
John Buridan

*Summulae
de Dialectica*

*An annotated translation, with a philosophical
introduction by Gyula Klima*

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Introduction

The Summulae of John Buridan

John Buridan [Iohannes Buridanus] (1295/1305–1358/61) was undoubtedly one of the most influential philosophers of the late Middle Ages. Nevertheless, as is usual with medieval authors, we do not know much about his life. His date and place of birth are uncertain. He was born somewhere in the diocese of Arras in Picardy, sometime around 1300. In his youth, he studied in the Collège Lemoine in Paris, probably as a recipient of a stipend for needy students. Later he joined the Arts Faculty at the University of Paris, where he obtained his license to teach sometime after 1320. During his long career at the Arts Faculty, Buridan was a highly respected Arts Master who was twice appointed rector of the university, in 1327/28 and 1340. He never moved on to the “graduate” or “professional schools” of theology, law, or medicine, which was the usual career path for professors of his time. Still, he was famous, unusually well off for a university professor (receiving at least three different benefices), and a popular public person, who according to (unfounded) contemporary gossip even had an affair with the queen (famously alluded to in Villon’s *Ballade des dames du temps jadis*). Buridan’s time of death is also uncertain. He may have died in the plague of 1358, but he certainly did not live beyond 1361, when one of his benefices went to another person.¹

Buridan’s work was arguably one of the most powerful forces behind the emergence of late medieval nominalism, eventually leading to the separation of the two major ways of doing philosophy and theology in the fifteenth century: the realist *via antiqua* (the old way) and the nominalist *via moderna* (the modern way).² To be sure, Buridan’s unwavering nominalism was never coupled with the “revolutionary” zeal of William Ockham or Nicholas of

1. For more on Buridan’s life and the influence of his work see the relevant titles in the bibliography, especially B. Michael, “Johannes Buridan: Studien zu seinem Leben, seinen Werken und zur Rezeption seiner Theorien im Europa des späten Mittelalters, Inaugural-Dissertation,” 2 vols. (Ph.D. diss., Freien Universität Berlin, 1985); E. Faral, *Jean Buridan: Maître és arts de l’Université de Paris* (Paris: Imprimerie Nationale, 1949), pp. 462–605.

2. For a good summary of the history of the separation of the “ways” and for further references see W. L. Moore, “Via Moderna,” in *Dictionary of the Middle Ages*, ed. J. R. Strayer (New York: Scribner, 1989), 12:406–9.

Autrecourt.³ It was precisely Buridan's characteristically calm and pragmatic philosophical style, however, that could establish nominalism as a viable alternative in late medieval philosophy. As T. K. Scott, the first English translator of the *Sophismata*, put it: "What Ockham had begun, Buridan continued, but with an even clearer realization of ends in view. . . . If Ockham initiated a new way of doing philosophy, Buridan is already a man of the new way. If Ockham was the evangel of a new creed, Buridan is inescapably its stolid practitioner. . . . He is a nominalist (a much more radical one than Ockham), but he is less concerned to defend nominalism than to use it. Elaboration of philosophical overviews is replaced by care for important philosophical detail."⁴

The historical influence of Buridan's works on late medieval and early modern thought can hardly be overestimated. Not only did his work have a lasting impact at his home university, the University of Paris, but through the works and teaching of his students his ideas spread all over Europe, from Scotland to Poland, from Germany to Italy and Spain. Paris soon became dominated by Buridan's nominalist logic, owing in particular to the activity of Peter of Ailly (1350–1420), chancellor of the university and a staunch defender of the nominalist approach.⁵ Indeed, Buridan's approach became so dominant that in 1474 King Louis XI felt compelled to issue a decree banning the teaching of nominalism in favor of the great realists Albert, Aquinas, Scotus, Bonaventure, Alexander of Hales, and Giles of Rome. The ban, as usual, produced just the opposite of its desired effect, yielding an even stronger rise in interest in nominalist logic, so that the decree had to be rescinded in 1481.⁶ But Buri-

3. For detailed analyses of the complicated doctrinal relationships between these authors, see E. A. Moody, "Ockham, Buridan, and Nicholas of Autrecourt," in *Inquiries into Medieval Philosophy*, ed. J. Ross (Westport, Conn.: Greenwood, 1971), pp. 275–315; T. K. Scott, "Nicholas of Autrecourt, Buridan and Ockhamism," in *Journal of the History of Philosophy* 9 (1971): 15–41; W. J. Courtenay and K. Tachau, "Ockham, Ockhamists and the English-German Nation at Paris, 1339–1341," *History of Universities* 2 (1982): 53–96; W. J. Courtenay, "The Reception of Ockham's Thought at the University of Paris," in *Preuve et raisons à l'Université de Paris*, ed. Z. Kaluza and P. Vignaux (Paris: Vrin, 1984), pp. 43–64; W. J. Courtenay, "Was There an Ockhamist School?" in *Philosophy and Learning: Universities in the Middle Ages*, ed. M. J. F. M. Hoenen, J. H. J. Schneider, and G. Wieland (Leiden: Brill, 1995), pp. 263–92.

4. John Buridan, *Sophisms on Meaning and Truth*, trans. T. K. Scott (New York: Appleton-Century-Crofts, 1966), p. 13.

5. Peter of Ailly's two important logical works exist in English translation with an excellent introduction and ample notes: Peter of Ailly, *Concepts and Insolubles: An Annotated Translation*, trans. P. V. Spade. (Dordrecht: Reidel, 1980).

6. For more details on the circumstances and contents of the ban see F. Ehrle, "Der Senten-

dan's influence was quite soon to be felt in more remote parts of Europe as well. Students (or younger colleagues) of Buridan such as Albert of Saxony, the first rector of the University of Vienna (founded in 1365), and Marsilius of Inghen, rector of the University of Heidelberg (founded in 1386), quite early implemented Buridan's ideas in the newly established universities of central Europe, where they reigned supreme for the next two centuries, as the wealth of the surviving manuscripts of Buridan's works in that region also testifies.⁷ The oldest statutes of the University of Cologne (opened in 1389) prescribed for bachelors the reading of Buridan's or Peter of Spain's *Summulae*, although in the first quarter of the fifteenth century the realist faction of the faculty prevailed and remained strong throughout the century. The influence of Buridan and his fellow nominalists was equally strong or stronger, however, in Erfurt, Leipzig, Rostock, and other German universities established in the fifteenth century.⁸ In general, if nominalism was not the dominant doctrine for some period at these universities, then it either coexisted with the *via antiqua* in the curricula, or it was at least a theoretical alternative that realists definitely had to reckon with. In Italy, Buridan's nominalism, along with the similar teachings of his students and of several English logicians, was made known through the works of Paul of Venice and his student Paul of Pergula in Padua. In Spain, Alcalá and Salamanca came to be the sixteenth-century strongholds of nominalism, as a result of the return of a number of Spanish scholars to their homeland as teachers upon completing their studies in Paris.⁹ But the spread of Buridan's ideas was not stopped by the English Channel, either. Several influential Scottish philosophers, theologians, and logicians of the period studied in Paris, so at the university of St. Andrews the *doctrina Buridani* was

zenkommentar Peters von Candia, des Pisaner Papstes Alexanders V.," *Franziskanische Studien* 9 (1925). For the impact of the ban on the spreading of Buridan's ideas see A. L. Gabriel, *The Paris Studium: Robert of Sorbonne and His Legacy* (Frankfurt am Main: Verlag Josef Knecht, 1992), esp. pp. 121–35.

7. Compare M. Markowski, "Johannes Buridans Kommentar zu Aristoteles' Organon in Mitteleuropas Bibliotheken," in *The Logic of John Buridan*, ed. J. Pinborg (Copenhagen: Museum Tusculanum, 1976), pp. 9–20; M. Markowski, *Buridanica quae in codicibus manu scriptis bibliothecarum Monacensium asservantur* (Breslau: Ossolineum, 1981); R. Palacz, "Les traités de Jean Buridan," conservés dans les manuscrits de la Bibliothèque du Chapitre à Prague," *Mediaevalia Philosophica Polonorum* 14 (1970): 53–54.

8. Compare M. Markowski, "L'influence de Jean Buridan sur les universités d'Europe centrale," in *Preuve et raisons à l'Université de Paris*, ed. Z. Kaluza and P. Vignaux (Paris: Vrin, 1984), pp. 149–163; Gabriel, *Paris Studium*, chap. 2, pp. 135–67.

9. See E. J. Ashworth, *Language and Logic in the Post-Medieval Period* (Dordrecht: Reidel, 1974), pp. 4–8.

exclusively preferred to the *doctrina Alberti* until Bishop Wardlaw persuaded the faculty in 1438 to allow the *via Alberti*.¹⁰

Despite their tremendous influence on late Scholastic thought, however, the general decline of Scholasticism and the emergence of a new scientific and philosophical attitude in the seventeenth and eighteenth centuries did not spare Buridan's works. Although there were scattered publications of his works, most notably of his *Summulae*, as late as in 1637, and some even in 1740, they gradually came to be looked on with scorn, along with the rest of the Scholastic output, as containing useless cavils not worthy of serious philosophical consideration.

That in this way Buridan's works were finally doomed to near-oblivion by the anti-Scholastic sentiments of early modern philosophy cannot be taken as evidence of their lack of genuine theoretical importance any more than the general decline of logic in that period could be taken to show the irrelevance of logic to philosophical analysis. As Peter King, the first English translator of Buridan's *Treatise on Suppositions* and *Treatise on Consequences* put it: "Buridan's medieval voice speaks directly to modern concerns: the attempt to create a genuinely nominalistic semantics; paradoxes of self-reference; the nature of inferential connections; canonical language; meaning and reference; the theory of valid argument. It is to be hoped that Buridan can reclaim his lost reputation among contemporary philosophers for his penetrating and incisive views on these and other matters."¹¹

The relevance of Buridan's ideas to contemporary philosophical concerns is also shown by a steadily growing number of books and scholarly papers published on his work, produced not only by historians of medieval philosophy but also by historically minded philosophers who regard Buridan's ideas as providing genuine clues to problems of contemporary philosophy.

The present volume contains the first annotated translation of the entire text of John Buridan's monumental contribution to medieval logic, the *Summulae de Dialectica*. The name *Summulae* is the abbreviation of *Summulae de Dialectica*, the title most commonly used to refer to Buridan's work.¹² But there are other variants of the title as well. Hubien's text, which served as the primary basis for this translation, bears the title *Lectura de Summa Logicae*. The

10. See H. Rashdall, *The Universities of Europe in the Middle Ages* (Oxford: Clarendon, 1936), 2:305. Compare A. Broadie, *George Lokert, Late-Scholastic Logician* (Edinburgh: Edinburgh University Press, 1983); A. Broadie, *The Circle of John Mair: Logic and Logicians in Pre-Reformation Scotland* (Oxford: Clarendon; New York: Oxford University Press, 1985).

11. P. King, *Jean Buridan's Logic* (Dordrecht: Reidel, 1985), p. 4.

12. Indeed, this is how Buridan himself refers to the first eight treatises of his work in the *Sophismata*, e.g., chap. 1, To the third sophism, P.2.2, chap. 3, Fifth sophism, P.1, etc.

term *summa* (lit., sum, summary), which refers to a rigorous, systematic treatment of a whole field by a scholastic master, is notoriously difficult to translate (in fact, it normally goes untranslated, as in Aquinas's *Summa Theologiae*). In any case, the term *summulae* is the plural, diminutive form of *summa*, which indicates compendiousness, so *Summulae de Dialectica* might be rendered as "Compendia of Dialectics" (indeed, the 1499 Venice edition bears the title *Compendium Totius Logicae*, "Compendium of the Entire [Art of] Logic"). The title of Hubien's text, which may be rendered as "Lectures on the Summa of Logic," indicates that Buridan's *Summulae* was the textbook he wrote and used for his logic courses over the years of his long teaching career at Paris. In fact, the term *summulae* was widely used to refer in general to the short, summary treatments of various subjects in logic that were the standard by-products of the teaching activity of Masters of Arts. Accordingly, practitioners of the art expounded in these *summulae* were often referred to as *summulistae*.

The whole work consists of nine treatises (the ninth of which, the *Sophismata*, is sometimes treated by Buridan as the last part of the *Summulae*, sometimes as an independent treatise), providing a systematic account of Buridan's nominalist logic, which also incorporates his intriguing treatment of several issues we would classify as belonging to the fields of the philosophy of science and the philosophy of mind and language.

The first eight treatises of the *Summulae* ostensibly provide Buridan's running commentary on Peter of Spain's *Tractatus* (also known as *Summulae Logicales*).¹³ But Buridan in fact almost completely rewrote and reorganized the main text for his commentary, apparently retaining only the parts of Peter's text that he found both essential and theoretically acceptable, while adding his own text where Peter's text did not cover some important material (as in the case of the entire eighth treatise, on divisions, definitions and demonstrations), or replacing Peter's text with his own where his views radically differed from those of the realist master (as in the case of the entire fourth treatise, on the properties of terms).¹⁴

Indeed, Buridan's main text was probably regarded as quite original, de-

13. Peter of Spain, *Tractatus*, called afterwards *Summule logicales*, ed. L. M. de Rijk (Assen: van Gorcum, 1972). As Professor de Rijk in the introduction to his critical edition of Treatise 8 remarks: "It should be noted, incidentally, that there are convincing arguments to identify the author of the famous textbook with a Spanish Black Friar rather than with the Portuguese Pope John XXI. See Angel d'Ors, 'Petrus Hispanus O.P., Auctor Summularum' in *Vivarium* 35 (1997), pp. 21–71."

14. For detailed comparisons of Peter's and Buridan's texts and their doctrinal contents, see the excellent introductory essays of the critical editions of the individual treatises of Buridan's *Summulae*.

serving a commentary in its own right; thus, early printed editions of the *Summulae* provided only Buridan's main text, replacing his commentary with the more concise commentary of John Dorp. As a result, Buridan's entire work has so far never appeared in a printed edition.

In the midst of the recent surge of interest in medieval logic, however, Buridan's text was made available for interested scholars all over the world through the efforts of Hubert Hubien,¹⁵ who produced a working text of the *Summulae*. This text has been widely circulated among Buridan scholars (in the form of ASCII files on computer diskettes). Professor Hubien's text of the *Summulae*, although it lacked a critical apparatus and was based on relatively few but carefully selected manuscripts, had the virtue of (near) completeness¹⁶ and the reputation of being reliable enough for the purpose of research into Buridan's logic.

But there was still an obvious need for a critical edition of the *Summulae*. In 1986 a team of scholars formed the Buridan Society with the aim of producing such a volume.¹⁷ So far only treatises 2, 3 and 4 have appeared.¹⁸

Therefore, when the opportunity first arose for preparing an English translation of the entire *Summulae* for the Yale Library of Medieval Philosophy, in 1994, the obvious decision was to base the translation on the Hubien text and to contact the editors of the individual treatises to clarify and emend the occasional obscure points of that text. Thus, the translation of the first seven treatises is still primarily based on the Hubien text, collated with, and emended where necessary on the basis of, the available critical texts. On the other hand, treatise 8 in the Hubien text was incomplete. Luckily, however, L. M. de Rijk's work on this treatise coincided with this project; thus the translation of treatise 8 is based on de Rijk's (as yet not entirely finalized) text. The translation of treatise 9 is also based on the critical text, prepared by F. Pironet.

Hubien's text does not contain section headings, but the editors of the critical text have provided them. To render the structure of the whole work more perspicuous, I have provided the rest of the section titles.

15. Professor Hubien has published the critical text of Buridan's *Treatise on Consequences*: J. Buridan, *Tractatus de Consequentibus*, ed. H. Hubien (Louvain: Publications universitaires, 1976), translated in P. King, *Jean Buridan's Logic* (Dordrecht: Reidel, 1985).

16. In the Hubien text, Treatise 8 was incomplete.

17. The founding members of the Society were E. P. Bos, H. A. G. Braakhuis, S. Ebbesen, H. Hubien, R. van der Lecq, F. Pironet, L. M. de Rijk, and J. M. M. H. Thijssen.

18. J. Buridan, *Summulae: De Praedicabilibus*, ed. L. M. de Rijk (Nijmegen: Ingenium, 1995); J. Buridan, *Summulae: In Praedicamenta*, ed. E. P. Bos (Nijmegen: Ingenium, 1994); J. Buridan, *Summulae: De Suppositionibus*, ed. R. van der Lecq (Nijmegen: Ingenium, 1998).

The nominalist doctrine of the Summulae

In this introductory essay I can only present a brief overview of some of the principal points of Buridan's doctrine, especially those that demand some preliminary explanation for a fuller understanding of the peculiarities of the subsequent text.

First, some words about the overall structure of the *Summulae* are in order. The first eight treatises contain the systematic exposition of Buridan's logical doctrine in the form of a running commentary on the main text. This format demands a multilevel division of the text: the treatises are divided into chapters, the chapters into parts (usually one-paragraph blocks of text addressing one determinate issue, but in fact, occasionally the parts are subdivided into subparts), and the parts into sections (usually single sentences or clauses of sentences of the part). At the beginning of each chapter, Buridan states the division of the chapter into its parts, referring to the part by its opening words. In the translation this somewhat clumsy system of cross-references is omitted in favor of the multilevel numbering of Buridan's subdivisions. The ninth treatise, the *Sophismata*, is best characterized as a collection of logical exercises, perhaps used to enhance the skills and deepen the understanding of more advanced students. This may explain its rather different structure, centered on the discussion of problem sentences gathered thematically according to the characteristic difficulty they involve, as well as the rather ambiguous relationship between this treatise and the rest of the *Summulae*.

There is a clear, but in its details somewhat loose, correspondence between the first eight treatises of the *Summulae* and the books of the Aristotelian *Organon*, supplemented by Porphyry's *Isagoge*.¹⁹

19. The name *Organon* (Gr.: tool, instrument, organ) indicates the conception of logic as a universal methodological tool, also reflected in the opening sentence of Peter of Spain's *Tractatus*: "Dialectic is the art of arts, having access to the principles of all methods." The traditional order of the books of the *Organon* is based on the idea of moving from what is simple and formal to what is complex and material, each subsequent book building on the issues covered in the previous ones: *Isagoge* (dealing with the general classification of all predicable terms regardless of what they signify, considering only some formal conditions of their predicability concerning their inferiors), *Categories* (dealing with the classification of simple categorematic terms in terms of what they signify), *On Interpretation* (dealing with propositions consisting primarily of the terms dealt with earlier), *Prior Analytics* (dealing with the formal validity of syllogisms constructed out of the propositions discussed earlier), *Posterior Analytics* (dealing with the soundness of demonstrations based on valid syllogisms), *Topics* (dealing with probable arguments, the probability of which depends on the signification of their terms), and the *Sophistical Refutations* (dealing with the detection of fallacious reason-

The first treatise corresponds to Aristotle's *On Interpretation*, the second to the *Isagoge*, the third to the *Categories*, the fifth to the *Prior Analytics* (but it also contains material related to Boethius's *On Hypothetical Syllogisms*), the sixth to the *Topics*, and the seventh to the *Sophistical Refutations*. The eighth treatise corresponds to the *Posterior Analytics*, but it also contains material from Boethius's logical works, especially his *On Division*, as well as Buridan's own rather original theory of definitions. Finally, the fourth treatise contains Buridan's highly original treatment of topics characteristic of medieval terminist logic, namely, the celebrated properties of terms: signification, supposition, appellation, ampliation, and restriction.²⁰

The first treatise covers certain preliminaries, such as the definitions of noun and verb as the primary components of propositions, which, in turn, being the bearers of truth and falsity, are the primary concern of logic, the art that serves as a general tool for reaching truth and avoiding falsity in any field of knowledge.

The prefatory character of these opening remarks also allows Buridan to introduce some of his own characteristic tenets at the outset, laying the foundation for his uncompromising nominalist doctrine. Most important from this point of view is his emphasis on the (semantic) primacy of mental language and the consequent treatment of written and spoken propositions as conventionally assigned token-symbols, which designate the primary bearers of truth and falsity, namely, mental propositions, construed as singular acts of individual human minds.

For Buridan (and, for that matter, medieval philosophers in general), the entities primarily accounting for the possibility of reasoning in any human language are acts of the human mind. But before anyone should jump to conclusions on the basis of this remark and dismiss Buridan's logic as some sort of subjectivist psychologism, relying on "spooky" mental entities, let me hasten to point out that Buridan's commitment to mental language in its semantic function has nothing to do with such modern worries.

For medieval logicians, the commitment to mental language in its semantic function is simply the recognition of the trivial fact that articulate sounds in themselves are not meaningful: a conventionally significant utterance is meaningful only by virtue of its being associated with (or subordinated to) some cognitive act of a human mind. Such a cognitive act, a concept, is simply

ings). As we shall see, Buridan's treatises do not follow this order, probably for pedagogical reasons.

20. For the early history of this original medieval contribution to logical theory see L. M. de Rijk, *Logica Modernorum: A Contribution to the History of Early Terminist Logic*, 3 vols. (Assen: van Gorcum, 1962–67).

something on account of which a human being conceives of, or is in some way aware of, something.²¹ Thus, a meaningful utterance ultimately signifies just that thing or those things which it makes anyone who understands it aware of, that is, anyone who has the corresponding concept and knows that the utterance in question is associated in common usage with that concept.²² In other words, an utterance is meaningful by virtue of its being subordinated to a human concept, and thus it will immediately signify that human concept, but ultimately it will signify the object or objects of that concept, whatever that concept represents. Therefore, according to Buridan, what a meaningful utterance signifies is neither simply “an extramental thing” nor simply something “in the head.” For a meaningful utterance immediately signifies (or is subordinated to) a concept (whatever a concept is in its own nature), but in virtue of this immediate signification it ultimately signifies that thing which is (or those things which are) conceived of, naturally signified, or represented by this concept (whatever it is or whatever they are in their nature), in the way it is (or they are) represented.²³ In fact, Buridan also considers an analogous relation between utterances and inscriptions, as illustrated by figure 1.

Given that human concepts for Buridan are individual acts of individual

21. Note that in this connection it is entirely irrelevant what sorts of entities concepts are in their own nature. Be it a modification of an immaterial mind or just some sort of brain process, a concept is simply something that enables a human being to have a certain type of awareness of something that without this concept he or she would not have. Thus, if I have the concept of money, I can be aware of certain tiny metal discs and some colored pieces of paper as being money, but otherwise I literally “have no idea” that those pieces of metal and paper are money and do not know what one can do with them in a society in which they are recognized as such.

22. Accordingly, if I do have the concept of money, but I do not know that the utterance ‘*argent*’ is subordinated to this concept in French, then I still do not know that on hearing this utterance I should use that concept, that is, that I should think of money. Indeed, it may also happen that I know that this utterance is subordinated in French to the concept of money, but I do not know that it is also subordinated to the concept of silver, which is the case when I do not have full mastery of French.

23. I must note here that Buridan in the text never uses the Latin equivalent of ‘represent’ (*repraesentat*) to indicate the relation between concepts and things. (I owe thanks to Ria van der Lecq for alerting me to this point.) When he uses the word, he uses it to indicate the relation between spoken and mental terms or the relation between a picture and that which it is a picture of (the former are said to represent the latter). Buridan would rather talk about an object being conceived (*concupitur*), or naturally signified (*significatur naturaliter*), by a concept. Nevertheless, in English, it is natural to speak about the representative function of concepts, and hence about the relation between concepts and their objects as being the relation of representation. So I use this English terminology to indicate what Buridan would talk about as the relation of natural signification between concept and thing.

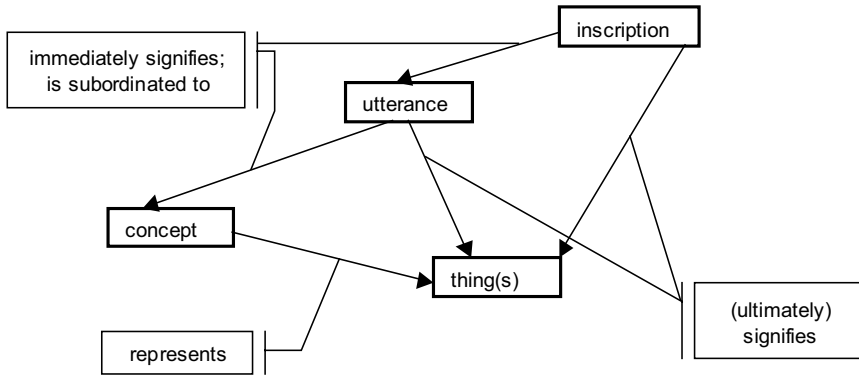


Fig. 1. The Aristotelian "Semantic Triangle"

human minds, however, this conception may immediately give rise to worries about the objectivity of meaning or signification. For if utterances are just labels of our mental acts, could not we switch these labels at will (*ad placitum*), whenever we want?

Buridan's answer is that this is in fact the case. We really are able to impose any utterance on any concept at will, but, of course, we can understand each other only if we manage to attach the same utterances to the same concepts in the actual use of a common language. So, although any user of a language has the power to impose any utterance on any concept he or she has, the utterance will become generally understood by other users only if the usage "catches on," that is, only if this utterance will be received in common usage as being subordinated to that same concept, namely, to an act of my mind by which I conceive of the same thing or things in the same way as you do by a corresponding act of your mind, and *vice versa*.²⁴ Furthermore, once such a usage is established, one can again use the same utterance improperly, not in accordance with that usage but as subordinated to another concept, say, analogically, metaphorically, ironically or, perhaps, simply incompetently. Given

24. Such distinct, individual mental acts count as the same concept if and only if they represent the same things in the same way. So they are not, strictly speaking, numerically the same, but they are of the same kind in their representative function. This is why Buridan would speak of similar concepts rather than of the same concept (cf. text at n. 35 in *Sophismata* chap. 2). But speaking of the same concept with the proper understanding will not do any theoretical harm; it is just simpler and more natural. In any case, Buridan would be the first to agree that we can use the phrase 'the same concept' *ad placitum* to indicate distinct mental acts that represent the same things in the same way and that therefore are indistinguishable in their representative function, although they are not strictly one and the same entity.

this dynamic conception of signification based on the interplay between individual understanding and common usage, Buridan may duly be credited with giving concrete meaning to the idea expressed by the contemporary slogan “meaning is use.”²⁵

Having established the primacy of mental language in his semantics in the above-described manner, Buridan puts it to heavy theoretical use in developing his nominalist conception of the relations between mind, language, and reality.

This is obvious first of all in his treatment of what we would refer to as the issue of *compositionality*. We all know that we are able to understand complex phrases we have never heard before, on the basis of our understanding the meanings of their component parts. Thus, it seems to be an obvious feature of complex phrases that their meaning is determined by the meanings of their components. It is this feature of complex phrases that we refer to as compositionality, which in the technical language of contemporary semantics is usually expressed in the more general form that the semantic value of a complex phrase is a function of the semantic values of its components. But in view of Buridan’s two-tiered conception of signification, in his semantics compositionality will not be just the simple issue of determining the semantic values of complex phrases as functions of the semantic values of their components. In fact, if an utterance is imposed as a whole on a complex concept, this conception clearly allows for complexity and so for compositionality on the mental level without a corresponding complexity on the syntactic level of spoken phrases.²⁶

These considerations presuppose the distinction between simple and complex concepts. A simple concept is one that does not consist of further concepts, whereas a complex concept is one consisting of several simple concepts.

To be sure, whenever Buridan is talking about complexity on the mental level, we need not take him as attributing the same sort of syntactic complexity to a complex concept as we can observe in spoken or written complex

25. Contemporary philosophers of mind and language who are interested in the interplay between individual understanding and common usage may find Buridan’s ideas particularly intriguing. For example, philosophers interested in Fodor’s conception of mental language or those dealing with discourse representation semantics may find many interesting overlaps between Buridan’s and their own concerns.

26. Besides the obvious examples of using ad hoc abbreviations for the purposes of a discussion, or using simple words for their nominal definition (the significance of which from the point of view of Buridan’s nominalism will be discussed below), Buridan goes as far as to claim that a barrel hoop hanging in front of a tavern is made the conventional symbol of the mental proposition “Wine is sold in this house.” See 8.2.3. and n. 142 to *Sophismata*. For the converse case see n. 35 below.

expressions. The complexity of a complex concept corresponding to a complex spoken or written expression is nothing but the functional dependence of its semantic values²⁷ on the semantic values of the simple concepts corresponding to the syntactic parts of the syntactically complex spoken or written expression. But this semantic complexity of a complex concept clearly need not be carried by any sort of syntactic complexity of its constituents, for the simple concepts corresponding to the syntactic parts of the complex spoken or written expression on which the signification of the complex concept depends need not be the syntactic constituents of this merely semantically complex concept. In fact, just as a syntactically simple spoken or written term can be semantically complex, because its semantic values are dependent on the semantic values of other simple terms that are not its syntactic parts, so there is no inconsistency in attributing semantic complexity to ontologically (and hence also syntactically) simple mental acts on the basis of the dependence of their semantic values on the semantic values of other simple concepts, which are not their syntactic parts.

In case anyone has doubts concerning the viability of this distinction between syntactic and semantic complexity, and whether it is indeed inherent in Buridan's conception, let us briefly consider here Buridan's own discussion of what he describes as the simplicity of the name 'Iliad' from the grammarian's point of view (syntactic simplicity) and its complexity from the logician's point of view (semantic complexity).²⁸

The name 'Iliad' is syntactically simple, because it has no separately significative parts. (Although of course it does have some parts, namely, its syllables.) Still, if it is made to signify the same things in the same manner as does the whole Trojan story, then of course it becomes semantically complex, because its semantic values will be functionally dependent on the semantic values of all the simple words that make up that story but are not its syntactic parts.²⁹ Thus, in an analogous manner, we can also have an ontologically

27. I am talking about semantic values in the plural here because Buridan attributes several sorts of semantic values to concepts as well as to written or spoken words and expressions. Indeed, he attributes to them signification and supposition, or even connotation and appellation, and thus to universal categorematic concepts he also attributes several significata or connotata, and hence, depending on the actual context of its use, potentially several supposita or appellata. These technical notions of Buridan's semantics will be explained in due course. In any case, whatever sorts of semantic values are concerned, the complexity of a complex concept consists precisely in the fact that its semantic values are dependent on the relevant semantic values of other concepts.

28. See 1.1.6, 1.2.1, esp. pp. 13–16 below (cf. also p. 839).

29. To be sure, since it does have some parts, the same name could be made syntactically complex, e.g., by imposing its syllables separately to signify the same things that various

and hence also syntactically simple concept (namely, a simple mental act that has no parts and hence no separately significative parts either), which nevertheless may be semantically complex because of its representative function (that is, its semantic value) being dependent on other, semantically and syntactically simple concepts. But then, on the basis of this analogy, Buridan is clearly entitled to speak of these concepts as the (semantic) constituents that make up a (semantically) complex concept, without thereby compromising their ontological and syntactical simplicity.³⁰

The simple concepts making up complex concepts are usually combined by means of what Buridan calls *complexive concepts*.³¹ Complexive concepts are

parts of the poem do. In general, the syntactic parts of a syntactically complex expression are any ontologically integral (say, temporal or spatial) parts of the thing that functions as the expression in question such that they have semantic values of their own that enter into the calculation of the semantic value of the complex expression. Accordingly, in the written sentence 'The cat is on the pole', the strings of letters 'cat' and 'pole' function as its syntactic parts, contributing to the meaning of the whole sentence by their own meaning. By contrast, in the word 'polecat', the same strings do not function as syntactic parts, since they do not contribute to the meaning of the whole by their own meaning. On the other hand, if we were to agree that the word 'polecat' should no longer be used in its ordinary sense, in which it normally refers to a particular kind of stinky animal, but as an abbreviation of the sentence 'The cat is on the pole', then the string 'polecat' would still be syntactically simple (although it would be semantically complex, for its meaning would be dependent on the meanings of the parts of that sentence), for it would still not have its own syntactic parts in the above-described sense; but it would become syntactically complex if we were also to agree, say, that its first syllable should henceforth mean the same as 'the cat' and its second syllable the same as 'is on the pole', for then it would have parts with their own meanings determining the meaning of the whole. Compare Buridan's corresponding discussion of *dominus* and *paterfamilias* on p. 16.

30. Compare pp. 428, 849 below. For more discussion of the distinction between syntactic and semantic complexity, and for a formal reconstruction of the idea of conceptual composition and its use in Buridan's semantics in the framework of a model theoretical semantics, see G. Klima, "Latin as a Formal Language: Outlines of a Buridianian Semantics," *Cahiers de l'Institut du Moyen-Âge Grec et Latin* 61 (1991): 78–106. I was recently alerted to the importance of this distinction for the correct understanding of the medieval doctrine of mental language by Yiwei Zheng. See Y. Zheng, "Metaphysical Simplicity and Semantical Complexity of Connotative Terms in Ockham's Mental Language," *Modern Schoolman* 75 (1998): 253–64.

31. Perhaps not all complex concepts need to be the result of combining simple concepts by means of complexive concepts. Simple adjectival concepts, which Buridan discusses somewhat tentatively at length in 8.2.3, may apparently form complex concepts with substantival concepts without the mediation of any complexive concepts. Indeed, perhaps the same goes for concepts corresponding to terms in the genitive case (and probably other

acts of the mind the function of which is not to represent something by themselves but rather to join several concepts into a complex concept. Such complexive concepts (most important, the concept corresponding to the copula)³² are *syncategorematic* concepts, that is, concepts whose function is not to represent something by themselves but to modify the representative function of *per se* representative concepts, also referred to as *categorematic* concepts.³³

But then it can happen that even if a spoken phrase is complex, not all of its components have extramental semantic values, but some of them indicate merely complexive concepts. Therefore it is possible that two expressions may signify exactly the same things outside the mind (*ad extra*) despite the fact that they may signify different concepts in the mind (*apud mentem*), the difference being accounted for by the different syncategorematic concepts. For example,

oblique cases, see 8.2.4.), unless we think of such a concept as a complex concept already consisting of the concept corresponding to the term in the nominative case and to the complexive concept corresponding to the case itself. The corresponding possessive construction in English, e.g., formed with the preposition *of*, would probably be more naturally treated in the second way. These are intriguing questions deserving separate study. In fact, such questions were extensively discussed by late medieval logicians, taking their cue primarily from Ockham and Buridan. Compare Peter of Ailly, *Concepts and Insolubles*, trans. P. V. Spade (Dordrecht: Reidel, 1980), esp. pp. 18–19, 24–26; E. J. Ashworth, “The Structure of Mental Language,” *Vivarium* 20 (1982): 59–83.

32. Other examples of complexive concepts are the logical functions of conjunction, disjunction, conditional, and so on. The copula is (some form of) the verb ‘to be’, or its equivalent, required by the surface syntax of many languages to form sentences out of terms. To be sure, not all languages have such a requirement. For example, neither Hungarian nor Russian has this requirement despite the fact that they are unrelated languages. This need not imply, however, that on the mental level no complexive concept is required to form mental propositions even for users of these languages. In fact, a spoken copula (an equivalent of the English ‘is’) is not required in Hungarian in the third person in the present tense and in the indicative mood (both in the singular and plural forms), but it is required in the other persons, tenses, and moods. Still, we should note here that Buridan’s dynamic conception of mental language allows for the possibility that different users of different languages, or even of the same language, can have more or less different conceptual apparatuses. So “Mentalese” in Buridan’s conception need not be construed as a universal, uniform “ideal language” in people’s minds, only labeled differently in various spoken languages. This idea has far-reaching consequences for the philosophy of mind and language that cannot be dealt with here. I discuss some of these implications in my “Latin as a Formal Language” and in Essay V of G. Klima, *Ars Artium: Essays in Philosophical Semantics, Medieval and Modern* (Budapest: Institute of Philosophy of the Hungarian Academy, 1988).

33. For Buridan’s detailed discussion of the distinction between categorematic and syncategorematic terms and concepts, see 4.2.3. For his discussions of complexive concepts, see, e.g., 1.1.6, 1.2.3, 4.2.4, 4.3.4.

as Buridan argues, the propositions 'God is God' and 'God is not God' signify exactly one and the same thing outside of the mind, namely, God.³⁴ But of course they do not have the same signification in the mind, for the mental proposition designated by the first involves an affirmative copula, whereas that designated by the second involves a negative copula, whence they are contradictories. Indeed, for the same reason, despite the fact that it is again one and the same simple entity that is signified by the simple term 'God', Buridan is not committed to the absurd claim that the aforementioned propositions signify the same as this simple term, for although they all signify the same *ad extra*, they do not signify the same *apud mentem*.

This simple example nicely illustrates Buridan's general tactic of reducing the ontological commitment of his logic: the syntactic or semantic complexity of a spoken or written expression may reflect (semantic) complexity on the mental level but need not reflect any corresponding complexity on the ontological level.³⁵ So, by means of his two-tiered semantics, Buridan can consistently maintain both that these propositions are not synonymous, because they are not subordinated to the same concept, and that they do not signify in external reality anything over and above what the term 'God' signifies. The *only* thing that distinguishes these two propositions in their semantic function from this simple term is that they have separately meaningful parts, because these parts are systematically associated with distinct concepts. The term 'God' is subordinated to the concept by which we conceive of God in an absolute manner. The copula 'is' is subordinated to the simple complexive concept that forms the mental proposition affirming the identity of the thing

34. See 1.1.6, 4.2.3, *Sophismata* chap. 1, to the Third sophism. This example and its Buridanian analysis also have an important historical aspect, as is clear from the following quotation from Peter of Ailly: "suppose someone should object to these conclusions that, among the articles condemned at Paris against Master Nicholas of Autrecourt, one is 'To say [that] the sentences "God exists" [and] "God does not exist" signify the same thing, although in different ways, is an error.' I reply that many of his theses were condemned (*multa fuerunt condemnata contra eum*) out of jealousy, and yet later on were publicly conceded in the schools." Peter of Ailly, *Concepts and Insolubles*, p. 58. sec. 203. (According to P. V. Spade's note, the condemnation is dated 1346.)

35. To be sure, syntactic complexity need not necessarily reflect complexity on the mental level, either. For example, the English phrase "man's best friend" is not understood in accordance with its common usage, according to which it means the same as 'dog', if it is understood compositionally, that is, as corresponding to the complex concept made up of the concepts corresponding to the single words of this phrase. So here we have a case where an originally complex expression is transferred as a whole *ad placitum*, by common usage, to designate a simple concept (when, of course, it no longer functions as a complex expression in that usage). Compare 1.1.6.

conceived by the concept subordinated to the subject term and of the thing conceived by the concept subordinated to the predicate term of the spoken proposition (in this case the two terms and the corresponding concepts are the same). Finally, in the case of the negative proposition, the negation 'not' is subordinated to the syncategorematic concept that, applied to the concept of the copula, denies the identity affirmed by the affirmative proposition.

In view of this, for Buridan the logical import of any expression is primarily determined by the sort of conceptual structures conveyed by its syntactical features. Thus, users of a spoken language must rely on such syntactical clues to figure out the conceptual structure determining the logical import of the expressions of the language. Given the systematic connection between these syntactical clues and the corresponding conceptual constructions as established by common usage, the task is not impossible. But in view of all the irregularities and ambiguities of actual spoken languages, in which the commonly (and, for the most part, only tacitly and unreflectively) acknowledged rules of syntax and semantics are not only mechanically applied but also dynamically changed by the interaction of individual users, the task can be rather difficult. Indeed, occasionally, when theoretically unsophisticated common usage does not yield unambiguous rules, Buridan, following common Scholastic practice, is also willing to indulge in "legislation," stipulating just what syntactical constructions are supposed to convey what sort of conceptual constructions (for the sake of precise expression in philosophical or scientific discourse).

The result of this is what is often described as a "regimented," technical Latin, in which, for instance, differences of word order can function as syntactic indicators of different conceptual constructions, which in turn may determine different semantic values for the expressions subordinated to them. In this way, for example, the sentences (1) *Homo non est asinus* ('A man is not a donkey') and (2) *Homo est non asinus* ('A man is a non-donkey') will correspond to different mental propositions that will differ only in their structure, which results from the different ways in which the simple concepts involved in them are construed with one another, as indicated by the different word order of these sentences (i.e., spoken or written propositions). The mental proposition corresponding to (1) can be regarded as being obtained by first applying the complexive concept of the copula to the categorematic concepts of man and donkey, and then applying the syncategorematic concept of negation to the resulting complex concept, whence the negation of the copula in the surface syntax must yield the negation of the whole proposition. On the other hand, the mental proposition corresponding to (2) can be obtained by first applying the concept of negation to the concept of donkey (which is a

case of what Buridan, following Aristotle, calls *infinitizing negation*) and then applying the concept of the copula to the concept of man and to the complex of the negation and the concept of donkey.³⁶

According to Buridan, the difference in the logical import of these two constructions, which otherwise contain exactly the same constituents, is that (1) is a negative proposition that can be true even if no human beings exist, but (2) is affirmative and hence can be true only if there are human beings (who are non-donkeys). Thus, in this case, the difference in word order indicates a difference in conceptual structure, which in turn yields the further difference in what is required for the truth or falsity of the resulting mental propositions.

Even though in this way truth and falsity are primarily the attributes of the mental propositions designated by the corresponding spoken or written propositions (sentences), the latter can also be said to be true, insofar as they are the (complex) signs of the former. In fact, the corresponding sentences of another language can also be said to be true for the same reason. Thus (1') 'A man is not a donkey' and (2') 'A man is a non-donkey' are equivalent to (1) and (2), respectively, because they designate mental propositions that are similar in structure to the ones designated by the corresponding Latin sentences.

Buridan's reason for treating these sentences in this way is simple: for him the complexive concept to which the affirmative copula is subordinated signifies the identity of the thing or things referred to by the terms flanking the copula.³⁷ Now, clearly, if there is nothing for these terms to refer to, then they cannot refer to the same thing or things, and so the affirmative proposition stating this identity must be false. But in that case the contradictory negative proposition must be true. We have just seen, however, that on the basis of how the mental proposition corresponding to (1) is constructed, the negation of the copula in it produces precisely the contradictory of the corresponding

36. The somewhat vague notion of "applying" a concept to another introduced here can acquire precise meaning in a model-theoretical reconstruction of Buridan's semantics in which concepts in their semantic function are represented by semantic functions defined in a model, and then applying one concept to another will be a case of applying a function to another as to its argument, as usual in mathematics. For details see my "Latin as a Formal Language." Basically, if we designate the concept of an utterance U as CON(U), then the difference of (1) and (2) can be brought out as follows:

CON(Homo non est asinus) = CON(non)(CON(est)(CON(homo))(CON(asinus)))

CON(Homo est non asinus) = CON(est)(CON(homo))(CON(non)(CON(asinus)))

37. Indeed, he takes this understanding of the function of the copula as a "first indemonstrable principle," despite his obvious awareness of the alternative analysis provided by the *via antiqua* "inference theory of predication." See *Sophismata*, chap. 2, Tenth conclusion. More details of this issue will be discussed below.

affirmative mental proposition. This is what Buridan means by claiming that the contradictory of a categorical proposition is formed by denying its formal part, namely, the copula.³⁸

Given this understanding of the copula and its negation, the “laws of opposition” summarized in the *Square of Opposition* automatically follow.³⁹ For in this way a universal affirmative proposition states that whatever its subject stands for is identical with something its predicate stands for. For example, ‘Every man is an animal’ in this analysis affirms that whatever the subject term stands for (i.e., any individual human being) is identical with something that the predicate term stands for, that is, an animal. But then, if there are no human beings, there is nothing for the subject to stand for, and thus nothing that the subject stands for can be identical with an animal, in which case this proposition is false. But if it is false, then its contradictory is true. Now, the contradictory of a proposition is obtained by denying the proposition as a whole, by placing a negation in front of the whole proposition. In this case, we obtain ‘Not every man is an animal’. But ‘Not every’ is equivalent to ‘Some . . . not’, where the negation is the negation of the embedded affirmation following it, which, in accordance with the foregoing considerations, must be expressed by negating its copula, whence we obtain ‘Some man is not an animal’. If this is really the contradictory of ‘Every man is an animal’, however, which is false when there are no people, then this yields the counterintuitive result that ‘Some man is not an animal’ is true under the same circumstances.

The main reason why this may sound counterintuitive is our tendency to interpret a proposition such as ‘Some man is not an animal’ not as being strictly equivalent to ‘Not every man is an animal’, i.e., ‘It is not the case that every man is an animal’, but rather as being equivalent to ‘Some man is a non-animal’, which clearly does entail the existence of human beings. Therefore, once the relevant distinction is made, Buridan can claim that it is only sloppy usage that obscures this clear-cut conceptual distinction, and so this distinction obviously demands a little “regimentation” of usage, at least in strict scientific and philosophical contexts, where much hinges precisely on such otherwise easily overlooked distinctions.⁴⁰

This may not be the only reason for our reluctance to accept this conclusion, however. For one may find attributing existential import to the universal affirmative proposition counterintuitive in the first place. After all, is not ‘Every man is an animal’ a necessary truth, which must hold regardless of whether

38. See 1.3.4, 1.3.6, 1.4.3.

39. See 1.4.2.

40. For more detailed discussions of this issue see Essays II and III of Klima, *Ars Artium*.

there is actually anything to which it applies? Are not all necessary, law-like statements precisely of this sort, namely, that their truth cannot depend on some actual, contingent state of affairs?

In response to these questions, first of all we must make a distinction between an assertoric proposition (*de inesse*) that is necessary, namely, one that cannot be false, and a modal proposition about necessity (*de necessario*), which makes the claim that the predicate necessarily belongs to the subject, and which is false if the predicate does not necessarily belong to the subject. According to Buridan, the proposition 'Every man is necessarily an animal' is true, for the predicate does indeed necessarily belong to the subject, and this is so even when there are no human beings. In fact, for the truth of this proposition it is not required that the subject refer to any actual human being. In accordance with Buridan's version of the medieval theory of ampliation,⁴¹ the modal context *ampliates*, i.e., extends, the range of reference of the subject term, so that this proposition is equivalent to 'Everything that is or can be a man is necessarily an animal', which of course is true even if there are no human beings. (By contrast, the proposition 'Every round square is necessarily round' is false, for on this analysis it is equivalent to 'Everything that is or can be a round square is necessarily round', and thus it is an affirmative proposition the subject of which refers to nothing, since nothing can be a round square.)⁴²

Nevertheless, despite the fact that the proposition about necessity (*de necessario*) 'Every man is necessarily an animal' is true even if there are actually no human beings, the assertoric 'Every man is an animal', analyzed as a simple proposition about actuality (*de inesse*), is false in that situation.⁴³ As Buridan points out, however, this is not the only possible analysis of this proposition. Precisely because the corresponding modal proposition is true, this assertoric proposition can also be analyzed as what we would call a law-like statement, in which the range of reference of the subject is not restricted to the actual present time connoted by the copula, but covers everything that did, does, or

41. See 4.6. See also the entry 'ampliation' in the index. For discussion, references, and a reconstruction of the theory of ampliation, see G. Klima, "Old Directions in Free Logic: Existence and Reference in Medieval Logic," in *New Directions in Free Logic*, ed. K. Lambert (forthcoming), and Klima, "Existence, Quantification, and the Medieval Theory of Ampliation," in Klima, *Ars Artium*.

42. Compare the index entries 'chimera' and 'vacuum'. For the vexed history of chimeras in their logical role see S. Ebbesen, "The Chimaera's Diary," in *The Logic of Being: Historical Studies*, ed. S. Knuuttila and J. Hintikka (Dordrecht: Reidel, 1986), pp. 115–43.

43. For the terminological problems involved here see the first note to 1.3.4 (n. 62).

will fall under the subject, because the subject term in this proposition has the type of reference that Buridan calls *natural supposition*.⁴⁴ As he writes in 4.3.4:

Again, just as the intellect is able to conceive of man and animal without any distinction of time by means of the concepts whence the terms 'man' and 'animal' are imposed, so it is likely that it is able to form a complexive concept without any distinction of time. But then the mental proposition [formed with this concept] will be indifferent with respect to all present, past and future times, and so also [its] terms will supposit for everything from those times indifferently. But we do not have an utterance properly imposed to signify such a mental copula, so we can use the verb 'is' by convention [*ad placitum*] to signify such a copula by which the present time will no more be signified than is the past or the future; indeed, [it will signify] no time at all, and so there will occur a natural supposition of the terms. In fact, perhaps we can show from our faith that we are able to form such mental propositions. For God could preserve all things in rest, without motion (I mean all things other than motion). So let us suppose that He does so. Then nothing would be time, if every time is motion, as Aristotle shows in bk. 4 of the *Physics*.⁴⁵ Nevertheless, the souls of the blessed would know and understand by mental propositions that God is good and that they are present to Him; and by the copulas of those mental propositions they would not co-understand [*cointelligerent*] time, for they would also know that there is no time, and so they would know that neither they themselves nor God did exist in the present time, and that they did not coexist with the present time either. And it appears to me that a spoken copula imposed precisely to signify such a complexive concept would be purely syncategorematic, while others, which connote a certain time, already share [the characteristics of] categorematic [terms], in that beyond their concept they also signify an external thing conceived besides the things signified by the subject and the predicate, namely, time.

In this way, then, Buridan is able to account for both the validity of the relationships of the *Square of Opposition* and the intuition that the truth of 'Every man is an animal' should not depend on the contingent fact of whether there actually are any human beings. Nevertheless, he would still hold that

44. For more on the development of the idea of natural supposition, see L. M. de Rijk, "The Development of Suppositio Naturalis in Mediaeval Logic: Fourteenth-Century Natural Supposition as Atemporal (Omnitemporal) Supposition." Parts 1 and 2. *Vivarium* 9 (1971): 71-107; 11 (1973): 43-79.

45. Aristotle, *Physics* IV.2.219a2-b4.

the proper interpretation of the assertoric proposition does involve the connotation of the copula, which is properly modified only in a modal proposition, and thus the modal proposition, even when it is about necessity, need not entail the assertoric proposition.

But the case is somewhat different with what Buridan would call a composite modal, that is, one in which the mode ('necessary', 'possible', 'impossible', and so on) does not modify the copula, but in which the mode is predicated of (or is subjected to) a nominalized form of a proposition by means of an assertoric copula.⁴⁶ For example, the proposition 'That a man is an animal is necessary' is such a composite modal, in which the predicate term is the mode, and the subject term is the that-clause attached to it by the assertoric, unmodified copula 'is'.

Buridan's reason for calling such composite modals not properly modal propositions is precisely that their main copula is not modified by the mode but remains assertoric. Here the mode has only the function of asserting the modal status of the proposition referred to by the corresponding complex nominal phrase, but not of modifying the copula.

The nominal phrase in question in Buridan's Latin is an accusative with infinitive construction. For example, in *Hominem esse album est possibile/necessarium/verum*, etc. ('That a man is white is possible/necessary/true, etc.') the subject term is the accusative with infinitive phrase *hominem esse album*, which is a nominalization of the sentence *Homo est albus*, formed from the accusative form of the subject and the predicate and from the infinitive of the verb. In English we have analogous constructions, for example, 'I believe him to be insane', but the same construction is not available with the modalities listed here. On the other hand, since such constructions are almost always convertible into a construction with a that-clause, as in 'I believe that he is insane', which also works with the modalities, I use that-clauses in the translation to render Buridan's accusative-with-infinitives and adjust explicit references to the construction itself in the text accordingly. When this practice causes major discrepancies, I add an explanatory note or a brief reference to the present discussion.

In any case, whichever nominal form we use, the semantic function assigned to it by Buridan is clear: as a common term, it primarily has the function of referring materially to individual tokens of the corresponding proposition. Therefore, such a nominalization is also quantifiable; that is, Buridan admits constructions such as 'Every *that a man is wise* is true', which is true if and only if every proposition-token of the form 'A man is wise' is true. Hence, if there are no such proposition-tokens in existence at the present time,

46. See 1.8.9, 5.6.2.

say, because all written sentences of this form are eliminated, nobody utters this sentence, and nobody forms the corresponding mental proposition, then 'Every *that a man is wise* is true' is false according to Buridan, even if there exists a wise person at this time.⁴⁷

Such sentential nominalizations, however, do not merely perform the function of referring to corresponding proposition-tokens. For clearly, in the construction *hominem secare est hominem agere* ('For a man to cut is for a man to act' or 'That a man cuts is that a man acts'), the subject and the predicate cannot refer to the corresponding propositions: this sentence does not state that the proposition 'A man cuts' is the proposition 'A man acts'.⁴⁸ Still, consistent with his uncompromising nominalism, Buridan would not allow even in this case that these constructions stand for *complexe significabilia*, the alleged total *significata* of the corresponding propositions (endorsed, for example, by Gregory of Rimini),⁴⁹ which Buridan regarded as unacceptable additions to one's ontology. Instead, he argues that when these sentential nominalizations do not stand *materially* for the corresponding sentence-tokens but are taken *significatively*, then they stand for the individuals of which their categorematic terms are jointly true, if they are true of anything; otherwise they stand for nothing.⁵⁰

All these considerations, as well as the more traditional topics Buridan covers in the treatises on the Porphyrian predicables and the Aristotelian categories (in treatises 2 and 3), make use of technical semantic notions that Buridan will treat systematically only in treatise 4, *On Suppositions*.

First among these is signification, which I touched on earlier. Here I must add only one further distinction, which, as we shall see, is crucial from the point of view of Buridan's nominalism. The distinction concerns the types of

47. See 1.8.9.3.

48. See *Sophismata*, chap. 2, Third conclusion.

49. See N. Kretzmann, "Medieval Logicians on the Meaning of the Proposition," *Journal of Philosophy* 67 (1970): 767–87; G. Nuchelmans, *Late-Scholastic and Humanist Theories of the Proposition* (Amsterdam: North Holland, 1980); E. J. Ashworth, *Language and Logic in the Post-Medieval Period* (Dordrecht: Reidel, 1974), pp. 55–62. In a recent paper, Jack Zupko convincingly argues that, although the late medieval notion of *complexe significabile* (closely related to the earlier notions of *enuntiabile* and *dictum*) was introduced by Adam Wodeham, Buridan's arguments are directed against Gregory of Rimini's version of the theory. See J. Zupko, "How It Played in the Rue du Fouarre: The Reception of Adam Wodeham's Theory of Complexe Significabile in the Arts Faculty at Paris in the Mid-Fourteenth Century," *Franciscan Studies* 54 (1994–97): 211–25. A good selection of relevant texts along with a German translation and comments is provided by D. Perler, *Satztheorien: Texte zur Sprachphilosophie und Wissenschaftstheorie im 14. Jahrhundert* (Darmstadt: Wissenschaftliche Buchgesellschaft, 1990).

50. See *Sophismata*, chap. 2, conclusions 3–8.

signification that common categorematic terms may have. On this basis, common categorematic terms can be classified as either absolute (nonconnotative) or appellative (connotative). One should note here that Buridan does not provide an explicit definition of any of the basic properties of terms that he covers in this treatise. Instead, his aim seems to be to teach them in practice, by pointing out their differences through examples. Nevertheless, on the basis of these examples we may attempt to provide some definitions for our own use.

Thus, we may say that the signification of a common categorematic term is its relation to its ultimate significata, namely, the things naturally represented by the universal concept to which the term is subordinated. Now some of these concepts are connotative, i.e., they represent the things they directly represent *in relation to* some things (which hence they represent only obliquely, as somehow related to the things they directly represent), whereas others are absolute, i.e., they represent the things they directly represent *not in relation to* anything. Accordingly, an appellative term is one that, in virtue of its being subordinated to such a concept, signifies its significata in relation to some things, and then those things are called its connotata, or appellata.⁵¹ An absolute term, on the other hand, is one that signifies its significata absolutely, not in relation to anything. For example, the term 'father' or the term 'husband' signifies men in relation to their children or to their wives, for any father is somebody's father and any husband is somebody's husband, whereas the term 'man' in the sense of 'human being' signifies all human persons not in relation to any thing, but only as the members of the species of rational animals. By contrast, the term 'man' in the sense of 'male human person' would signify men not absolutely but in respect of their accidental difference of gender, distinguishing them from women.

Signification, therefore, is a property of these terms by virtue of which they are meaningful at all and on account of which they are related to the things that their concepts represent, in the manner in which the things are represented by these concepts.

Supposition, on the other hand, is the referring function of terms in propositions, i.e., their relation to the things that they are actually taken to stand for in the context of a given proposition, in the manner determined by that context. For Buridan, a term has *material supposition* when it is taken to stand in a proposition for any of the token-terms similar to it, including itself, or for a concept immediately signified by such a token-term in an individual

51. Strictly speaking, a connotative term's connotata should be called its appellata only as they are obliquely referred to in the context of a proposition, just as its significata are its (personal) supposita only in a propositional context. But even Buridan is willing to talk more loosely about the supposita and appellata of such terms outside of such a context.

human mind. A term is said to have *personal supposition* when it stands for its ultimate significata, i.e., the things represented by the concept it immediately signifies.⁵²

If the term in question is appellative, then in a proposition in which it has personal supposition it supposits for its supposita in relation to its appellata. For example, the term 'father' in the proposition 'Every father is a man' supposits for men in relation to their children, and thus not for all men but only for those who have children.

In general, for Buridan, the appellation of a term is the relation of the term in a proposition to its appellata, i.e., the things in relation to which it supposits for its supposita.⁵³ So, in the proposition 'Every father is a man' the supposita of the term 'father' are the ultimate significata of the same term which it signifies in relation to their children, who, in the context of the proposition are the term's appellata, as illustrated by figure 2.

On the basis of this understanding of appellation, Buridan is able to claim that it is not only appellative terms that can have appellation in a proposition. Absolute terms can also have appellation, when they are not the subject or the predicate of a proposition themselves but parts of complex subjects or predicates. In that case they either appellate the ultimate significata of their nominative forms (i.e., the entities that would be the personal supposita of their nominative form if they were the subject or predicate of a proposition) or the immediate significata of their nominative forms (i.e., the concepts to which their nominative forms are subordinated).⁵⁴

For example, in the sentence *Hominis asinus est animal* ('A man's donkey is an animal'), the subject term is the possessive construction *hominis asinus*, in which the genitive form *hominis* ('man's') of the absolute term *homo* (man) does not supposit, for only the complex term as a whole supposits, but it appellates men as possessors of donkeys, and so, owing precisely to this appellation, the whole term will supposit in this proposition only for donkeys actually possessed by men. Indeed, it is on the basis of this type of analysis of

52. See 4.3.2.

53. We should note here that Buridan's understanding of appellation is radically new, rather different from that of his predecessors. See A. Maierù, *Terminologia logica della tarda scolastica* (Rome: Edizioni dell'Ateneo, 1972), chap. 1. Still, in later Scholasticism, probably owing largely to the success of his theory of *appellatio rationis*, his interpretation became very influential and was adopted not only by nominalists but by realists as well. See Ashworth, *Language and Logic in the Post-Medieval Period*, pp. 92–97.

54. From this point of view, the extension of the theory of appellation to cover the appellation of concepts seems to complement rather appropriately Buridan's conception of material supposition, which also includes supposition for the immediate significates of terms in appropriate propositional contexts. See 4.3.8.4.

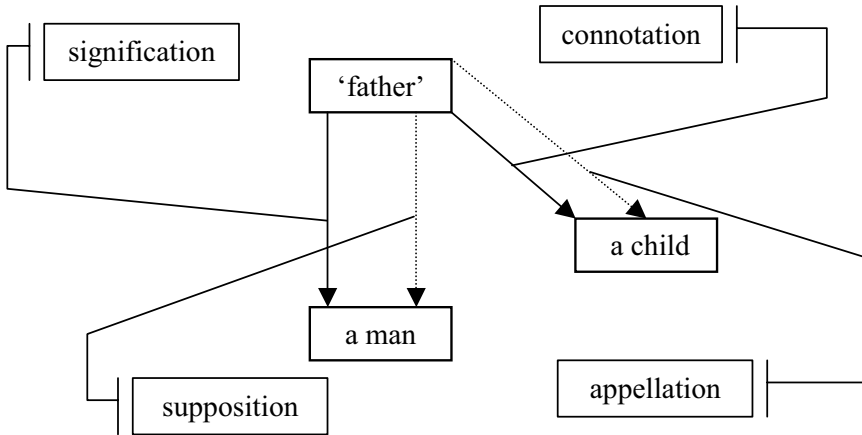


Fig. 2. Buridan's Conception of the Semantic Relations of a Relative Term

the structure of complex terms that Buridan can successfully handle propositions with *oblique terms* (terms in cases other than the nominative case, which they receive in Latin when they enter into the constitution of a complex term), which modern logicians would regard as involving multiple quantification, such as *Cuiuslibet hominis asinus currit* ('Of every man a donkey runs').⁵⁵

But the philosophically more intriguing case of appellation is that of the appellation of concepts, *appellatio rationis*, which is at once Buridan's most influential theory for treating the problems of reference in intentional contexts and his most efficient instrument of nominalist logical analysis, where at first sight a realist solution would seem to be more plausible.

55. See 1.3.3, 4.2.6, 5.8.2–4. These passages are especially important to dispel, or at least to refine, the widespread belief among contemporary philosophers that the logical analysis of inferences involving propositions of this type is theoretically beyond the reach of traditional (i.e., pre-Fregean) logic. There have been several interesting attempts in contemporary logic to construct "term-logics," despite the general prevalence of the Fregean paradigm. Most notable among these are the systems of S. Lesniewski, especially as developed by C. Lejewski and applied to medieval theories by D. P. Henry, and those of F. Sommers, further developed by G. Englebretsen and others. For discussion, references, and my own attempts to construct such systems as simple extensions of standard quantification theory, see Klima, *Ars Artium*. See also 5.8.2 n. 57. For more on the medieval treatment of cases of "multiple quantification" see, e.g., A. D'Ors, "Hominis asinus/Asinus hominis"; in *Sophisms in Medieval Logic and Grammar*, ed. S. L. Read (Dordrecht: Kluwer, 1993), pp. 382–97; E. Karger, "A Theory of Immediate Inferences Contained in Buridan's Logic," in *Argumentationstheorie: Scholastische Forschungen zu den logischen und semantischen Regeln korrekten Folgerns*, ed. K. Jacobi (Leiden: Brill, 1993), pp. 407–29; P. Thom, "Termini Obliqui and the Logic of Relations," *Archiv für Geschichte der Philosophie* 59 (1977): 143–55.

Consider the proposition 'I promise you a horse'.⁵⁶ In accordance with Buridan's general account of categorical propositions, this proposition must be analyzed as 'I am someone promising you a horse', which is true if its terms supposit for the same thing, that is, if its predicate supposits for me. Now apparently, this predicate can supposit for me only if I am someone promising you a horse, that is, if the term 'someone promising you a horse' supposits for me in relation to you and in relation to a horse. But which horse? If I promise you a horse in general without having any particular horse in mind, which I can certainly do, then this term cannot supposit for me in relation to Brownie, for I do not promise you Brownie, and the same goes for any particular horse.

Does this mean that if I promise you a horse in general, then, since I do not promise you any horse in particular, I promise you a universal horse? In fact, according to the realist analysis of this sentence provided by Walter Burleigh, in this case I promise you a universal horse, which, however, I can deliver only in a particular horse, indeed, in any particular horse.⁵⁷

But this solution runs counter to the intuition that the object of my promise must be precisely what I eventually deliver (and not only somehow connected with what I deliver), but what I deliver must be a particular horse, for you would certainly not be satisfied unless you can ride away on the back of the object of my promise, which you can do only with a visible, tangible, particular horse, existing under its determinate dimensions in space (which we could not say of a universal horse, whatever that is). But then, if any horse that could count as fulfilling my promise must be a particular horse, and yet, I did not promise you any particular horse, should this mean that I promised you no horse at all?

Buridan's ingenious solution to this problem is provided in terms of his theory of appellation of concepts. The term 'horse' in 'I promise you a horse' does not stand for a universal horse, nor just for a particular horse, but for any singular horse along with the appellation of the universal concept of horses, since a promise concerning any horse in general is precisely one that is made by conceiving of any particular horse in general, by means of the universal concept of horses. Summarizing his analysis of appellation of concepts, Buridan writes:

56. I provide a thorough discussion of Buridan's treatment of the problem in G. Klima, "Debeo tibi equum: A Reconstruction of the Theoretical Framework of Buridan's Treatment of the Sophisma," in Read, *Sophisms in Medieval Logic and Grammar*, pp. 333–47. The paper also provides a number of further references to alternative treatments of the issues involved.

57. Walter Burleigh, *De Puritate Artis Logicae Tractatus Longior*, with a revised edition of the *Tractatus Brevior*, ed. P. Boehner (St. Bonaventure, N.Y.: Franciscan Institute, 1955), chap. 3, pp. 11–15, esp. p. 14. See n. 65 below.

These are the things to be said about the special conditions of these verbs and the special mode of confusion of the accusatives which follow them [i.e., their grammatical objects]. They seem to arise entirely from the fact that these accusatives somehow appear to participate in material supposition. For they appellate their concepts, although they do not supposit for them, and so it is not possible to descend to the supposita of other concepts. They appellate these concepts in this way because we think of things by means of those concepts, but it is not in this way, i.e., not by means of a concept, that fire heats water, or that a stone hits the ground.⁵⁸

But since for Buridan universal concepts are just universally representing singular acts of individual human minds, this solution does not compromise his nominalist ontology, whereas it provides both a logically satisfactory solution to the puzzles of reference in intentional contexts and a philosophically intriguing explanation for their emergence in the first place.

Indeed, in general, the greatest appeal of Buridan's logic is precisely this comprehensive consistency, whereby it provides a coherent explanation from a unifying standpoint even in cases where it seems the least likely to succeed in keeping to the principles of his nominalist metaphysics. To be sure, this need not mean that Buridan is absolutely right, or that by this comprehensive consistency his nominalist metaphysics is entirely justified. In the next section, I shall conclude this discussion with a brief evaluation of Buridan's doctrine in its historical context as well as *sub specie aeternitatis*.

The historical and philosophical import of Buridan's doctrine

The best way to understand the philosophical import of Buridan's nominalism is to consider it in comparison with its historical alternative, medieval realism.⁵⁹ According to their opponents, most notably Ockham and Buridan,

58. See 4.3.8.4.

59. To be sure, despite the quite widespread contemporary understanding of the term 'realist' when applied to medieval philosophers, and the fact that many late medieval thinkers described themselves and their contemporaries as being either realists (*reales*) or nominalists (*nominales*), when we are talking about medieval realism, we should not have in mind the Platonic theory according to which there are universal entities, such as a universal horse, the universal Equinity, which exists in separation from every other being in itself, is numerically one, and is an exemplar of all its singulars because it excellently, yet univocally, exemplifies only what is essential to them all, whereas the latter are its singulars precisely because they participate in these essential characteristics. Such "extreme realism" concern-

the realists are guilty of adhering to a fundamental error in their understanding of the relations between mind, language, and reality. As Ockham most famously put it, the realists' fundamental error is "multiplying beings according to the multiplicity of terms . . . which, however, is erroneous and leads far away from the truth."⁶⁰ Or, as Buridan declares:

"We should note that concerning action and passion and the four other remaining categories, I do not intend to follow the doctrine of the author of *The Book of Six Principles*.^[61] For I think that he was mistaken, since he believed that no terms that pertain to diverse categories can supposit for the same thing, and so he maintained that action is one form and passion is another, and that passion would hence be an effect of action; this is totally false, and thus his doctrine made many people err."⁶²

ing universals was regarded even by otherwise "realist" medievals as entirely absurd and sufficiently refuted by Aristotle, so that some even doubted that Plato ever held the theory in this crude form. Compare Soto, *In Porphyrii Isagogen, Aristotelis Categorias, librosque de Demonstratione, Commentaria* (Venice, 1587; reprint, Frankfurt am Main: Minerva, 1967), q. 1, p. 30, 1I; Aegidius Romanus, *In Primum Librum Sententiarum* (Venice, 1521; reprint, Frankfurt am Main: Minerva, 1968), 1SN, d. 19, pt. 2, q. 1, and John Wyclif, *Tractatus de Universalibus*, ed. I. J. Mueller (Oxford: Clarendon, 1985), pp. 61–69. The more refined, "moderate" realist account will be expounded in the subsequent discussion. For more details and a comparative discussion of Aquinas and Ockham on these and related issues see G. Klima, "The Changing Role of *Entia Rationis* in Medieval Philosophy: A Comparative Study with a Reconstruction," *Synthese* 96 (1993): 25–59.

60. William of Ockham, *Summa Logicae*, ed. P. Boehner, G. Gál, and S. Brown (St. Bonaventure, N.Y.: Franciscan Institute, 1974), pt. 1, chap. 51, p. 171. For a detailed discussion of Ockham's relevant arguments see M. M. Adams, *William Ockham*, 2d ed. 2 vols. (Notre Dame, Ind.: University of Notre Dame Press, 1989), pp. 169–285. In fact, this charge later became the defining characteristic of the realists, at least for the Parisian nominalist doctors who in their manifesto of 1474 wrote the following: "those doctors are called nominalists, who do not multiply the things principally signified by terms according to the multiplicity of the terms; whereas the realists are those who, on the contrary, contend that things are multiplied according to the multiplicity of the terms." F. Ehrle, "Der Sentenzenkommentar Peters von Candia, des Pisaner Papstes Alexanders V.," in *Franziskanische Studien* 9 (1925): 322. Compare N. W. Gilbert, "Ockham, Wyclif and the 'via moderna,'" in *Antiqui und Moderni: Traditionsbewusstsein und Fortschrittsbewusstsein im späten Mittelalter*, ed. A. Zimmermann (Berlin: de Gruyter, 1974), pp. 85–125.

61. *Liber de Sex Principiis*, in *Isagoge, translatio Boethii*, ed. L. Minio-Paluello under the title *Anonymi Fragmentum vulgo vocatum "Liber de Sex Principiis"* (Bruges: Desclée, De Brouwer, 1966), p. 41, l. 8.

62. See 3.6.1. Compare Buridan's *Quaestiones in Praedicamenta*, ed. J. Schneider (Munich: Verlag der Bayerische Akademie der Wissenschaft, 1983), pp. 129, 149, 145, where at one

These typical nominalist charges, however, are not quite justified. To be sure, if we compare Buridan's semantic principles with the corresponding principles of what may be described as a realist or *via antiqua* semantics,⁶³ then one may easily get the impression that the latter is heavily burdened by ontological commitment to a host of strange entities, rightfully rejected by the nominalists. Indeed, this impression seems to be justified already by a quick look at the differences between the nominalist and the realist conceptions of the signification of common terms and their corresponding alternative theories of predication.

According to the realist theory, the function of a common categorematic term is not to signify the particulars for which it supposits in personal supposition but to signify the common nature on account of which the things having this nature fall under this term; this is why the term can be used to refer to these things in a proposition. For example, according to realists, the function of the term 'man' is *not* to signify individual human beings, but this term signifies human nature in abstraction from its individuating conditions, which is why it can be used to refer to any individual human person when the term has personal supposition in the context of a proposition.⁶⁴

Despite possible appearances to the contrary, this much in itself does not involve commitment to abstract Platonic universals in reality. For the com-

point he exclaims that the teachings of the *Liber Sex Principiorum* are strong enough to kill dogs!

63. I am using this phrase only to refer to the characteristic semantic theory of medieval realists. For a detailed historical discussion of the late medieval contrast between *via antiqua* and *via moderna* see Moore, "Via Moderna." For a side-by-side comparison of these principles see G. Klima, "Buridan's Logic and the Ontology of Modes" in *Medieval Analyses in Language and Cognition*, ed. S. Ebbesen and R. L. Friedman (Copenhagen: Royal Danish Academy of Sciences and Letters, 1998), pp. 458–79.

64. For an explicit clash between a nominalist and a realist over this issue, see Burleigh, *De Puritate Artis Logicae Tractatus Longior*, pp. 6–10; William of Ockham, *Summa Logicae*, pp. 124, 195–96. For further details of the realist conception, see, e.g., Lambert of Auxerre, *Logica (Summa Lamberti)*, ed. F. Alessio (Florence: La nuova Italia editrice, 1971), pp. 205–9 (but note that according to Gauthier and De Libera, among others, the *Summa Lamberti* is to be attributed to Lambert of Lagny, not Lambert of Auxerre); Burleigh, *De Puritate*, chap. 3, p. 7; Domingo Soto, *Summulae, Summularum aeditio secunda* (Salamanca, 1554; reprint, Hildesheim: Georg Olms Verlag, 1980), bk. 1, chap. 7; bk. 2, chap. 10; bk. 2, chap. 14; Pseudo-Campsall, "*Logica Campsallae Anglicj, valde utilis et realis contra Ocham*," in *The Works of Richard Campsall*, ed. E. A. Synan, vol. 2 (Toronto: Pontifical Institute of Mediaeval Studies, 1982), chap. 9, n. 4, p. 101. For a detailed description and analysis of the principles involved in the typically "realist semantics" of Saint Thomas Aquinas, see G. Klima: "The Semantic Principles Underlying Saint Thomas Aquinas's Metaphysics of Being," *Medieval Philosophy and Theology* 5 (1996): 87–141.

mon human nature signified by the term 'man' according to this conception need not be construed as a really existing universal entity, which is numerically one in itself but is somehow common to all the individuals that have it.⁶⁵ On the contrary, in reality there are only individual human beings with their individual human natures (i.e., the human nature of Socrates, which renders *him* a human being, is not the same thing as the human nature of Plato, which renders *him* a human being), but their human natures are conceived by our intellects in abstraction from their individuating conditions (i.e., the human nature of Socrates and that of Plato are not conceived as the human nature of Socrates and that of Plato, but simply as human nature, disregarding to whom they belong). This is why they can be signified universally by the term subordinated to the concept by which we conceive of human beings in this manner. Thus, human nature does not *exist* in abstraction from singulars, it is only *conceived* in this way (i.e., disregarding its individuating conditions, which it has in singulars, without which it could not exist at all), and hence it is also *signified* in this way by the term 'man'. This does not mean that the term must *refer to* (supposit for) human nature conceived in this way in the context of a proposition in which the term has personal supposition. On the contrary, as I have said, in personal supposition the term will refer to individuals that have such a nature (namely, each its own). So what is ultimately signified by this term is the individualized human natures of individual humans, and this is precisely why the term can personally supposit for individual human beings, i.e., the things that actually have this nature. Indeed, it is this conception of signification that accounts not only for this interpretation of personal supposition but also for the characteristic theory of predication that goes hand in hand with this conception of signification, which historians of medieval logic have dubbed the *inherence theory*, as opposed to the nominalists' *identity theory*.⁶⁶

65. Compare n. 59 above. In fact, the "realist" solution to the problem generated by intentional verbs referred to above is presented by Burleigh in the following way: "when the question is raised according to what sort of supposition this proposition is true: 'A horse is promised to you', positing that someone promises you a horse, and *maintaining that there is some unity other than numerical unity*, one should reply that [it is true] insofar as the subject has absolute simple supposition, for I do not promise you this horse nor that horse, but simply a horse. And since a universal cannot exist by itself, and consequently cannot be given, except in some singular, the one who promises you a horse is obliged to give you some singular, for otherwise he could not give you what has been promised" (my italics). Burleigh, *De Puritate*, chap. 3, p. 14.

66. Compare, e.g., L. M. de Rijk's introduction to Petrus Abaelardus, *Dialectica*, ed. L. M. de Rijk (Assen: Van Gorcum, 1970), pp. 1:37–38; D. P. Henry, *Medieval Logic and Metaphysics* (London: Routledge and Kegan Paul, 1972), pp. 55–56; P. T. Geach, "Nominalism," in *Logic Matters* (Berkeley: University of California Press, 1980), pp. 298–301.

As we have seen, for Buridan an affirmative categorical proposition is true if and only if its terms supposit for the same thing or things.⁶⁷ By contrast, according to the inherence theory such a proposition is true if and only if the universal nature signified by its predicate actually *inheres* in the supposita of its subject, that is, if the supposita of its subject are actual in respect of the universal nature signified in them by the predicate. For example, the proposition ‘Socrates is a man’ is true according to the identity theory if and only if Socrates is identical with one of the personal supposita of the term ‘man’, whereas according to the inherence theory the same proposition is true if and only if Socrates is actual in respect of the nature signified by the predicate, i.e., if Socrates’ human nature is actual. Again, the proposition ‘Socrates is a father’ is true according to the identity theory if and only if Socrates is one of the supposita of the term ‘father’, i.e., if he is one of the men signified by this term in relation to a child (who, in turn, is one of the appellata of this term), whereas according to the inherence theory the same proposition is true if and only if the nature signified by the predicate term in Socrates, namely Socrates’ fatherhood in respect of a child, is actual. This can clearly be seen if we consider figure 3.

Now, even though the realist conception so interpreted is not committed to the real existence of Platonic universal entities (for on the medieval realist view universals as such are only objects of the abstractive intellect, which can *consider* a universal nature in abstraction from its individuating conditions, despite the fact that this universal nature cannot exist in itself apart from its individuating conditions in the individuals it informs), apparently, it is still committed to a huge number of rather strange entities, namely, the “inherent universals” ultimately signified by common terms in respect of the individuals falling under them. So, this still seems to justify Ockham’s charge that according to this conception “a column is to the right by to-the-rightness, God is creating by creation, is good by goodness, just by justice, mighty by might, an accident inheres by inherence, a subject is subjected by subjection, the apt is apt by aptitude, a chimera is nothing by nothingness, someone blind is blind by blindness, a body is mobile by mobility, and so on for other, innumerable cases.”⁶⁸ And so realism would still seem to amount to “multiplying beings according to the multiplicity of terms.”⁶⁹

67. This is true if we disregard the complications arising from quantification and from insolubilia, which are irrelevant in this connection. Compare *Sophismata*, chap. 2, conclusions 9 and 14, and chap. 8.

68. William of Ockham, *Summa Logicae*, pt. 1, chap. 51, p. 169.

69. *Ibid.*, p. 171, where Ockham explicitly claims that this is the root (*radix*) of the errors of the moderns.

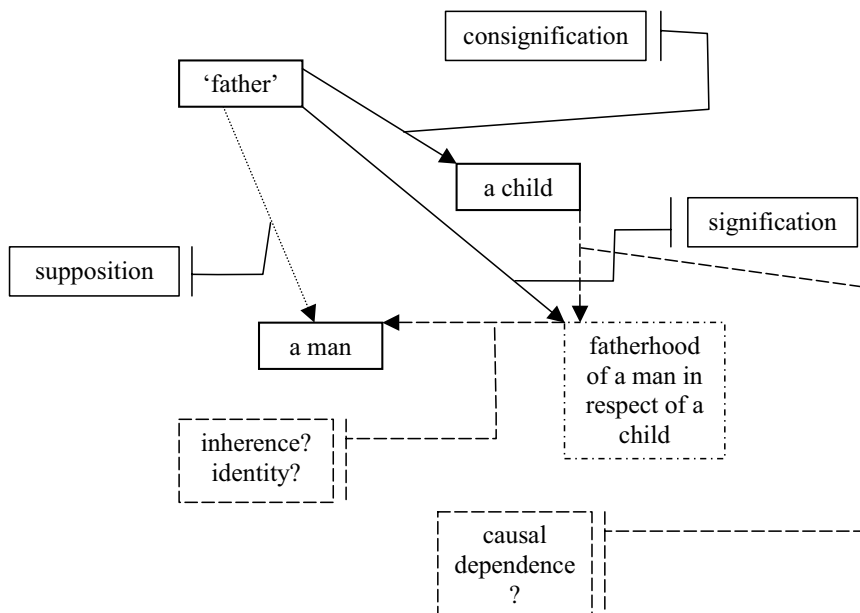


Fig. 3. The *Via Antiqua* Conception of the Semantic Relations of a Relative Term

We should notice, however, that this alleged multiplication of beings with the multiplicity of terms can occur *only* if the ultimate significata of these terms are taken to be distinct both from their supposita and from each other. To illustrate this point, let us take a piece of wax. Let us assume that it is a wax ball with a diameter of one inch. The nominalists would be justified in claiming that the realists are multiplying beings with the multiplicity of terms *only* if the latter were committed to holding that the terms 'wax', 'ball', 'round', 'one-inch wide', and so on, which are all true of this wax ball, signify forms or inherent natures of this wax ball that are all distinct from each other and from the ball itself. For it is only in that case that we should count the following as distinct entities, adding to the number of the beings in our universe: the wax ball, its wax-ness,⁷⁰ its ball-ness, its roundness, its one-inch width, and

70. Obviously, when we do not have abstract names for the significata of concrete common terms established by common usage, we have to introduce such contrived, artificial names to do the job. It is precisely this theoretical need of this semantic conception that explains the introduction of contrived abstract terms into the technical Latin of Scholastic philosophy, which later became the inexhaustible source for sneering and ridicule by humanists and, in general, the post-humanistic new intelligentsia, who no longer understood, needed, or even cared about the theory underpinning these "barbarisms."

so on, whatever is signified in this ball, according to the realists, by its true predicates.

But, in fact, there is nothing in the semantic conception of the realists that would *force* a commitment to the distinctness of these significata. To be sure, one may think that it is quite easy to establish such a commitment. For example, when the wax ball is shaped into a cube, then, in accordance with the realists' principles, its roundness ceases to exist, while the piece of wax itself continues to exist, whence the piece of wax in question (and so also its wax-ness) cannot be identified with its roundness (and ball-ness, for that matter).

We should notice, however, that this simple piece of reasoning, which can be referred to as the "argument from separability,"⁷¹ is valid only if we assume that the piece of wax can cease to be round if and only if the entity that is its roundness ceases to exist, that is to say, that the entity that is its roundness is essentially a roundness.⁷² But why should it be? After all, one can as well say that the shape of the piece of wax, which used to be its roundness, is now not a roundness but (given that the same piece of wax is now cubical) a cubical shape (a cubicity). But this only means that the shape that used to be a round shape is now a cubical shape; it need not mean that the shape that used to be a round shape ceased to exist. On the contrary, since the shape of the wax can be understood as being but a certain characteristic arrangement of the dimensions of the wax, nothing prevents the identification of this shape with the dimensive quantity of the wax, which at one time may be arranged so that it falls under the concept of round shape, and at another in a different way, so that it falls under the concept of cubical shape. The only critical point in this identification is that it must abandon the assumption that the terms 'roundness' and 'cubicity' should be regarded as essential predicates of what they refer to and that, instead, they should be construed as referring, at different times, to the permanent but changing dimensive quantity of the same thing that is now round and now cubical. Of course, the same goes for any other terms in any other category. Therefore, whoever wants to get rid of unwanted ontological commitment to distinct "inherent universals" apparently demanded by the realist semantic theory can do so by simply rejecting

71. This type of argument, which was widely used by Scholastics to establish ontological distinctions (often invoking divine omnipotence to maintain the distinct existence of things that cannot exist separately by nature, such as accidents without their subjects and relations without their foundations), is analyzed in detail in my "Buridan's Logic and the Ontology of Modes."

72. For a detailed analysis of the relevance of this point, see Klima, "Ockham's Semantics and Metaphysics of the Categories." in P. V. Spade, ed., *The Cambridge Companion to Ockham* (Cambridge: Cambridge University Press, 1999), pp. 118–42.

the assumption that the abstract terms referring to the ultimate significata of concrete common terms in the realist semantic framework are essential predicates of these significata. In fact, this is precisely what most realists did, identifying the semantic values of terms across categories, especially where the last six categories were concerned, without any danger of inconsistency arising from arguments from separability.⁷³

Now, in Buridan's nominalist framework abstract terms do not have the essential semantic function that they did in the realist framework (namely, to refer to something, whatever it is, whose existence verifies the corresponding concrete terms of their personal supposita). Furthermore, whenever Buridan needs to give an account of the semantics of abstract terms, he can identify their semantic values with those of terms in other categories by simply providing the nominal definitions expounding their connotations, which at once "automatically" establishes these terms as denominative, nonessential predicates of their particulars.⁷⁴

Still, the relative ease with which Buridan can handle the apparent ontological commitments generated by the use of abstract terms does not justify the claim that it is *only* in the framework of his nominalist semantics that one can get rid of the unwanted ontological commitment to distinct semantic values of such terms, or that the realist semantic framework necessarily entailed such a commitment. In fact, the realists had their own, rather different tactics to reduce the ontological commitment of their semantic theory, both

73. The foremost authority for such identifications was Aristotle himself, who explicitly identified the act of a patient, a passion, with the act of an agent, an action. Compare *Physics*, bk. 3, chap. 3, 202a12–b29. For further references and a detailed analysis of how such identifications were possible for both realists and for nominalists, although using different logical tactics to reduce the ontological commitment of their respective theories, see my "Buridan's Logic and the Ontology of Modes."

74. See 3.1.3, 3.5.5, 8.2.3. To be sure, this may seem to be contradicted by Buridan's insistence that terms even in the accidental categories are predicated quidditatively of their inferiors. (See 3.5.10, 3.4.1.) We must not forget, however, that the sort of quidditative predication that Buridan is talking about in such contexts does not imply that the particular thing of which such a predicate is actually true cannot lose this predicate as long as it exists, for a predication is quidditative in this broader sense only because the predicate does not signify or connote anything that is not signified or connoted by the subject (although it may well supposit for more). (See 8.2.3–4, 8.6.3.) For example, even though the predication 'This spherical shape is a shape' is quidditative according to Buridan (for nothing is signified or connoted by the predicate that is not signified or connoted by the subject), this does not imply that the thing that is now a spherical shape—according to Buridan, the magnitude of the thing arranged in space in such and such a way—cannot cease to be a spherical shape by a simple modification of its spatial arrangement.

in terms of identifying the semantic values of terms across categories and in terms of distinguishing various diminished senses in which a thing (once it is regarded as distinct from other things) can be said to exist.⁷⁵

To be sure, from the point of view of nominalist logic, “inherent universals” signified by common terms in all categories and other “spurious entities” (such as abstract universals existing only as objects of the mind along with other sorts of *entia rationis*, as well as the total significata of propositions, the notorious *enuntiabilia* or *complexe significabilia*) are semantically superfluous and ontologically weird items.⁷⁶ And one should also admit that in the “realist” logic such items *necessarily* emerge in the role of the *semantic values* of terms and propositions. Nevertheless, these semantic values can either be accounted for separately, in a relatively independent ontology (in terms of distinguishing various kinds or senses of being), or they may be “eliminated” by identifying them across categories (that is to say, on this basis, semantically distinct linguistic categories need not be mapped onto correspondingly distinct ontological categories).

Thus, we can conclude that—despite the nominalists’ claims to the contrary—what made the big difference between the realists’ and the nominalists’ approach was not the difference in the ontological commitment of their respective semantic theories but rather the more basic differences in their conceptions concerning how words, concepts, and things are related to one another, and the resulting differences in the various tactics by which they handled issues of ontological commitment and other metaphysical problems within their alternative semantic frameworks. For this reason, the new, nominalist semantics did not, and could not, replace the older realist framework by conclusively refuting it; rather, it simply emerged as an alternative way (indeed, “the modern way,” *via moderna*) for doing logic, philosophy, and science in general.

The emergence of late medieval nominalism, largely owing to Buridan’s extraordinary logical acumen as well as to his pragmatic, decidedly nonrevolutionary attitude, generated a new type of theoretical conflict, quite unparalleled in the history of medieval philosophy (and perhaps the whole previous history of pre-modern philosophy in general): it was no longer the conflict of incompatible theories formulated within basically the same conceptual framework, but it became the conflict of competing “paradigms,” in a

75. A comprehensive comparison of these various tactics to reduce ontological commitment is provided in Klima, “Ontological Alternatives vs. Alternative Semantics in Medieval Philosophy,” *S. European Journal for Semiotic Studies* 3 (1991): 587–618.

77. For a systematic overview of these “spurious entities” see my “Changing Role of *Entia Rationis* in Medieval Philosophy.”

manner all too familiar to us, the historical heirs of these developments. From this point of view, the emergence of medieval nominalism as an alternative way in late medieval philosophy can be regarded as the first and most significant move toward modern philosophy, where opening up radically different conceptual alternatives, as opposed to propounding alternative theories within basically the same conceptual framework, has become the rule, rather than the exception. Clearly, we can understand our modern situation better if we carefully study this phenomenon at its roots, when it first emerged in a very different intellectual context.