and the predicate. Gaetano criticises Heytesbury because his theory does not take account of the need to keep parts of speech – specifically the adverb and the verb – distinct even at a mental level.<sup>43</sup> According to Heytesbury, as we have seen, a negative proposition is held together by a single act uniting in itself the copula, which is a verb, with the negation, which is an adverb. Moreover, Gaetano notes that from Heytesbury's position it follows that a mental proposition *de secundo adiacente* would not be intelligible, and also that in the mind there would be no

42. Cf. Paulus Pergulensis, *Super sophismata*, I, iii, Venice, B.N. Marciana, ms. lat. Cl. VI, 160 (2816), f. 182rb: "Secunda opinio statim diceret quod illi termini in casu proposito non essent propositio, sed propositiones plures, quia plura significant inconiuncte, quare ad illam propositionem non responderet universali<ter> negando, ad illam tamen responderet pluribus responsionibus, cum per Aristotelem [*Soph. El.*, 17, 176a10-12] ad propositiones plures non sit danda vna responsio. Vnde ad illam propositam respondetur concedendo quod omnis homo est homo et negando quod homo est omnis homo, et hec opinio est Petri de Mantua." Perhaps Paul is referring to Petrus Mantuanus, *Logica, De veritate et falsitate propositionis* (ed. Joannes M. Mapellus: f. D5rb): "Et sic dicendum est de ista 'omnis homo est homo' et sic de aliis, posito quod significet ordine recto et non ordine retrogrado" (the discussion begins at f. D4ra).

43. Cf. Gaetani de Thienis *Super primum sophisma* (ed. Joannes M. Mapellus: f. 81vb): "Sed contra hanc positionem instatur multipliciter. Et primo, quia ex ea sequitur quod aduerbium non sit pars orationis distincta a verbo, ex quo sibi non correspondet in mente distincta pars orationis. Consequens est falsum, et tenet consequentia, quia distinctio partium orationis sumitur a modis significandi, qui sumuntur a modis intelligendi, qui ortum habent a modis essendi etc. Item ex illa sequitur quod contradictoria non sunt consimilis copule: consequens inconueniens, et tenet consequentia, ex quo in negatiua aduerbium negan[ti]s et verbum est copula, cum illud totum subordinetur actui diuidendi qui est copula, et in affirmatiua solum verbum est copula. Item sequitur quod in hac propositione vocali 'homo est', ly 'est' non est verbum, quod est falsum, et patet consequentia, quia subordinatur illi orationi mentali 'est ens', et omne quod subordinatur orationi est oratio, et non verbum. Et sequitur per idem quod verbum adiectiuum non debet dici verbum sed oratio, cum subordinetur orationi."



*verbum adiectiuum* at all, because such a spoken or written verb should be subordinate to an *oratio mentalis*.<sup>44</sup> Therefore (*propterea*), as Gaetano relates, Peter of Mantua maintained in contrast to Heytesbury that all syncategorematic words are subordinate to *modi concipiendi*.<sup>45</sup> Another commentator, Simon of Lendinara (in Padua between 1418 and 1434),<sup>46</sup> offers similar remarks, concluding that for these reasons Peter of Mantua followed another way.<sup>47</sup>

As far as I can see, the expression *modus concipiendi* does not appear in Peter of Mantua's *Logica*. As we shall see, he speaks of *modi significandi* derived from different *modi intelligendi*. The term *modi concipiendi* can be found in other texts and authors such as Mesino de Codronchi<sup>48</sup> and in questions dealing with the discipline of music that John E. Murdoch attributed to Biagio Pelacani (in both cases *modi significandi* and *modi concipiendi* are mentioned).<sup>49</sup> Again, in a text by Thomas of Cleves we find *modi concipiendi vel modi intelligendi*, and

44. Gaetani de Thienis *Super primum sophisma* (ed. Joannes M. Mapellus: f. 81vb): "Ex quibus [Heytesbury's position] sequitur quod in mente non datur propositio de secundo adiacente, cum ex vnica intentione et vno actu non possit fieri propositio. Actus enim verbalis habet copulare vnum extremum cum reliquo iuxta illud Aristotelis primo Perierminias: hoc verbum 'est' significat quandam compositionem etc. Vnde hoc mentale per se sumptum 'hoc est' non est intelligibile. Sequitur etiam quod dum hoc verbum 'est' vocale vel scriptum coniungit extrema, tunc subordinatur solo actui, dum autem non coniungit et ponitur in propositione subordinatur aggregato ex actu et intentione, quia illud vocale vel scriptum 'homo est' non esset intelligibile vbi ly 'est' solo actui subordinaretur. Ex quibus vterius sequitur non dari verbum adiectiuum in mente cum quodlibet verbum vocale vel scriptum adiectiuum orationi mentali subordinetur." Cf. Paulus Pergulensis, *Super sophismata*, I, iii, Venice, B.N. Marciana, ms. lat. Cl. VI, 160 (2816), f. 182va-b, and Braakhuis 1982: 356.

45. Gaetani de Thienis *Super primum sophisma* (ed. Joannes M. Mapellus: f. 81vb): "Propterea Petrus de Mantua posuit aliam opinionem, volendo omnia syncategoremata pura excepto verbo subordinari modis concipiendi."

46. Cf. Wilson 1960: 175 n. 82.

47. Cf. Simon de Lendenaria, *Recollecta supra sophismatibus Hentisberi*, I, iii (ed. Joannes M. Mapellus: f. 172rb): "Secundo arguitur contra idem sic, et primo presuppono quod partes orationis sunt distincte, vt satis patet per grammaticos. Secundo presuppono quod verbum subordinetur verbo, et non verbum non verbo, non autem e contra: illud presuppositum patet etiam. Tertio suppono quod cuiilibet parti orationis correspondeat aliquid in intellectu realiter distinctum a quacumque alia parte orationis. Quibus suppositis stantibus, arguitur contra Hentisberum [...]. Et hec fuerant motiua propter que Petrus de Mantua insecutus est aliam viam."

48. Cf. Roncaglia 1993 and 2000, and Maierù 2002: 18-19.

49. Cf. Panti 1992: 311-312, and Maierù 2002: 15-17; also Murdoch 1976. For Biagio, see also below at and around n. 74.

we should remember Buridan's use of *modi intelligendi* in his last commentary on the *Physics*, and even before in Peter Auriol.<sup>50</sup> In Peter of Mantua's work, *modi intelligendi* could probably denote mental acts that perform the function of syncategoremes, but this doctrinal aspect is not explicitly clarified in the printed text available. Peter, however, criticises Heytesbury's theory as a whole. Master Peter raises these objections in the tract *de equipollentiis*.<sup>51</sup> Moreover, in his commentary on the *Logica parva* by Paul of Venice, Manfredo Medici refers to another tract (*de conuersionibus*) in which Peter criticises Heytesbury for his view that every mental proposition has at least three elementary constituents.<sup>52</sup>

Before examining the two places indicated, it would be helpful to reconstruct the essential points of doctrine on mental language that can be deduced from Peter of Mantua's *Logica*. I will follow the exposition in the tract *de terminis priuatiuis*, adding elements that derive from other parts of the work.

According to Peter, the mental term naturally signifies whatever it signifies regardless of when it is thought or who thinks it:

50. Thomas de Clivis, *Speculum logicale*, XXII (ed. Bos-Read: 96); for Buridan see above, nn. 40-41; for Buridan's influence in Italy, cf. Federici Vescovini 1976; for Peter Auriol, cf. Friedman 1997 and 1999.

51. For the order of tracts in Peter of Mantua's *Logica* (with reference to the *editio princeps* and the ms. Vat. lat. 2135), cf. Maier 1961: 31-33.

52. Manfredi de Medicis *Additiones super Summulis Pauli Veneti*, I, 3 (ed. Venetiis 1542: f. 14rb): "Nota quod propositio categorica debet habere predicatum implicite aut explicite, vt etiam notat Paulus. Sed contra: ergo ista propositio 'Adam est' haberet predicatum similiter, et tale maxime esset ly 'ens', ergo ista significaret quod Adam est ens, quod videtur falsum. [...] Ad quod responde quod ille terminus 'ens' pro nunc sumitur duobus modis. Primo modo vt est transcendens et non participium. Alio modo vt est participium correspondens illi verbo 'sum, es, est' predicanti secundum adiacens, et tunc tantum significat quantum ly 'existens'. [...] Aduerte vterius quod Petrus Mantuanus in capitulo conuersionum dicit quod ad propositionem categoricam non requiritur quod habeat predicatum implicitum aut explicitum, quia vult quod dicendo 'homo currit', ista non correspondeat proprie isti mentali 'homo est currens', quia vult quod sicut dantur verba adiectiua in voce aut in scripto, ita etiam dantur in mente, quod est contra Tysberum tertio principali primi sophismatis. Et apud ipsum non valet argumentum: iste due propositiones equiualent et vna habet predicatum, ergo et alia; patet de istis: 'homo currit', 'homo est currens'. Et ideo aliter diffinit propositionem categoricam, scilicet quod est oratio simplex vna indicatiua, finite significans et determinate, perfecti sensus ostensiuua."



The mental term, which by nature signifies something or some things, does not signify more at one time than at another, nor does it signify more in the mind of one individual than in another; thus, Socrates neither does understand nor can understand more through the term 'man' existing in Socrates' intellect than Plato can understand through the term 'man' existing in Plato's intellect; otherwise the two propositions 'homo currit' and 'homo currit', the one existing in the mind of Socrates, the other in the mind of Plato, would not be convertible.<sup>53</sup>

A second defining feature of mental language according to Peter is that every mental concept is simple and has the properties of a part of speech; thus, on the mental level there are no composite parts of speech, because if there were, the composite parts would each have a separate meaning. On account of this, we must exclude from mental language the grammatical property of figure, and other properties like conjugation, declension, and deponent verbal forms, that are found only in spoken or written language.<sup>54</sup> According to our author, even connotatives are simple terms.<sup>55</sup> A third point is that every part of speech, whether

53. Petrus Mantuanus, *Logica, De terminis priuatiuis* (ed. Joannes M. Mapellus: f. D5rb): "Item accipitur quod terminus mentalis aliquam rem vel aliquas res significans naturaliter, non plura significat vno tempore quam alio nec plura significat in mente vnus quam in mente alterius, sic intelligendo quod per illum terminum 'homo' in intellectu Sortis existentem non plura comprehendit Sortes aut plura comprehendere potest quam Plato per illum terminum 'homo' in suo intellectu existentem; patet, quia aliter non conuenterentur iste due 'homo currit', 'homo currit', quarum vna esset in mente Sortis et alia in mente Platonis." Cf. also *De scire et dubitare* (f. F5rb-va).

54. Petrus Mantuanus, *Logica, De veritate et falsitate propositionis* (ed. Joannes M. Mapellus: f. D2rb): "omnis conceptus est simplex, vt infra probabitur", and *De terminis priuatiuis* (f. D5vb): "Quarto accipitur quod quilibet conceptus mentalis est simplex ita quod nulla est pars orationis in mente que sit composita, quia tunc partes orationis significarent separate. Si enim sit aliquis conceptus compositus ex *a* et *b* conceptibus, tunc *a* et *b* conceptus etiam sunt mentales naturaliter significantes aliquid, cum non possint cadere a suis significationibus ipsis manentibus significatiuis, scilicet quod significant in compositione illud quod ante compositionem significabant; sequitur quod illius compositi partes significant separate: consequens falsum. Et ideo concluditur quod figura composita vel decomposita non continetur in mentalibus, sed solum in vocalibus vel scriptis, sicut sunt alie multe passiones grammaticales, puta coniunctiones et declinationes et genus deponens, et huiusmodi <que> solum conueniunt in vocalibus aut scriptis."

55. Petrus Mantuanus, *Logica, De terminis priuatiuis* (ed. Joannes M. Mapellus: f. D6rb): "Et sicut iam sumus locuti de infinitis terminis, ita dicendum et de priuatiuis, quia illi termini 'vacuum', 'iniustus', 'tenebra' etc. subordinantur simplicibus termi-

spoken or written, provided it is univocal, is subordinate to a part of mental discourse (according to Aristotle, the voice gives expression to the passions of the soul). Consequently, elements of spoken or written language are only parts of speech in virtue of *modi significandi*, which are derived from *modi intelligendi*, as can be seen from grammatical doctrine.<sup>56</sup> It is clear from this that every part of speech, whether spoken or written, is subordinate to synonymous parts of mental discourse.<sup>57</sup> Peter expressly asserts that no mental term is equivocal.<sup>58</sup> If every concept is simple, all complex knowledge presupposes simple knowledge.<sup>59</sup> Fourth and finally, a simple categorematic mental term is an

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nis eorum sicut eorum opposita, aliter nullius partis orationis sunt si subordi<n>arentur complexis. Sed contra: quia ille terminus 'iniustus' priuatiue suum habitum significat, similiter ille terminus 'vacuum' significat locum non repletum corpore, et iste terminus 'tenebra' rem priuatam luce aut lumine significat, igitur etc. Dicitur negando duas vltimas consequentias: sic enim arguitur quod illi termini 'plenum', 'album', 'longum' terminis complexis subordinantur; nam iste terminus 'plenum' locum plenum corpore significat, et iste terminus 'album' rem habentem albedinem significat eam denominare sufficientem (!). Consequens tamen est falsum, quia *ille terminus 'album' siue 'longum' sunt termini simplices, aliter nullus terminus connotatiuus vocalis aut scriptus subordinaretur mentali simplici*. Antecedens tamen prime consequentie est falsum, quod iste terminus 'iniustus' siue 'iniustitia' priuatiue suum habitum significet, quia iste terminus 'iniustus' positiue significat vitium quod est iniustitia. Tamen pro vere priuatiuis est aduertendum quod, licet hec prepositio 'in' intret compositionem, tamen in compositione nihil significat nec modum significandi addit vocabulo cuius efficitur pars, quia tunc partes significarent in compositione vnaqueque sicut ante." (Italics mine).

56. Petrus Mantuanus, *Logica, De terminis priuatiuis* (ed. Joannes M. Mapellus: f. D5vb): "Item quelibet pars orationis vocalis aut scripta saltem vniuoca subordinatur alicui parti orationis mentalis. Patet hoc, quia voces sunt note earum que sunt in anima passionum [Arist., *De interpr.*, I, 16a3-4]. Et ex hoc patet quod voces aut scripta non sunt partes orationis nisi ex modis suis significandi, qui modi accipiuntur ex modis suis intelligendi, vt patet ex grammatica; ideo quelibet pars orationis vocalis aut scripte subordinatur alicui parti orationis mentali<s>."
57. Petrus Mantuanus, *Logica, De terminis priuatiuis* (ed. Joannes M. Mapellus, f. D6rb): "Ex quibus concluditur vltra quod hoc complexum vocale 'non est' non subordinatur alicui simplici actui, quia quelibet pars orationis vocalis aut scripte subordinatur mentali sibi sinonime: nam si sit in mente hec negatio 'non' et postea ponatur secum verbum substantiuum, puta actus componendi, ex illis duobus non fit vnus actus."
58. Petrus Mantuanus, *Logica, De veritate et falsitate propositionis* (ed. Joannes M. Mapellus: f. D5ra): "[...] ly 'canis' capitur equiuoce in premissis, in mentalibus autem terminis non cadit hec diuersitas, quia nullum equiuocum equiuocans est in mente." See also *De insolubilibus*, f. H1rb-va.
59. Petrus Mantuanus, *Logica, De scire et dubitare* (ed. Joannes M. Mapellus: f. F5va): "Item accipitur quod omnis notitia complexa incomplexam presupponit."



*intentio* which is a *similitudo naturalis* of the thing that is known; while this is not true of syncategorematic parts of speech,<sup>60</sup> like quantifiers, prepositions, conjunctions, and many adverbs, which signify nothing. If it is held that these are signs and therefore have meaning, this inference must be denied, while the following inference is valid: this is a sign, therefore it means something or some things, in some way; according to our author, all this emerges, once again, from the discipline of grammar.<sup>61</sup> Introducing his discourse on the expository syllogism and the distinction of terms into immediate and mediate, the author explains that by 'term' he means a part of speech, such as a noun, a verb, or any other, whether categorematic or syncategorematic.<sup>62</sup> As can be inferred, the author allots much space to the grammatical characterization of mental language.

In formulating his criticism of Heytesbury's position, Peter starts by asserting that the various parts of speech (spoken or written) are subordinate to the corresponding parts of mental discourse (e.g. an adverb is subordinate to an adverb; a participle to a participle). His reasoning is based on the grammatical doctrine that establishes the relations between *modi significandi* and *modi intelligendi*. Peter draws the conclu-

60. Petrus Mantuanus, *Logica, De terminis priuatiuis* (ed. Joannes M. Mapellus: f. D5vb): "Vltimo adiungitur quod omnis intentio mentalis aliquam vel aliquas res significat, quam vel quas naturaliter significat, et hoc est quod antiqui dixerunt quod omnis intentio simplex est vera, et veram rem vel veras res significat: aliter enim non esset intentio similitudo naturalis, quod dictum debet intelligi de intentione simplicis cathegorematica, eo quod multe sunt partes orationis nihil significantes."

61. Petrus Mantuanus, *Logica, De terminis priuatiuis* (ed. Joannes M. Mapellus: f. D5va): "Sed signorum que sunt sincathegoremata nulla sunt significata, vt illius termini 'omnis', 'nullus' etc. et sicut sunt prepositiones, coniunctiones et multa aduerbia que nihil significant. Et si arguitur quod ipsa sunt signa, igitur habent significata, vel aliquid significant, vel aliquid est significabile per ipsa aut aliquod ipsorum sine noua impositione, negatur consequentia, sed bene sequitur: hoc est signum, igitur aliquid vel aliquid vel per aliquem modum significat, puta per se stantis aut adiacentis vel coniungentis, aut actum casualem imperfectum ad casuale reducendum. Hoc totum patet de intentione grammatice."

62. Petrus Mantuanus, *Logica, Tractatus syllogismorum* (ed. Joannes M. Mapellus: f. D8vb): "terminum hic appello partem propinquam grammatice orationis, puta nomen vel verbum, aut aliquam orationis partem cathegorematicam aut sincathegorematicam. Omnis autem terminus est mediatu s aut immediatu s, quare etiam prepositiones (propositiones *ed.*) et alie partes orationis indeclinabiles sunt mediate vel immediate, quamuis nullum terminum habeant inferiorem aut superiorem quo (quia *ed.*) describi possunt."

sion that in the spoken or written proposition ‘homo non est animal’, the negation and the verb are not subordinate to only one *actus diuidendi*, but are subordinate to the corresponding mental verb and adverb. If that were not the case, and only one mental “act of negation” were posited to correspond to verb and negation together, that act would not be a definite part of speech and would be neither verb nor adverb.<sup>63</sup> Going further, the author denies the corollary to Heytesbury’s theory, that the spoken or written proposition ‘homo est’ is subordinate to the mental proposition ‘homo est ens’: if this were the case, since *homo* is subordinate to its mental “synonym”, the verb ‘to be’ would be subordinate to two parts of speech, verb and participle. Moreover, the verb *est* of the spoken or written proposition ‘homo est’ and the *est* of the proposition ‘homo est ens’ would not be synonymous terms, because the former would be subordinate to a verb and the latter to a verb and a participle.<sup>64</sup> (Master Peter evidently does not think it necessary to subsume the participle under the verb, as Ockham had consid-

63. Petrus Mantuanus, *Logica, De equipollentiis* (ed. Joannes M. Mapellus: f. E4va-b): “Accipiamus primo quod diuerse partes orationis grammaticae vocales vel scripte diuersis partibus orationis mentalis subordinantur, sic quod aduerbium aduerbio et participium participio et sic de aliis; quod patet ex hoc, quia modi signi-/E4vb/-fican-di vocalium aut scriptorum, per quos ipsa vocalia aut scripta distinguuntur ad inuicem generice aut specificae, accepti sunt a modis intelligendi specificae aut generice distinctis. Quo accepto, sequitur quod in ista propositione ‘homo non est animal’ vocali aut scripta, ista negatio ‘non’ et illud verbum ‘est’ non subordinantur vni actui diuidendi, sed illud verbum ‘est’ subordinatur verbo substantiuo et ista negatio ‘non’ subordinatur actui negatiuo aduerbiali. Item, si subordinaretur aggregatum ex illa negatione ‘non’ et verbo substantiuo vni actui diuidendi, iste actus diuidendi nullius partis orationis esset, quia nec esset verbum substantiuum nec adiectiuum nec aduerbium.”

64. Petrus Mantuanus, *Logica, De equipollentiis* (ed. Joannes M. Mapellus: f. E4vb): “Sequitur vltra quod ista de secundo adiacente vocalis aut scripta ‘homo est’ non subordinatur alicui de tertio adiacente, puta tali ‘homo est ens’ quia, cum ly ‘homo’ non subordinetur nisi tali termino ‘homo’ secum sinonimo, tunc ly ‘est’ subordinaretur duabus partibus orationis, scilicet participio et verbo, quod est contra acceptum. Item si ista subordinaretur tali mentali, scilicet ‘homo est ens’, tunc ly ‘est’ in ista vocali ‘homo est’ et in ista alia vocali ‘homo est ens’ non essent termini sinonimi, quia in vna ly ‘est’ subordinatur simplici verbo substantiuo et in alia verbo et participio. Item ly ‘est’ in ista ‘homo est’ non esset verbum, quia haberet omnes modos significandi participii, vel qua ratione foret verbum, foret etiam participium.”



ered doing).<sup>65</sup> According to Peter of Mantua, a spoken or written term cannot be subordinated to anything but its synonymous mental term.<sup>66</sup> As far as I can see, this synonymy is not qualified in any other way. Taking the proposition ‘homo non est animal’ as his example, the author asks whether it contains an act of composition (an affirmation) or of division (a negation). In answer to this, he seems to distinguish two senses of the word ‘to compose’, one that makes it a synonym of ‘to affirm’, and another that involves merely the union of two terms. The Mantuan therefore replies that, in the given proposition, there is no act of composition in the sense of an affirmation, but only the act of uniting by means of the copula, which links the predicate to the subject, thus making the affirmation possible, and there is a negation which denies that the predicate inheres in the subject. The copula and the negation are two distinct acts and two distinct parts of speech.<sup>67</sup>

Then, in the tract on conversion, Peter declares that transposition of the terms of a proposition does not take place when the proposition has no explicit predicate; he maintains, therefore, that if conversion is required for syllogistics, not all propositions can be syllogised or used

65. Cf. Guillelmi de Ockham *Summa logicae*, I, 3 (ed. Boehner-Gál-Brown: 11, 13-25).

66. Petrus Mantuanus, *Logica, De equipollentiis* (ed. Joannes M. Mapellus: f. E4vb): “Quibus datis, sequitur quod nullum verbum adiectiuum subordinatur alicui nisi verbo adiectiuo secum sinonimo. [...] Et ita generaliter dicitur quod *nullum vocale aut scriptum subordinatur alicui nisi secum sinonimo, et rectus nisi recto, et obliquus nisi obliquo, et complexum nisi complexo et sic de aliis*; non tamen omnia conuertibilia ad inuicem vocalia vel scripta subordinantur eidem mentali, sed solum sinonima ad inuicem. Vnde propositiones equipollentes ad inuicem non eidem mentali subordinantur.” (Italics mine).

67. Petrus Mantuanus, *Logica, De equipollentiis* (ed. Joannes M. Mapellus: f. E4vb): “Et si interrogatum fuerit numquid in illa ‘homo non est animal’, ly ‘est’ sit actus componendi aut diuidendi, dicitur quod in illa propositione non est *actus componendi, id est affirmandi*, quo scilicet affirmetur predicatum de subiecto, sed est actus componendi, quia cum isto vel secum conuertibili possumus affirmare aliquod predicatum de suo subiecto. Sed in illa propositione nullus est actus negatiuus nisi illa negatio aduerbialis. *Sed ibi est vnus actus vniuius predicati cum subiecto. Vnde mediante ista negatione negatur predicatum a subiecto cum ista copula verbali vniente predicatum cum subiecto.*” (Italics mine). Cf. also *De terminis priuatiuis* (f. D6rb, above, n. 57); see also Simon de Lendenaria, *Recollecta supra sophismatibus Hentisberi*, I, iii (ed. Joannes M. Mapellus: f. 172ra): “Huic dicitur distinguendo de compositione. Nam compositio capitur dupliciter, quia componere id est de nouo componere, vel componere id est affirmare.”

in a syllogism.<sup>68</sup> Having posited this, he considers in particular the proposition ‘homo currit’: it is categorical and must therefore, some argue, have a subject, a predicate, and a copula as its principle part or be subordinate to a mental proposition composed of three elements, as required by the definition of the categorical proposition. Peter replies to this argument by denying the definition of the categorical proposition and proposing another definition.<sup>69</sup> On the whole, the objections he raises in the chapter on conversion recall the position of Buridan: as we have seen,<sup>70</sup> Buridan approved of scholars who corrected the definition of the categorical proposition given in the work of Peter of Spain. But Buridan is not mentioned in these texts.

### 3. Paul of Venice

The second author whom I want to consider here contributed at least twice to these discussions. The first time was in the first of his sophisms, which Curtis Wilson considers to depend on the corresponding sophism by Heytesbury;<sup>71</sup> the other was in two chapters of the *Quadratura*. Both works by Paul of Venice, *Sophismata aurea* and

68. Petrus Mantuanus, *Logica, De conuersionibus* (ed. Joannes M. Mapellus: f. E5va): “Conuersio est ordinatio transpositiua extremorum duarum propositionum consimilis qualitatis vtroque extremo communicantium, sic se habentium quod si a conuersa ad conuertentem formetur argumentum sic significando est formale. Ex qua diffinitione sequitur quod nulla propositio que non habet extremum seu predicatum est conuertibilis, quia nulla talis participat vtroque extremo cum aliqua alia, cum non habeat. Unde hec non est conuertibilis ‘homo est’ quia, si conuerteretur, talis esset sua conuertens ‘homo ens est homo’ vel talis ‘aliquid seu ens est homo’; sed nulla talis est sua conuertens, quia conuertens et conuersa debent participare vtroque extremo, et ista caret; igitur etc.”

69. Petrus Mantuanus, *Logica, De conuersionibus* (ed. Joannes M. Mapellus: f. E5va-b): “Et si arguitur contra, quod ista habet predicatum ‘homo currit’, quia est cathégorica propositio, igitur habet subiectum, predicatum et copulam principales partes sui, aut subordinatur vni tali, tenet consequentia per diffinitionem cathégorice. [...] Ad primum dicitur negando istam consequentiam: ista est propositio cathégorica, igitur habet subiectum, predicatum etc. aut subordinatur vni tali. Et cum dicitur quod illa est diffinitio cathégorice, dicitur illud negando, sed propositio cathégorica est oratio simplex, vna, indicatiua, finite significans et determinate, perfecti sen-/E5vb/-sus ostensiuua. Et ideo illa non est propositio: quis currit?, nec illa oratio: deum esse.”

70. See above, n. 38.

71. Cf. Wilson 1960: 154.



*Quadratura*, were probably composed at the end of the fourteenth century.<sup>72</sup>

In the first sophism, Paul returns to the issue in the form we have seen used by Heytesbury – i.e. whether the four terms can constitute both a universal and an indefinite proposition – and Paul examines the argument that at a mental level, where there is neither place nor order, there is no reason why the four terms would constitute a universal proposition without for the same reason constituting an indefinite proposition. In his reply, the author admits that there is no place or position in the mind, but maintains, on the other hand, that there is indeed an order: this is the order of the intellect asserting and denying, constituting the subject and predicate, and making (by means of the act of distributing subject or predicate) the proposition either universal or indefinite.<sup>73</sup> We have seen that Heytesbury considered the mental proposition to be different from spoken or written ones, and he did not use the term *ordo* in connection with the former. The idea that some kind of order, compatible with the nature of the intellect, must be admitted at the mental level, had already emerged towards the end of the fourteenth century in anonymous questions concerning music that have been attributed to Biagio Pelacani from Parma,<sup>74</sup> and again, Biagio himself states this explicitly in his questions on Peter of Spain (1379-80).<sup>75</sup>

72. Cf. Conti 1996: 12-13.

73. Paulus Venetus, *Sophismata*, I, ii (ed. Secundus Contarenus-Baptista de Modoetia: f. 3va): “Et si[c] arguitur de illis quatuor terminis in mente, vbi non est situs nec ordo, quod non est ratio quare sint aliqua vniuersalis quin per idem sint vna indefinita et e conuerso, quo concesso habeo intantum quod illa vniuersalis in mente ‘omnis homo est homo’ est illa indefinita ‘homo est omnis homo’, dicitur quod, licet in mente non sit situs, tamen est ordo intellectus affirmandi vel negandi vnum conceptum de altero, aliter (alteri *ed.*) omnis terminus significatiuus in propositione mentali esset indifferenter subiectum vel predicatum, quod est falsum. Ideo illud est subiectum in mente de quo intellectus facit aliquid de altero predicari, illud autem est predicatum quod intellectus facit de altero predicari iuxta sententiam Aristotelis primo Priorum. Et cum signum vniuersale sit actus distribuens, si tali signo intellectus distribuit subiectum, illi quatuor termini sunt propositio vniuersalis; si vero distribuit predicatum, tunc sunt propositio indefinita.”

74. Cf. Panti 1992: 312 (“in propositione mentali subiectum precedit predicatum et copulam non ordine situati, sed ordine modi significandi et modi concipiendi”). For Biagio, see also above at and around n. 49.

75. Cf. Blaise de Parme, *Questiones super Tractatus*, I, 13 (ed. Biard-Federici Vescovini: 86): “Ad probationem, ‘in mente termini non sunt ordinati, cum intellectus sit indivisibilis’, dico quod non sunt ordinati ordine situati, quia non habent situm, sed bene sunt ordinati ordinatione debita.”

In the second part of his *Quadratura*, Paul of Venice devotes two chapters to these problems. In the fourth chapter, which discusses the “mutation” of the mental, spoken, and written proposition, the author presents an argument in which he again takes up Heytesbury’s favourite themes (the four terms that constitute two propositions, so that the universal proposition is indefinite, with the hypothesis that two men see the same written proposition, and one, here called Socrates, perceives it in progressive, linear order – *recte* – while the other, called Plato, perceives or conceives it backwards – *retrograde*).<sup>76</sup> In his doctrinal discussion with four conclusions, Paul stresses how close his own solution is to Heytesbury’s, and vigorously emphasizes the primary role of an act of the intellect. In the first conclusion, he says that although the subject of a mental proposition can become the predicate and vice-versa, no mental proposition can change its denomination: in order to do so, a new composition or division must take place, and therefore a new act of composing or dividing. It is only on account of a new or different act that the propositions can be different; the same act cannot serve two propositions. The same intention can indeed serve two propositions, but the intellect cannot reconsider things without performing a new act. In the course of his reply, Paul affirms that the universal proposition, which is true, is not indefinite.<sup>77</sup>

76. Paulus Venetus, *Quadratura*, II, 4 (ed. Secundus Contarenus-Baptista de Modoetia: f. 27ra): “Capitulum de mutatione propositionum mentalium, vocalium vel scripturarum. Quarto principaliter ad questionem arguitur sic. Ista propositio scripta ‘omnis homo est homo’ est vera, et hec eadem est falsa, igitur questio vera. Tenet consequentia cum prima parte antecedentis, sed secundam partem probo sic. Omnis talis est falsa ‘homo est omnis homo’, sed hec ‘omnis homo est homo’ est ista ‘homo est omnis homo’; igitur illa est falsa ‘omnis homo est homo’”, etc.

77. Paulus Venetus, *Quadratura*, II, 4 (ed. Secundus Contarenus-Baptista de Modoetia: f. 27rb): “Pro solutione huius argumenti pono quatuor conclusiones, quarum prima est ista. Licet cuiuslibet propositionis mentalis subiectum possit effici predicatum et e conuerso, nulla tamen mentalis propositio potest mutari denominationem. Prima pars patet, eo quod subiectum et predicatum propositionis mentalis sunt due intentiones stabiles et permanentes, quarum quamlibet de altera potest componere intellectus. Verbi gratia, iam intellectus componit in ista ‘homo est animal’ illam intentionem ‘animal’ de illa intentione ‘homo’, et etiam e conuerso potest sic componere ‘animal est homo’ sine fabricatione noue impositionis. Secundam partem probo. Nam in mente non posset propositio variare suam denominationem nisi fieret noua compositio vel diuisio in mente. Sed semper in noua compositione vel diuisione resultat nouus actus componendi vel diuidendi, et ad nouitatem seu alietatem actus sequitur alietas propositionis. Igitur etc. [...] Ex ista conclusione sequitur correlarie quod *ista vniuersalis mentalis ‘omnis homo est animal [!]’ non potest esse illa indefinita ‘homo*



In the chapter that follows, where he deals with the “formation” of a mental, spoken, and written proposition, Paul starts by imagining a circular figure, on the circumference of which the three terms *homo – est – homo* are placed at the same distance from each other while the sign *omnis* is placed in the centre of the circle. On this basis, the author reconsiders the argument intended to show that the universal proposition is indefinite. In the body of the doctrinal discussion, Paul of Venice draws four conclusions. The first reconfirms that the mental proposition has no place or position, but that it does have an order, here defined according to priority and posteriority. To illustrate the first part, the author says that there cannot be order according to place or position where there is no *continuous* quantity (with the property of extension), and that this type of quantity does not exist in the mind. To prove the second part of the conclusion, regarding the order of priority and posteriority in the mental proposition, the author recalls the Aristotelian doctrine that intellectual knowledge originates in the senses; it follows from this that not all items of knowledge are acquired at once but successively.<sup>78</sup> In a corollary to this conclusion, the author says that what is divisible inheres in what is indivisible as in its own subject: the mental proposition is divisible, being a *discrete* (as opposed to continuous) quantity of at least three units, and the soul, which is its subject, is indivisible.<sup>79</sup> The second conclusion affirms that not only can a mental

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*est omne animal [!]', quia ad constituendum hanc indefinita<m> ex illa [vel] necessario concurret alius (illius ed.) actus componendi, quia vnus actus componendi non potest seruire duabus propositionibus, sicut posset intentio. Non enim posset intellectus nouiter considerare quin causaretur nouus actus.” (Italics mine).*

78. Paulus Venetus, *Quadratura*, II, 5 (ed. Secundus Contarenus-Baptista de Modoetia: f. 27va): “Capitulum de formatione propositionum mentalium, vocalium vel scriptarum. [...] Pro solutione huius rationis pono quatuor conclusiones, quarum prima est ista. Licet mentalis propositio ordinem non habeat situs vel positionis, tamen habet ordinem prioritatis et posterioritatis. Prima pars est euidentis, quia non datur ordo situs vel positionis vbi non est quantitas contigua [!]. Sed in mente non est quantitas contigua [!]. Igitur in mente non est situs vel positio. Secunda pars probatur. Nam omnis cognitio intellectiua habet ortum a sensu, primo Posteriorum [2, 72a1-4] et 3. De anima [4, 429b30-440a2]. Sed in sensu non simul acquiruntur omnes cognitiones, sed successiue, vt docet experientia. Igitur etiam in intellectu successiue formantur intentiones et per consequens secundum prius et posterius.”
79. Paulus Venetus, *Quadratura*, II, 5 (ed. Secundus Contarenus-Baptista de Modoetia: f. 27va): “Ex ista conclusione sequitur correlarie, quod diuisibile fundatur subiectiue in indiuisibili. Probatur. Nam omnis propositio mentalis est diuisibilis, cum sit quantitas discreta saltem trium vnitatum, et anima que est subiectum ipsius est indiuisibilis, cum sit tota in toto et tota in qualibet parte sui corporis. Igitur intentum.”

proposition be formed over successive moments, but it can also be formed at once; a corollary that follows from this conclusion states that the intellect can judge many propositions at once and also keep them for a certain time.<sup>80</sup> The third conclusion states that spoken and written propositions involve two kinds of order, both order according to priority and posteriority, and order according to position. The fourth conclusion concerns the circle, mentioned above, in which the terms *homo – est – homo* are placed at the same distance from each other, while *omnis* is placed in the center; this conclusion maintains that spoken or written elements make up a vocal or written proposition if these elements are connected in the usual way of speaking or writing (e.g. that no great amount of time elapses between the uttering of the subject term and the uttering of the predicate term). A corollary affirms that the terms

80. Paulus Venetus, *Quadratura*, II, 5 (ed. Secundus Contarenus-Baptista de Modoetia: f. 27va-b): “Secunda conclusio est ista. Sicut propositio mentalis potest successiue formari, sic subito potest fieri aliqua talis. Prima pars illius conclusionis patet: sepe enim contingit quod formatur primo ly ‘homo’, deinde ly ‘animal’ [!], deinde illa copula ‘est’ qua componit intellectus illum terminum ‘animal’ cum illo termino ‘homo’. Secunda pars etiam probatur, quia non minoris (maioris *ed.*) potentie est intellectus quam sensus; sed sensus percipiens hoc album, subito componit iudicialiter hoc esse album, igitur per idem intellectus intelligens album, subito iudicare poterit vel intelligere hoc esse album. Ex ista conclusione sequitur correla-/27vb/-rie quod intellectus potest simul et semel plura iudicare et complexe, et eadem complexa pro tempore seruare. Patet. Nam sensus plura complexe simul apprehendit, videlicet hoc esse album, demonstrando Sortem, et hoc esse nigrum, demonstrando Platonem. Ergo a fortiori et intellectus eadem potest simul intelligere complexa, id est propositiones horum complexe significabilium seruat intellectus pro tempore, quia suum iudicium respectu eiusdem suaque compositio manet per tempus, quia non est credendum quod actus componendi vel diuidendi solum per instans maneat, sed per tempus sicut et actualis consideratio intellectus.”

81. Paulus Venetus, *Quadratura*, II, 5 (ed. Secundus Contarenus-Baptista de Modoetia: f. 27vb): “Tertia conclusio est ista. Quelibet propositio vocalis vel scripta vtrumque ordinem exigit, prioritatis (proprietas *ed.*) scilicet et posterioritatis, situs et positionis [...]. Quarta conclusio est ista. Ad hoc quod aliqua [propositio] scripta vel voces sint propositio vocalis vel scripta, debita requiritur inuicem applicatio. Probatur. Nam si hodie proferrem illum terminum ‘homo’ et cras illud verbum ‘est’, tertia vero die illum terminum ‘animal’ [!], ex his non fieret propositio propter nimiam intercessionem temporis. Igitur intentum. Et si taliter idem termini proferentur quod inter eos (eas *ed.*) nulla penitus foret pausa, ex his iterum non formaretur propositio propter velocem dilapsum terminorum. Ubi autem non nimis longa sit mora nec nimis breuis iuxta comunem modum iam loquentium, ex predictis fieret propositio. Idem assero de terminis scriptis [...]. Ex hac conclusione sequitur correlarie [...]. Secundo sequitur quod, si ponerentur in circulo illi tres termini ‘homo’ ‘est’ ‘homo’ et in centro ly ‘omnis’, quod ex his quatuor non resultaret propositio, nec regeretur ly ‘omnis’ ab illo verbo ‘est’.”



involved in the circle do not constitute a proposition at all.<sup>81</sup> Concluding his doctrinal analysis, Paul maintains that one must neither grant nor deny anything, nor assign a proposition, before it is clear where the syncategorematic word *omnis* belongs. If it precedes the terms, we have a universal proposition, which is granted; on the other hand, if *omnis* follows the copula, the proposition is indefinite and denied.<sup>82</sup>

The solution adopted by Paul of Venice in this chapter seems in some way to take into account the doctrinal perspective of his religious brother Gregory of Rimini, who had adduced the “indivisible subject” in order to deny the possibility of distinguishing two mental propositions composed of the same terms. Gregory had also put forward the idea of distinguishing the parts of a mental proposition on the basis of a different order of production, an idea he immediately discarded in favour of the production of the proposition all at once. Paul of Venice seems to maintain both “order according to production” and production “all at once”: the intellect can produce all at once, but it can also produce successively. In reality, he does not accept Gregory of Rimini’s view of the unity of the mental proposition, since he considers the mental proposition to be made up of a discrete quantity of at least three units.

The distinction between discrete quantities and continuous quantities overcomes the difficulties posed by the fact that the mind is an indivisible subject. However, it must be recognised that Biagio of Parma had already maintained that a mental proposition has no quantity in the sense of extension (*extensive*) since it inheres in an indivisible subject, but nevertheless it has quantity in the sense of discrete quantity, being made up of terms, syllables, and letters.<sup>83</sup> Gregory’s name is mentioned neither by Paul nor by Biagio.

82. Paulus Venetus, *Quadratura*, II, 5 (ed. Secundus Contarenus-Baptista de Modoetia: f. 27vb): “Ideo non conceditur ibi aliquid nec negatur, nec certa propositio assignatur, quousque non fuerit facta certificatio an ly ‘omnis’ teneat se a parte ante vel a parte post: primo modo illi termini sunt illa propositio ‘omnis homo est homo’, quam concedo, et secundo modo sunt illa propositio ‘homo est omnis homo’, quam nego; quare etc.”

83. Cf. Blaise de Parme, *Questiones super Tractatus*, I, 15 (ed. Biard-Federici Vescovini: 98), and cf. Maierù 2002: 23-24 n. 60.

#### 4. Word Order and Proof of Propositions

One question that can be raised<sup>84</sup> is whether and (if so) how the theme of the propositional mental order interrelates with the doctrine of the proof of propositions, the fundamental rule of which is that one must begin the proof from the first mediate (and therefore provable) term of the proposition itself.<sup>85</sup> In his commentary on Heytesbury's sophisms, Paul of Pergula claims that this rule was not known when Heytesbury wrote his logical works.<sup>86</sup>

If we consider Peter of Mantua's work, we can say that this does not appear to be a problem for him. In his *Logica*, Peter of Mantua deals first with mental language in the tract *de terminis priuatiuis*, i.e. about halfway through the work, after many tracts devoted to the proof of propositions. In his discussion of mental language, Peter apparently does not think it necessary to add any remark connecting the two topics. The most common example analysed by our authors is that of the modal proposition, the word order of which at the spoken, written, and mental levels gave rise to differences of interpretation. For Peter, a modal proposition is in the compound sense if the modal term precedes the rest of the proposition, whereas the proposition is in the divided sense when the modal term is placed among the other terms or following them.<sup>87</sup> A theory like this reduced the difficulties that this kind of proposition raised with regard to their proof.

Turning to Paul of Venice: several commentaries on the fourth tract of his *Logica parua* (on proving terms)<sup>88</sup> give us the very same gloss. In

84. Thanks to Simo Knuuttila and Claude Panaccio who actually raised the question.

85. Paulus Venetus, *Logica parua*, IV, 4 (ed. Venetiis 1542: f. 76ra): "Notanter dicebatur: nullo termino mediato precedente, quia si precederet aliquis terminus mediatus, ratione illius deberet ista propositio probari, quia a primo termino mediato semper est inchoanda propositionis probatio."

86. Paulus Pergulensis, *Super sophismata*, IV, Venice, B.N. Marciana, ms. lat. Cl. VI, 160 (2816), f. 189ra: "Sed contra hoc arguitur supponendo primam [!] vnam regulam auream, quod probatio propositionis semper debet fieri ratione primi termini probabilis, que regula nondum zepta [i.e. accepta] erat tempore Hentisberi, et propter hoc videtur errasse in aliquibus locis [...]." Cf. Braakhuis 1982: 350, and Maierù 1972: 409 (and 393-483 for the different types of proof).

87. Cf. Maierù 1972: 556 n. 197, and 581 n. 320; instances with epistemic verbs are usually given by Peter.

88. Cf. Paulus Venetus, *Logica parua*, IV (Engl. transl.: 181-213).



fact, the commentators propose an interpretation of the fundamental rule for proving propositions that in its wording is at least in part reminiscent of the discussion of the word order in a given proposition. Glossing the rule, Giacomo Ricci says that the proof must begin from the first mediate term “not in the spatial sense, but from the first term which gives the name to the proposition.”<sup>89</sup> Another formula is used by Manfredo Medici: “we must begin the proof of a proposition from the first term, whether in the spatial sense or in the virtual one.”<sup>90</sup> As we can see, the distinction put forward is not between spatial and mental order, but between spatial priority and functional priority of a term in a proposition.

In order to make entirely clear what these glosses mean, it is necessary to read the relevant text from the commentary on Paul’s *Logica* by Mengo Bianchelli, who simply transcribed a long passage from Paul of Pergula’s *Logica*.<sup>91</sup> This text explains how to proceed in proving a given proposition: one must consider first if it is immediate or mediate and, if it is mediate, one must consider if it is affirmative or negative; again, if the proposition is affirmative, one must consider if it is categorical or hypothetical.<sup>92</sup> If it is categorical, one must *always* begin

89. Jacobi Ritii *Additiones* on Paulus Venetus, *Logica parva*, IV, 1 (ed. Venetiis 1542: f. 70va): “Ultimo [...] Probatio propositionis semper debet incipere a primo termino mediato, non a primo secundum situm, sed a primo termino denominante propositionem. Exemplum. Probatio istius ‘hominem currere est possibile’, non debet incipere a ly ‘hominem’, sed a ly ‘possibile’, ex quo ista denominatur modalis de sensu composito.”

90. Manfredi de Medicis *Additiones* to Paulus Venetus, *Logica parva*, IV, 1 (ed. Venetiis 1542: f. 71vb): “Vltorius aduerte quod est vna maxima in illa materia, quod a termino primo aut situatiter aut virtualiter tali probabili, est inchoanda propositionis probatio.”

91. Menghi [Bianchelli] Faventini *Subtilissime expositiones questionesque super Summulis Magistri Pauli Veneti*, IV, 18 (ed. Venetiis 1542: f. 92va): “Aduerte pro maiori examinatione huius tractatus quod cum proponitur tibi aliqua propositio statim debes videre”, etc.; we read in a marginal note: “Notandum secundum: hec sunt verba formalia Pauli Pergulensis in fine sui tractatus de probationibus terminorum.” Cf. also f. 92vb: “Et sic est finis huius tractatus; si quid autem hic diminute diximus, ample dicemus contra probationes terminorum”; the text corresponds to Paul of Pergula, *Logica*, III (ed. Brown: 84,1293-86, 1339).

92. Paul of Pergula, *Logica*, III (ed. Brown: 84, 1295-1300): if the proposition is immediate, it cannot be proved; if it is negative, “debes eam probare per causas veritatis, aut per contradictorium, aut per singulares, ut supra dictum est” (84, 1298-1300).

from the first mediate term, without any jumping (*non per saltum*).<sup>93</sup> At this point Paul of Pergula writes:

I mean the first term not in a spatial sense, but in the denominative sense: in modal propositions the mode often comes last in terms of position, while nevertheless it is first in terms of denomination .... Having given the proof of the first term, you must go on step by step (*gradatim*) to the next term, if there is one, and so on in this way until all mediate terms of the categorical proposition have been sufficiently explained.

The author goes on to illustrate the case of the hypothetical proposition.<sup>94</sup>

One explanation for the particular way that Paul of Pergula phrases himself in the quotation above might be that he feared that the idea of a first term in the “denominative sense” would be perceived as introducing something radically new into the proof theory, and so Paul employs other terms to describe the way to proceed in proving a proposition – *non per saltum, gradatim* – that seem meant to neutralize the supposed novelty and bring the proof back to a more traditional form. Manfredo Medici appears to confirm this explanation.<sup>95</sup>

93. Paul of Pergula, *Logica*, III (ed. Brown: 84, 1301-85,1308): “Si categorica vide primum terminum mediatum et ab eo debes inchoare propositionis probationem quia a primo termino mediato *semper* inchoanda est propositionis probatio, *et non per saltum* debes propositionem probare, quia fiunt multae deceptiones exponendo propositionem non exponibilem sed resolubilem et e converso. Verbi gratia, ista propositio: Aliquod album incipit esse Sortes, est resolvenda ratione de ly aliquod album et non probanda ratione de ly incipit per causas veritatis.” (Italics mine).

94. Paul of Pergula, *Logica*, III (ed. Brown: 85, 1308-1317): “Appello autem primum terminum non secundum situm sed secundum denominationem, ut in modalibus, saepe modus secundum situm est ultimus, et tamen secundum denominationem est primus. [...] Facta autem probatione primi termini debes *gradatim* procedere ad alium si quis est, et sic donec omnes termini mediati propositionis categorice fuerint secundum exigentiam declarati. Si vero propositio fuerit hypothetica [...]”, etc. (Italics mine).

95. Manfredi de Medicis *Additiones* to Paulus Venetus, *Logica parva*, IV, 3 (ed. Venetis 1542: f. 75va): “Circa capitulum officabilium aduerte primo quod illa [*sc. regula*] est supplenda: nullo termino mediato precedente, quod dico quia illa ‘Sor scit hominem currere’ est resoluenda, cum a primo termino sit inchoanda propositionis probatio. Verumtamen facta resolutione prima, habet officari, et ideo quelibet talis in qua terminus modalis vel concernens actum mentis determinat etc. est officabilis mediate vel immediate, aut saltem includit aliquam propositionem sic probabilem, quod dico quia illa propositio ‘tantum Sortes scit hominem currere’ neque mediate neque immediate habet officari, includit tamen vnam que habet sic probari etc.”



But a more convincing explanation is put forward by John Wyclif and Paul of Venice, both of whom place more emphasis on the intellectual order of a proposition.<sup>96</sup> In particular, Paul of Venice states that the mode of a proposition in the compound sense, although it does not precede at the spoken or written level, in fact does precede in three ways, namely in terms of signification, in the corresponding mental proposition, and in the order of proving. Thus, in the case of a modal proposition in the compound sense, the mode is actually the first provable term.<sup>97</sup>

96. Cf. Johannis Wyclif *Logice continuacio*, I, 3 (ed. Dziewicki: 84): “Ex istis elicitor talis regula, quod in probando propositiones est ordo terminorum specialiter attendendus, cum utrobique termini mediati, secundum intellectum debitum prioris, significatio debeat explicari, antequam posterioris termini mediati officium explicetur. Verbi gratia: capta illa propositione, *album incipit esse Sor*, cuius primus terminus est ille terminus resolubilis *album*, probanda est propositio resolutorie ratione illius termini *album*, sic arguendo: *hoc incipit esse Sor*, et hoc est (vel incipit esse) *album*. Unde aliqui, per defectum illius considerationis, intricarunt seipsos et expresserunt suam sententiam nimis diffuse. Et hoc est quod monet quidam subtilis loycus, quod non fiat saltus ultra terminos mediatos in qualibet propositione exponenda; nam, exponendo primo hoc verbum *incipit*, foret nimis longum opus et intricabilis expositio, quamvis contingant frequenter multas propositiones sic inferri. Et additur in regula dicta ‘secundum intellectum debitum prioris’, quoniam quandoque terminus precedit vocaliter ubi, ad congruum intellectum habendum, oportet equipollentem terminum posterius intelligi” (I have modified the punctuation). For Wyclif’s text and the context of the second half of the XIV century, cf. Maierù 1972: 402-403 with note 32. A similar passage, concerning the “regula principalis et nobilissima totius logicae”, is in Paul of Venice, *Logica magna*, 3.13 (ed. Perreiah: 104): “quando sunt plures termini mediati in aliqua propositione, semper a primo termino debet incipi istius propositionis probatio, ita quod prioris termini mediati significatio debet explicari, antequam posterioris termini mediati officium explicetur. Verbi gratia capta propositione ‘Album incipit esse Sortes’, cuius primus terminus est ille terminus resolubilis ‘album’, probanda est propositio resolutorie respectu istius termini ‘album’ sic arguendo: ‘Hoc incipit esse Sortes et hoc est vel incipit esse album’. Ideo aliqui propter defectum illius considerationis seipsos intricarunt et suam sententiam expresserunt nimis (minus *ed.*) diffuse [...]”

97. Paulus Venetus, *Logica magna*, I, 20 (ed. Franciscus de Macerata-Jacopus de Fosano: f. 73va): “Respondetur [...] qui modus, licet non precedat in voce vel in scripto, tamen precedit (procedit *ed.*) in significatione et in sua mentali cui correspondet et in ordine probandi illam propositionem ‘hominem currere est impossibile’. Sumendo enim li ‘impossibile’ in sensu composito, est primus terminus probabilis, sed in sensu diuiso est secundus [...]”; quoted in Maierù 1972: 463 n. 279.

## 5. Conclusion

To conclude, I would like to emphasize two points. The first is that the historiography of the last decades has examined the theme of mental language with reference to authors of the first part of the fourteenth century<sup>98</sup> and of the first part of the sixteenth century.<sup>99</sup> The study of authors of the later fourteenth century and of the fifteenth century clearly supports the conclusion that throughout the entire period there was a great deal of continuity in the discussion.

The second point is that the hero of my story is not Buridan, but Heytesbury. Is there a connection between Heytesbury and Buridan? Can we say that there is a Buridian version of the doctrine given by Heytesbury? I cannot answer with certainty, but I would like to know something more on this point, and in general about the reciprocal influences between Oxford and Parisian logicians during the first half of the fourteenth century.<sup>100</sup>

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98. Cf. Panaccio 1999.

99. Cf. esp. the articles referred to above, n. 11.

100. Russell L. Friedman generously informs me that in a question of his reworked Parisian commentary on the *Sentences* (composed after 1319-20) Francis of Marchia "claims that a proposition is composed of two simple acts, which are the terms, plus an act of 'compositio', all three of these acts existing at once, but with an 'order of nature' between them, since the terms act 'materialiter et dispositive' with respect to the act of 'compositio'" (cf. Francisci de Marchia *Quodlibet cum quaestionibus selectis ex Commentario in librum Sententiarum* (ed. Mariani): 531-32). Friedman suggests that Francis' position could be a testimony of a "native Parisian tradition influencing" Gregory of Rimini. Friedman's suggestion is welcome. I add just a little remark: we cannot exclude an influence on the Parisian milieu of Ockham's commentary on the second book of the *Sentences* (cf. above n. 33), which Ockham read in Oxford in 1318 or even before (cf. Introduction to the text of Ockham, OTh V, p. 26\*), although the text of Ockham's work that we possess (a *reportatio*) does not explain the terminology and the arguments Marchia puts forward.



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