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The truth and falsity of modal propositions in Renaissance Nominalism

Coombs, Jeffrey Scott, Ph.D.
The University of Texas at Austin, 1990

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THE TRUTH AND FALSITY OF MODAL PROPOSITIONS IN RENAISSANCE NOMINALISM

by

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THE TRUTH AND FALSITY OF MODAL PROPOSITIONS IN RENAISSANCE NOMINALISM

APPROVED BY SUPERVISORY COMMITTEE:
to my parents
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Jeffrey Scott Coombs

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ABSTRACT

During a short-lived renaissance of medieval Nominalism lasting from approximately 1480 to 1530, many Renaissance Nominalist logicians devoted a great deal of attention to the task of developing an account of the truth and falsity of modal propositions. A modal proposition is any proposition containing one or more occurrences of the four modal terms: possible, necessary, impossible, and contingent. The Nominalist account follows the general procedure outlined in William of Ockham's *Summa totius logicae*, the goal of which is to translate modal propositions into one or more non-modal propositions, each proposition the subject of a "metalinguistic" modal predicate. For example, the modal proposition 'George possibly is running' would be translated to: "'George is running' is possible."

Renaissance Nominalists follow the practice of medieval logicians in distinguishing two types of modal propositions: the "composed" and the "divided". They differ from the mediavels in how they define these. Composed modal propositions contain a "second intention" modal term; divided modal propositions contain "syncategorematic" modal terms. Second intention modes appear in either the subject or predicate positions in propositions, and refer to presently existing sentence tokens. Syncategorematic modes do not alone refer to anything, and extend or "ampliate" the reference of other terms in the proposition from presently existing actual entities to non-actual possible beings.

Determining the truth value of a composed modal proposition was considered an easy task since the non-modal proposition into which the modal proposition is translated preserves the logical form of the original. However, the
truth value of a divided modal propositions depends upon the modality belonging to the atomic propositions implied by it.

A theory of modal truth is not complete unless it develops an account of the metaphysical nature of modality as the basis for ascribing truth values to modal propositions. The Nominalist logicians of the time offer only fragments of such a theory. Some suggested that modalities only exist in the mind; others believed that modalities are real, extramental relations holding between individuals. Such remarks were never fully reconciled with other modal notions found in these texts, particularly notions defined in terms of God's potencies.
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Chapter 1

Introduction

After Pantagruel had studied very well at Orleans, he resolved to see the great university of Paris. ... In his abode there, he went to see the library of St.-Victor, very magnificent, especially in some books which were there, of which followeth the catalogue. *Et primo:* ...

- Marmotrenus, de baboonis et apis, cum commento d'Orbells
- Tartareus, De modo cacandi ...
- Bricot, De differentis souparrum ...
- Majoris, De modo faciendi puddinos ...


They have instituted a new faculty, besides the four faculties we used to have; and they praise Reuchlin and call themselves his disciples; and they pay no regard to the Faculty of Arts, for they say that the Artsmen are so many conceited asses—and that they can scarce speak three or four Latin words—and that, shame to them! these beasts seduce many innocent youths, who after they have wasted a long time, and are, as it were, immersed in this vile sink of barbarism, return to their homes, having learned nothing save "Arguitur," "Respondetur," and "Quaeritur," and having for their Gods Tartareus, and Versor, and Perversor, and Buridan and Bruxellensis and the like.


It is fitting to begin a work on the Renaissance Nominalists by quoting their better known adversaries, the so-called "humanists," since up until about a decade ago most of what was known about these Nominalists was taken from the writings of their philosophical opponents. One goal of this dissertation is to reconsider the works of the Nominalists in the hopes that a fairer evaluation of their work was promulgated by their contemporaries.
I have chosen to focus on a question much discussed by these Nominalists: how one in general determines whether a modal proposition is true or false. My main thesis is that the Renaissance Nominalists carry on and elaborate the basic method for determining the truth and falsity of modal propositions developed by the "inceptor" of late medieval Nominalism: William of Ockham. The evidence presented in chapters two through four will provide the support for this thesis.

I have selected this particular topic because the topic of the truth and falsity of modal propositions has up to this time been ignored, even though many other aspects of logic in the period have already been investigated. Furthermore, there is presently in philosophical circles much interest in the topic of modalities. The last half of the twentieth century has seen a resurgence in the study of the alethic modalities: necessity, possibility, contingency, and impossibility. This renewal of interest no doubt derives from the indisputable but sometimes lamented success of "possible worlds" semantics. Historians of philosophy have in the face of this renewed interest turned their attention to the history of modality. The present work is meant to be a contribution to that history.

Possible worlds semantics provides a recursive account of the truth and falsity of modal propositions. It begins with the basic and perhaps irreducible notion of a "possible world," and then gives truth conditions for the modal propositions in terms of it. For example, the modal sentence "it is possible that p" is true just in case there exists a "possible world" in which 'p' is true, and it is false otherwise.

One approach, then, to the history of modality is to discover and report accounts of the truth and falsity of modal propositions offered by philosophers of the past. I have found such accounts to be the subject of much study and debate during the Renaissance when, perhaps paradoxically, medieval Nominalism enjoyed its own short renaissance. Given the wealth of material written by these Renaissance Nominalists on this subject, I have narrowed my attention to their discussions of it.

1Among recent general studies on the logic of the period are (Ashworth, 1974), (Munoz Delgado, 1964), (Broadie, 1983) and (Broadie, 1985).
This work therefore presents the views of Renaissance Nominalist logicians concerning the truth and falsity of modal propositions. It consists of four chapters beyond the first. These Nominalists distinguish two general classes of modal propositions, the "composed" and the "divided," and they believe that the differences between the two types is so great that each requires a distinct account of truth and falsity. But before turning to the two different accounts, the general distinction between "composed" and "divided" propositions must first be understood. Thus, the second chapter explains how this group of logicians understood the distinction between "composed" and "divided" modal propositions. The third chapter then presents their view concerning how the truth or falsity of the "composed" modal propositions was determined, while the fourth discusses how the truth conditions of the "divided" propositions were formulated. Finally, the fifth chapter discusses their views concerning the meanings of the modal terms.

Before turning to these topics, however, I wish to introduce the logicians I call "Renaissance Nominalists." Thus, I will specify in this introduction what period of history I refer to as the "Renaissance" and what this term "Nominalist" will mean in this context. Next, I will give a short biography of the main logicians we will be concerned with and a short presentation concerning the nature of their works on modal propositions.

I will then proceed to offer an outline of William of Ockham's approach to the truth and falsity of modal propositions so that it may be compared with those of the Renaissance Nominalists in later chapters. After this, I will argue that many 20th historians have incorrectly interpreted Ockham’s view on the modalities. Finally, I will explain how I will make citations to the the books of 15th and 16th century which I have consulted.
1.1 The Renaissance

The period under consideration here begins in the 1480’s, when logic teachers first had the opportunity to have their logic texts printed on the newly invented printing press, and lasts until about 1540, when Nominalism had for the most part disappeared from European Universities. I will use the term "Renaissance" to denote this period and no other. This usage of the contentious term "Renaissance" can be justified because (1) some historians have used it to denote approximately the same period,\(^2\) and (2) no other term seems appropriate except perhaps the cumbersome phrase "of the late fifteenth and early sixteenth centuries."\(^3\)

1.2 Nominalism

The logicians under scrutiny here are Nominalists in several senses of this term. First, they claim that they are Nominalists. Second, they boast of working within a tradition which began with William of Ockham and was carried into the Renaissance by the likes of John of Mirecourt, Gregory of Rimini, John Buridan, Peter of Ailly, Marsilius of Inghen, Adam Wodeham, John Domp, Albert of Saxony, and others.\(^4\) Third, they embrace typically Nominalistic positions on the problem of universals,\(^5\) the meaning or signification of propositions,\(^6\) and the nature of

\(^{2}\)For example, (Hale, 1971).

\(^{3}\)The focus of this work is much narrower than Ashworth’s "post-medieval," Risse’s "Neuzeit," Giacon’s "seconza scholastica" or Hickman’s "modern," making all these terms inappropriate.

\(^{4}\)This list is given in a letter referring to the ban on teaching Nominalism at the University of Paris in 1474. The relevant parts of this letter are available in (Munoz Delgado, 1964): pp. 70-71 and in (Prantl, 1870): 186-187.


"intentions." 7

There are two reasons for focussing on the Nominalists during this period instead of expanding the topic to include contemporary Thomists, Scotists, and, perhaps, Italian Aristotelians. First, the Nominalists in Paris and later in Spain, especially at Salamanca, were doing the best work in logic at that time. 8 Second, they literally have the most to say about our topic, that is, they produced, usually within the context of their commentaries on Peter of Spain's introductory logic book, long discussions on the truth and falsity of modal propositions. For example, one finds 20 folio pages (front and back, 81 columns) devoted to this topic in (Pardo, 1505), 14 folio pages (55 columns) in (Caubraith, 1509), about 6 folio pages in (Celaya, 1515). It is my impression after looking through texts from other traditions that logicians of the other traditions devote very little attention to this topic, if they consider it at all.

1.3 The Renaissance Nominalists and their Works

We will thus be considering Nominalist authors who devote the most attention to our topic or to closely related topics. All of these either taught or attended the University of Paris at some time. Since these are "minor figures" in the sense that they are not widely known to present day philosophers, a short biographical sketch of each is in order. Further, a short description of the text or texts which I have consulted is also appropriate.

Thomas Bricot (d. 1516) took his BA at Paris in 1478, his MA in 1479, and his doctorate in theology in 1490. Bricot was known throughout Europe as one of the premier theologians of his time. He was on the commission of Parisian

7 (Hickman, 1980): pp. 41-44. I agree, however, with Nuchelmans' claim that Mair's views are less revolutionary than Hickman suggests. See (Nuchelmans, 1981): p. 142.

8 (Ashworth, 1974): p. 6, where she states: "Between that year [1481] and about 1520 Paris was a centre of tremendous logical activity, and the best logicians to be found in the entire period with which I am dealing [she refers to the whole 'post-medieval' period] spent some, if not all, of their active life in that city." We need only add that most of these logicians were self-proclaimed Nominalists.
theologians who condemned Johannes Reuchlin and thus Bricot was indirectly responsible, as an object of attack, for the *Letters of Obscure Men* quoted earlier. No less an intellect than Erasmus called Bricot a prime example of decadent learning. Bricot’s philosophical works include an edition of Jean Buridan’s (ca. 1295/30-after 1358) *Tractatus Summularum*, learned notes in George of Brussels’ (see below) logical works, and his most important work: the *Tractatus Insolubilium*.\(^9\) The main topic of the *Tractatus* is the analysis of propositions containing some type of self-reference, but along the way Bricot considers the topic of assigning modality, as well as truth and falsity, to non-modal propositions.\(^10\) How this relates to our concerns will be explained later on in this introduction. Bricot is not the first logician to devote part of an *Insolubilia* Tract to assigning modality. Albert of Saxony (d. 1390) had done so as well. Bricot, however, provides a more extensive treatment.\(^11\)

**George of Brussels**\(^12\) (b. after 1450, d. 1510), whose life history remains unknown, wrote a commentary on Peter of Spain’s logic text, the *Summulae Logicae*. This work by Peter of Spain (d. 1277) was the standard beginning logic text for students in the late medieval period (and indeed for much of the 16th century as well, especially at Catholic universities). Logic teachers, however, added their own notes and commentary to it and thus interpreted Peter in accordance with their own philosophical point of view. George’s commentary, the *Expositio super Summulas Petri Hispani*, became the standard Nominalist interpretation of Peter of

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\(^9\)Now in a nice edition by E. J. Ashworth. See (Bricot, 1986).

\(^10\)See (Bricot, 1986): pp. 18-20 [which is based on (Paul of Venice, 1499): fol. 167\(^{vb}\)-168\(^{va}\)], 27-33, 49-50, 62-67, 92-93.

\(^11\)(Saxony, 1975): sigm. m v\(^{ra}\). “Insolubilia dicuntur, non quia nullo modo possint solvi, sed quia solvere est difficile. Et quantum ad hoc volo ponere primo aliquas descriptiones. ... Tertia description: propositio possibilis est quae qualitercumque significat ita potest esse. Quarta description: propositio necessaria est quae qualitercumque propositio significat ita necesse est esse.” (“These are called "unsolvable" not because they could not be solved at all, but because it is hard to solve them. And with regard to this I wish to present some descriptions. ... The third description: a possible proposition is one which, howsoever it signifies, such can be [the case]. Fourth description: a necessary proposition is one which, howsoever the proposition signifies, it is necessary that such be [the case].”)

\(^12\)It is very likely that he is the “Bruxellensis” mentioned in the quotation from von Hutten.
Spain during the early part of the sixteenth century. Although other Nominalists may have differed with George on the details of logical doctrine, they for the most part followed his lead in their general approach to logical problems. George’s commentary provides much of the information for my second chapter.

Pierre Tartaret (d. 1522) who was rector of the University of Paris in 1490 and despite being the "leading interpreter of Duns Scotus"\(^\text{13}\) offers opinions concerning modal propositions which are often so close to those of committed Nominalists that they often are helpful for explicating their views. As with George of Brussels, Pierre’s most interesting discussion of the modalities appears in the context of his commentary on Peter of Spain, in his *Expositio super summulis Petri Hispani*. Tartaret served on the same commission as Bricot which condemned Reuchlin.

Jeronimo Pardo (d. 1502?\(^\text{14}\)) presents the fullest account of the truth and falsity of modal propositions. In Chapter 8 of his *Medulla dyalectices* (roughly, the "Marrow of Logic"), he devotes many leaves to this topic. In addition, the first chapter of this work, whose main concern is the reference or "significate" of propositions, offers an extended discussion of the modality of propositions. In this discussion, Pardo shows an acquaintance with the history of his topic which is missing in the work of his contemporaries. Pardo made the effort to consult the works of Gregory of Rimini (1300-1358) and Andreas de Nova Castro (fl. ca. 1360). Each of these made interesting contributions to late medieval speculation concerning modality.

Pardo had much influence on Jerome of Saint Mark. Jerome was at Oxford for a time and studied theology at Paris.\(^\text{15}\) His discussion of the modalities in his *Compendium preclarum quod parva logica seu summule dicitur* is mainly an abbreviation of Pardo’s main views.

John Mair (1469-1550) was a tremendously popular instructor at the

\(^{13}\)So claims James Farge in his article "Pierre Tartaret," in (Bietenholz, 1985): p. 310.


\(^{15}\)(Ashworth, 1978): p. 82.
University of Paris and part of the reason the University attracted many students to the study of Nominalistic logic. John Knox, the Scottish reformer considered Mair the most learned theologian of his (Mair's, not Knox's!) time. Mair is also the author of the well-known History of Greater Britain. However, he does not add much to the topic of modalities than can be found in George of Brussels' or Pardo's work. Nonetheless, what little he did say was heavily commented upon by his many students.

Among Mair's students was Robert Caubraith, who was a member of faculty at the school of law at Paris. He wrote a large work entitled Quadrupertiun in oppositiones, conversiones, hypotheticas, et modales. His chapter on modal propositions contains a long section on their truth and falsity. This section rivals Pardo's in length and detail. Caubraith's work on modalities is, to borrow Alexander Broadie's description of Caubraith, truly "subtle, detailed, and painstaking," so much so as often to defy consistent interpretation. Still, Caubraith's disagreements with Pardo often elucidate the philosophical and logical consequences of both their points of view.

Juan de Celaya (c. 1490-1558) was a student of Caubraith's who later was a professor of theology at, and rector of, the university in his home town of Valencia around 1523/4. Thus, Celaya was one of many Spanish students of the University of Paris who brought his Nominalist teaching into Spain. His commentary on Peter of Spain, Expositio magistri joannis de celaya valentini in primum tractatum Summularum Magistri Petri Hispani, contains the third longest tract on the truth and falsity of modal propositions (Pardo's is first; Caubraith's second) in which he often differs with his old teacher.

Another student of Mair was yet another spaniard: Antonio Coronel (d. 1520). His Prima pars rosarii magistri Anthonii Coronel in qua de propositione multa notanda (the "first part of the [logical] rosary") contains some discussion of our topic, but is not as thorough as Pardo's or Caubraith's work.

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16(Broadie, 1985): p. 5.

17(Villoslada, 1938): p. 190. Thus, Caubraith apparently taught some philosophy before he taught law.

Other Spanish logicians who give usually standard short discussions of the truth and falsity of modal propositions are Juan Dolz, Fernando de Enzinhas (d. 1528), and Rodericus Cueto, all in commentaries on Peter of Spain.

We will occasionally refer to some German logicians, namely, Jodocus Truuetter Isennachens (d. 1519), and Johannes Eck (1486-1543), and Gervais Waim. The latter is the most interesting for our topic because of his views concerning the ontological foundations of modality.

Finally, some references will be made to other texts of the period, usually commentaries on Peter of Spain written by Scotists such as Nicolaus de Orbellis, Johannes de Magistris, and Joannis de Monte, and by Thomists such as Johannes Versor, Magnus Hundt, along with some anonymous commentaries. These occasionally shed light on and sometimes even agree with what our Nominalists say.

1.4 Modal Propositions

The topic of this dissertation is the truth and falsity of modal propositions. Before moving any further into this topic, we should briefly consider what a "modal proposition" is. We will learn in Chapter 2 that there was some debate among our nominalist logicians concerning which propositions are truly modal. Generally speaking, however, a modal proposition was simply one that contained at least one of the four "modal terms" or "modes": ‘possible’, ‘necessary’, ‘impossible’, or ‘contingent’, or their cognates, such as ‘possibly’, ‘necessarily’ and so on. Even here there was some disagreement as to what terms should be among the modes. Some logicians in particular wished to expand the list to include ‘true’, ‘false’,

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19See page 32.

'known' (scitum), and others.  However, they all agreed that the first four should be on the list and in fact most agreed that the modes should be limited to the first four listed.

1.5 Ockham and Renaissance Nominalism

The general approach these logicians take for determining the truth or falsity of modal propositions is taken from the works of William of Ockham. Ockham's approach, as expressed in his Summa Logica, can be characterized generally as follows. Ockham begins, of course, by telling us when simple, present tense, non-modal propositions, such as 'George is fishing', are true and false. Such propositions are true as long as the subject and predicate term have "supposition" for the same individual, and false otherwise. 'Supposition' is a technical term for the reference which a term has within the context of a proposition. Thus, the proposition 'George is fishing' is true just in case there is an individual to which both the subject 'George' and the predicate 'fishing' (understood as "fishing being" or "fishing human") presently refer.

---

21 (Pardo, 1505): fol. cvirb. "Octavum capitulum autem ostendit qua veritas vel falsitas modalium potest cognosciri, pro qua supponendum [est] qui sunt modi modales facientes ... cujusmodi sunt isti termini: 'possible', 'impossible', 'necesse', 'contingens', 'credendum', 'opinatum', 'scitum', 'verum' et 'falsum' et consimiles." ("Further the eighth chapter shows how the truth and falsity of modal propositions can be known, for which purpose one should state which are the modes generating modal propositions ... among which are these terms: 'possible', 'impossible', 'necessary', 'contingent', 'believed', 'opined', 'known', 'true', 'false', and similar terms.") Pardo later on the same page limits the modes to six: 'possible', 'impossible', 'necessary', 'contingent', 'true', and 'false'.

22 Besides the passage of George of Brussels already cited in footnote 20, see (Mair, 1514): fol. xxxivvb and (Cabraith, 1509): fol. cxxiiv. (Coronel, 1517) on sign. g iir tells us 'true' and 'false' are only improperly called modes: "Notandum est quod sex sunt modi facientes propositionem modallem: 'possible', 'contingens', 'necessarium', 'impossible', 'verum', 'falsum', sed quattuor primi proprie, alii duo impropriae."

23 Here I rely heavily on Alfred Freddoso's presentation of the view given in the introduction to (Ockham, 1980), especially pp. 45-61.

24 We may avoid entering for the time being the labyrinth of supposition theory. Freddoso on pp. 3-16 of (Ockham, 1980) discusses some of the problems facing Ockham's theories of supposition and truth.
After explicating the truth conditions for simple present tense propositions in this way, Ockham proceeds to set the truth conditions for each of the past tense, future tense, and modal propositions. The truth values of such propositions is determined by means of procedures whereby the tense and the modality of the verbs of these propositions are "removed" and expressed as predicates applied to present tense, non-modal propositions. Since we will be focussing our attention on modal terms, let's take a modal example:

'George possibly is fishing'.

This proposition is true just in case

'George is fishing' is possible.

That is, the modal term 'possible' must be truly predicated of the whole proposition 'George is fishing' in order for 'George is possibly fishing' to be true.

Ockham's project is primarily a logical one: to provide a means whereby the truth of complex modal propositions can be determined by the truth of more simple ones. The procedure resembles that of the modern recursive definition of "truth" given for compound statements in zero and first order logic. Thus, for example, the compound statement 'p \land q' is said to be true just in case 'p' and 'q' are both true. Here the logical operator '\land' is explicated in terms of the "metalinguistic" terms "and...both." In a similar fashion, Ockham and his Nominalist followers replace the modal term 'possibly' in 'George possibly is fishing' with a predicate "is possible." So, 'George possibly is fishing' is true if and only if 'George is fishing' is possible.

This process is primarily of logical interest since the main effort of Renaissance logicians went towards determining the form of the "non-modal" part (which they called the "de inesse" proposition) in the definiens of the modal proposition when the proposition contained different sorts of complicating aspects, such as logical connectives, quantifiers, temporal expressions, relative clauses, etc. This process, as Chapter 4 amply proves, is mainly a process to determine the scope of the modal term. So, for example, a proposition such as 'every human possibly is fishing'\textsuperscript{25} is true just in case each substitution instance of 'x is fishing' is possible (where we assume x ranges only over humans).

\textsuperscript{25}Taken in the "divided" sense.
Of course, such a procedure will not provide an account of why atomic propositions have the modality they do, anymore than the modern recursive definition of truth answers Pontius Pilate's question: what is truth? The modern recursive definition presupposes or, perhaps, postpones an answer to this question. Thus, Ockham's approach does not provide a complete theory of modality; it only shows us how to determine the modalities of logically complex propositions if we already know what modalities the simple ones have. This fact explains the existence of my fifth chapter, which explores some of the attempts made by the Renaissance Nominalists to explain how we determine the modality of the atomic propositions.

1.6 Was Ockham a Medieval Quine?

I have suggested that Ockham's procedure for determining the truth and falsity of modal proposition is primarily a method for determining the scope of the modal term. If true, this does not fully explain why Ockham chose ultimately to express the modes as *predicates* since he could have just as well used the adverbial forms of the modal terms (such as 'possibly' rather than 'is possible') as modal *operators* to delimit scope, just as standard forms of modal logic do today.

Ockham, however, never seems to give an answer to this puzzle, nor to my knowledge do his followers. One explanation which seems to be accepted by many scholars of late-medieval logic is that Ockham favored modal predicates over operators for the same reasons as the 20th century philosopher Willard van Orman Quine does. Quine's main reasons for favoring modal predicates over operators were ontological: Restricting expressions of modality to predicates, Quine thinks, will help us exclude certain types of entities from our world: specifically (1) Aristotelian essences. Quine elsewhere suggests that conceiving modes as predicates of sentences will allow us to live without (2) unactualized, "mere"

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26 As given in (Quine, 1976a).

possibles,\textsuperscript{28} and his various remarks indicate that he would happily apply the same strategy to remove any (3) necessary connections between entities or events.\textsuperscript{29} Thus, Quine does not wish any purely modal entity to creep into his ontology and he hopes that one way to protect the world from an invasion of such unwanted entities is to insist that modalities be expressed as predicates of sentences.\textsuperscript{30}

Returning to Ockham, one might then suggest that perhaps Ockham is engaged in a project similar to that of Quine. Perhaps expressing modalities as predicates is Ockham's way of protecting his ontology from unwanted "modal" entities such as those in categories (1)-(3). Unfortunately, there are many reasons to be cautious about drawing parallels between Quinean and Ockhamist philosophy here. First, Marilyn McCord Adams, in her recent work on Ockham, attributes to him the view that there are necessary connections among entities.\textsuperscript{31} She and other Ockham scholars further hold that there is not sufficient evidence to suggest that Ockham wished to exclude unactualized possibilia from his ontology.\textsuperscript{32} One would think that if Ockham were engaged in a Quinean program of ridding the world of unactualized possibilia, he would make an unambiguous statement to that effect, especially if he had based his whole treatment of temporal and modal propositions on such a program.

Ockham also does not seem to find any difficulties with claiming that

\textsuperscript{28}Removed in (Quine, 1980a): p. 4. In this essay "On What There Is" Quine says that "we may impose the adverb 'possibly' upon a statement as a whole" (ibid.) as a partial solution to the problems surrounding nonactual possibles. Presumably, in view of his pronouncements in "Three Grades of Modal Involvement" (Quine, 1976b), he would ultimately reinterpret these adverbs as predicates of sentences.

\textsuperscript{29}Rejected in (Quine, 1976a).

\textsuperscript{30}Many recent historians of modal logic seem to have this Quinean approach in mind since they believe that Nominalist logicians reject the view that modal propositions require an ontology of unactualized possibles as part of their truth conditions. Besides Freddoso, see Peter King's introduction to (Buridan, 1985): p. 56 and (Broadie, 1985): pp. 82-88.


\textsuperscript{32}Ibid.: p. 415-6 and 1056-1061, and see also (Karger, 1981) and (McGrade, 1985).
individuals have essences. However, the essence of an individual such as Socrates on Ockham's view cannot be of the sort envisaged by Quine, who states:

[Aristotelian essentialism] is the doctrine that some of the attributes of a thing (quite independently of the language in which the thing is referred to, if at all) may be essential to the thing, and others accidental. E.g., a man, or talking animal, or featherless biped (for they are in fact all the same things), is essentially rational and accidentally two-legged and talkative, not merely qua man but qua itself.  

Ockham certainly believes that Socrates is a man, but the genus Man is not some thing (res) outside the mind, from (de) the essence of those things of which it is predicated, but is some intention of the mind, predicabile of many.  

By putting genera, such as Animal, in the mind, Ockham makes them part of his "mental language." Thus, the essential relationship between the concepts of man and animal seems to be "language dependent" on Ockham's view. However, the individual Socrates still seems to have some sort of essence, but the mere concepts of man and animal are not part of that essence since they are only concepts in minds. Still, I suspect Quine would happily label Ockham an "Essentialist" (if not an "Aristotelian" one) solely in virtue of the fact that Ockham believes that individuals have some kind of essence.

Thus, whatever Ockham's reasons for preferring predicates to operators, they are not derived from any Quinean project of protecting the world from entities in categories (1)-(3).

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33 See for example (Ockham, 1974b): p. 68 and 70.

34 (Quine, 1976b): p. 76.

35 However, 'Socrates is a man' is not necessary in Ockham's opinion. See (Ockham, 1974b): p. 282.

36 Ibid.: p. 68, ll. 7-10. "Genus non est aliqua res extra animam, de essentia illorum de quibus praedicatur, sed est quaedam intuens in animae, praedicabile de multis." Ockham repeats this rather obscure claim that "the genus is not from (de) the essence of things" again at line 22, and says the same concerning species at p. 70, l. 6., and concerning differentiae at p. 75, l. 35. A proprium, however, "non est aliqua res inhaerens realiter illi cuius est proprium." Accidents, understood as universals and not as individuals, "non sunt de essentia rerum nec partes rerum extra" (p. 83, l. 71).
1.7 Citations

Some remarks need to be made about the way the early texts of our Nominalists are cited. For the most part, there are no modern editions of these works. Thus, the sources of most of the citations are from editions printed in the late 15th and early 16th centuries. My citations from these texts have been "lightly edited." I have corrected obvious errors in grammar and spelling and I have expanded all abbreviations. Where I have felt the need to insert a expression or replace one expression with another, I have enclosed the inserted expression in square brackets: "[" and "]". Where I think an expression should be removed, I have enclosed it in "corner brackets": "<" and ">". Folios in texts with folio numbers are cited as "fol.". Superscript "r" means "recto" and "v", "verso". Thus "fol. cxxi\textsuperscript{v}b" means the cited text comes from folio 121, column b of the "back" or "verso" side. Texts without folio numbering are cited by the "signature" number appearing (usually) at the bottom of the right hand page.
Chapter 2

Composed and Divided Modal Propositions

The Nominalist logicians of the Renaissance offer two accounts of the truth and falsity of modal propositions. They give one account for the so-called "composed" modal propositions and another for the "divided" modal propositions. Thus we must first understand the differences between "composed" and "divided" modal propositions before we will be able to understand their truth and falsity.

One feature that sets the Nominalists of the Renaissance apart from their medieval forebears is that they defined the composed modal propositions as those which contain "second intention" modes and the divided modal propositions as those which contain "syncategorematic" modes. We must therefore attempt to understand the characteristics of the "second intention" and "syncategorematic" modes before we may fully comprehend the peculiarities of the Renaissance Nominalists' distinction between composed and divided modal propositions.

We will begin in section 2.1 by substantiating our claim that Nominalist logicians of the Renaissance equate composed modal propositions with those containing second intention modal terms. In section 2.2 we show they further equate divided modal propositions with propositions containing syncategorematic modal terms. We will then try to understand what the two expressions "second intention mode" and "syncategorematic mode" mean by examining some texts in which these are defined and then by presenting three major differences commonly held to separate the two types of modal terms. In the remaining sections of this chapter we will look at some of the problems which these three differences engendered.
2.1 Second Intention Modes in Composed Propositions

The prevalent view of Nominalist logicians of the Renaissance is that composed modal propositions are exactly those propositions which contain second intention modes. George of Brussels, for example, tells us that when the modes are understood as second intentions, then they are divisions (differentiae) of propositions, and as such they generate composed modal propositions.\(^{37}\)

Although the 14th century nominalist logician Jean Buridan seems to be among the first to hold this view,\(^{38}\) it only seems to have achieved widespread acceptance among logicians of the late 15th century.\(^{39}\)

2.2 Syncategorematic Modes in Divided Modal Propositions

The syncategorematic modes, on the other hand, generate modal propositions in the "strictest" sense, George of Brussels tells us:

In a second way, [modes] are understood syncategorematically and are so understood when they generate a modal proposition in the strictest sense.\(^{40}\)

and, indeed, it turns out that for George the divided modal propositions are also called modal propositions in the strictest, "most proper" sense:

divided modal propositions are categorical propositions in which the mode, as a


\(^{38}\)At least his commentator John Dorp interprets Buridan’s view in this way at (Buridan, 1965): sign. d 1\(^{v}\): "Alio modo [modi] capiuntur prout sunt termini secundae intentionis...et sic faciunt propositiones modales compositas" ("In another sense, modes are viewed just as they are terms of second intention...and as such they generate composed modal propositions"), and sign. d 1\(^{v}\), "nam in modali composita modus debet esse terminus secundae intentionis" ("in fact in composed modal propositions, the mode must be a term of second intention"). Buridan himself, however, never, I believe, uses a phrase equivalent to 'second intention mode'.

\(^{39}\)For example, see (Trutvetter, 1501): sign. BB iii\(^{f}\), (Mair, 1514): fol. xxxii\(^{a}\) and (Mair, 1527): fol. lxvi\(^{a}\), (Caurraith, 1509): fol. cxxii\(^{a}\), (Enzinas, 1523): fol. xxxii\(^{a}\), (Cueto, 1528): fol. xxxvi\(^{a}\). One finds some Scots supporting the view as well: (Tartaret, 1500): fol. xiii\(^{a}\), and (Magistris, 1490): sign. dd 3\(^{a}\).

\(^{40}\)(Brussels, 1497): fol. xxi\(^{a}\). "Alio modo capiuntur sincathegorematiche, et sic capiuntur quando faciunt propositionem modalem strictissime dictam."
determination of the copula, stands next to the copula which unites the principal
material predicate with the principal subject, as in 'man possibly is running'.
Here this mode 'possibly' is the determination of this verb 'is' which unites
the material predicate with the subject. These are most properly called modal
propositions, and are distinguished from non-modal or de inesse categorical
propositions. 41

Thus, syncategorematic modes generate divided modal propositions. We must
therefore focus our attention on this distinction between "second intention" and
"syncategorematic" modes to understand the differences between composed and
divided modal propositions.

2.3 Second Intention and Syncategorematic Modes

It became commonplace among Renaissance Nominalists to contrast three
ways in which the usual four modal terms may be understood. For example, we
find in the work of George of Brussels:

One should know that these four terms 'possible', 'impossible', 'contingent', and
'necessary' are understood in two senses: first, as they are terms of first intention;
second, as they are terms of second intention. The first sense should again be
taken in two senses: first, categorically and as such the modes are divisions
(differentiae) of beings. The modes are understood in this first sense when one
says that some being is necessary or some being is contingent. In the present
discussion, they are not conceived of in this sense. In a second sense, they are
understood syncategorematically and are so understood when they generate a
modal proposition in the strictest sense. For example, one says 'Socrates possibly
is running,' and in this case 'possibly' is a syncategorematic term and constitutes
a modal proposition in the strictest sense. But when they are conceived of as
terms of second intention, then they are divisions of propositions. ... Thus, this
[second intention] term 'possible' just means 'possible proposition', 'necessary'
means 'necessary proposition', 'impossible' means 'impossible proposition', and

41 Ibid. "Sed propositiones mentales [...] divisse sunt propositiones cathegoricae in
quibus modus se tenet ex parte copulae tanquam determinatio eius, quae unit predicatum materiale
principale cum principali subjecto, ut 'homo possibiliter est curreris'. Ibi iste modus 'possibiliter' est
determinatio illius verbi 'est', quod unit predicatum materiale cum subjecto, et illae sunt modales
propriissime dictae, et distinguuntur a propositionibus cathegoricis de inesse." See also (Tartaret,
1500): fol. xxxii 2a (quoted on p. 29), (Mair, 1514): fol. xxxii 2a and (Mair, 1527): fol. lv 5a,
(Magistri, 1490): sign. dd 3b, (Caubraith, 1509): fol. cxxii 2a, (Enzinas, 1523): fol. xxxii 2a, (Cueto,
1528): fol. xxxiv.
‘contingent’ means ‘contingent proposition’.\textsuperscript{42}

George of Brussels’ division of the modes may be represented by figure 2-1.

\begin{center}
\begin{tikzpicture}[level distance=2cm, level 1/.style={sibling distance=4cm}, level 2/.style={sibling distance=2cm}]
    \node {Modes}
    child {node {First Intention}
        child {node {Categorical}}
        child {node {Syncategorimatic}}
    }
    child {node {Second Intention}}
\end{tikzpicture}
\end{center}

\textbf{Figure 2-1:} George of Brussels’ Division of the Modal Terms

The distinction between modes as terms of first intention and those of second intention seems to make its first appearance in the works of logicians of the 14th century, for example, in those of Richard Billingham and Willam Heytesbury,\textsuperscript{43} Ralph Strode,\textsuperscript{44} John Wycliffe,\textsuperscript{45} and Cajetan of Thiene.\textsuperscript{46} The use of the terminology of modes as second intention terms is also present in John Dorp’s

\begin{footnotesize}
\textsuperscript{42}(Brussels, 1497): fol. xx\textsuperscript{vb}.xxi\textsuperscript{ra}. "Notandum est quod isti quatuor termini, scilicet ‘possibile’, ‘impossibile’, ‘contingens’, et ‘necesse’, capiuntur dupliciter. Uno modo ut sunt termini primae intentionis, alio modo ut sunt termini secundae intentionis. Primo modo adhuc capiuntur dupliciter: uno modo cathegorumatico et sic sunt differentiae entium, et illo modo capiuntur quando dicitur quod aliquid ens est necessarium; aliquid ens est contingens, et isto modo non capiuntur in propositione. Allo modo capiuntur sincathegorumatico, et sic capiuntur quando faciunt propositionem modalem strictissime dictam, ut dicitur ‘Socrates possibiliter est currans’. Ibi ‘possibiliter’ est sincathegoruma et constitut propositionem modalem proprissime dictam. Sed quando capiuntur ut sunt termini secundae intentionis, tunc sunt differentiae propositionum. ... Et sic iste terminus ‘possibile’ tantum valet sicut propositionis possibilitis, et ‘necessarium’ sicut propositionis necessaria, ‘impossibile’ sicut propositionis impossibilis, et ‘contingens’ sicut propositionis contingens." This view also appears in (Eck, 1516): fol. xx\textsuperscript{vb}.xxa, ([Hagenau], 1967): sign. h 8\textsuperscript{v}-i 1\textsuperscript{v}, (Mair, 1514): fol. xxxii\textsuperscript{a}, and (Tartaret, 1500): fol. xiii\textsuperscript{a}.

\textsuperscript{43}See (Maierü, 1972): p. 457

\textsuperscript{44}Ibid.: p. 382, n. 218, where he explicitly speaks of verum as a second intention term.

\textsuperscript{45}Ibid: p. 460.

\textsuperscript{46}Ibid: p. 466.
\end{footnotesize}
commentary on Buridan. Of course the distinction of terms in general (not specifically of the modes) into these two groups is much older. The distinction goes back at least to Avicenna although it is probably even older.

The first evident applications of the distinction between categorical and syncategorematic terms to the modalities, on the other hand, appear in the late 12th and early 13th centuries but as applied to terms in general it is of course much older. Let us turn our attention to the general notion of "intention" in order to better understand this distinction with regard to the modes.

An "intention," according to William of Ockham and the Renaissance Nominalists who followed him, is an act of the understanding capable of (naturally, as opposed to conventionally) signifying something else. The difference between a second and first intention is a difference between what the intentions signifies. A first intention signifies one or more inhabitants of Aristotle's categories, as ordered by Porphyry's trees. Second intentions instead signify other intentions. For the Nominalists, then, second intentions are acts of the mind capable of signifying other acts of the mind which in turn are capable of signifying other extra-mental things.

Our characterization of intentiones so far is still ambiguous, and this ambiguity explains why some Nominalists of the Renaissance presented a different partitioning of the modes than that found in George of Brussels logic text. Antonio Coronel, for example, first distinguished categorical and syncategorematic modes, and then divided the categorical modes into first and second intention modes. Thus, unlike George of Brussels, Coronel thinks that second intention modes are categorical terms, but apparently does not think it appropriate to describe

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50 (Ockham, 1974a): pp. 73-74. By calling an intention merely an "act of the understanding," Ockham is ruling out the possibility that intentions require any "concept" beyond the mental act alone to function as the object of the mental act. Here Ockham is abandoning the "objective being" view of mental activity for the "mental act" view. See (Adams, 1987): Part One, Chapter 3, passim.
syncategorematic terms as "intentions" of any sort. The differences between the two views is evident if one compares figure 2-1 (p. 19) with figure 2-2 (p. 22).

The disparity between the two points of view stems from the ambiguity of the term ‘intention’, an ambiguity of which William Ockham himself was aware, as we see in his discussion of first intentions:

But the expression ‘first intention’ can be understood in two senses. In the broad sense an intentional sign in the soul is a first intention if it does not signify only intentions or signs. In this broad sense first intentions include not only intentions which so signify that they can supposit in a proposition for their significata, but also intentions which, like syncategorematic intentions, are only signs in an extended sense. In this sense mental verbs, mental syncategorematic expressions, mental conjunctions, and similar terms are first intentions. In the narrow sense only those mental names that are capable of suppositing for their significata are called first intentions.

In this passage Ockham distinguishes two kinds of first intentions. The first kind includes not only "categorical" or "categorematic" intentions or signs, that is, signs which signify (in propositions) the inhabitants of the traditional Aristotelian categories such as substances, qualities, quantities, etc., but also "syncategorematic" signs which are, as he says, "signs in an extended sense" because by themselves they do not signify anything, but when appended to other signs, change the signification of these other signs. Examples of categorical terms would be ‘man’ and ‘red’ which signify some thing or things (aliquid vel aliqua) while examples of syncategorematic terms include the logical connectives, the quantifiers ‘all’ and ‘some’, and syncategorematic modes, all terms which only signify "in some way"...

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51 (Coronel, 1517): sign. g i, "Modi facientes propositionem modalem...dupliciter accipiantur: sincathegorematicae et categorie. Sincathegrematicae accipiantur quando accipiantur adverbialiter quia tum nihil nec aliqua significatur, ut sic 'Socrates possibiliter currit', 'Creans necessario est deus'. Cathegoricae accipiantur quando accipiantur nominaliter quia aliquod vel aliqua significant. Sed quando accipiantur nominaliter, dupliciter capi possunt: prime intentionali et secunde." ("The modes which generate modal propositions are taken in two senses: syncategorematically and categorically. They are understood syncategorematically when they are taken adverbially because then no thing (or things) is signified [by them], as for example: 'Socrates possibly runs', 'Creating necessarily is God'. They are understood categorically when they are taken nominally because the signify some thing or things. But when they are taken as nominally, they can be understood is two senses: first intentionally or second [intentionally].") See also (Caubraith, 1509): fol. cxxi* (St. Mark, 1507): sign. J iii". In (Magistris, 1490): sign. dd 3*6, a similar doctrine may be offered. However, the text is so unclear as to make final judgement impossible.

52 (Ockham, 1974a): p. 74. We will have more to say about "supposition" later (p. 38).
Thus, a first intention in the broad sense is a sign includes syncategorematic signs. In the narrow sense, first intentions only include categorical terms.

![Diagram of Modes]

**Figure 2-2: Antonio Coronel's Division of the Modal Terms**

Evidently, George of Brussels understands 'first intention' in the broad sense since he subsumes categorical and syncategorematic modes beneath it. Coronel, however, restricts intentions, both first and second, to categorical modes and therefore assumed that intentions only properly include categorical terms. Thus, the fact that there are two different ways to divide up the modes can be explained by means of the ambiguity of the term 'intention'.

Setting aside these complications, we should note that the "first intention categorical" modes--or, as Coronel would perhaps say, the "categorical first intention modes"--were universally excluded from Nominalist discussions of modal propositions. Thus, a proposition such as 'George is contingent' was not considered to be a modal proposition, but, apparently a simple "categorical" proposition.

In any case, when the Nominalists discuss modal propositions, the main distinction of modal terms is that between the second intention modes and the

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54 (Brussels, 1497): fol. xxi3r (see p. 18).
syncategorematic modes. There are three main differences commonly believed to hold between the two types of modes:

1. Second intention modes have a definite reference, but syncategorematic modes have no reference. Specifically, second intention modes refer to propositions, but syncategorematic modes, since they are syncategorematic terms, do not signify or have reference when taken separately from other terms. This difference is discussed in section 2.4.

2. Second intention modes appear either as subjects or predicates of propositions. In other words, Second intention modes may replace either $A$ or $B$ in the proposition-schema ‘$A$ is $B$’, but syncategorematic terms may not. Syncategorematic modes are described either as part of the copula of the proposition in which they occur or as “determining” the copula while not being part of it. This distinction is discussed in section 2.5.

3. Syncategorematic modes “ampliate” the signification of the terms in modal propositions. Second intention modes do not. The doctrine of ampliation is discussed in section 2.6.

We now turn to an exposition of the signification of syncategorematic and second intention modes.

2.4 The Difference in Signification

The first main difference between syncategorematic modes and second intention modes is that syncategorematic modes do not refer unless as part of a complex sign which, taken as a whole, has reference while second intention modes have “independent” reference to propositions. Nominalists of the Renaissance, as we have seen (p. 21), characterized the difference between syncategorematic terms (such as the syncategorematic modes) and terms which are not syncategorematic (these were called “categorical” or “categorematic” terms) in virtue of the signification of these terms. Categorical terms such as ‘man’ clearly signify some entities quite independently of other terms while syncategorematic terms such as ‘every’ must be attached to some other term such as ‘man’ before they signify as part of a complex expression.

Following this general distinction, Renaissance Nominalists felt that
syncategorematic modes did not signify any thing or things by themselves, but when they "determined" the copula of propositions, they changed the signification of the other terms in the proposition. On the other hand, it is said of second intention modes, which are taken to be categorical by at least some of the Nominalists (as we learned above, p. 21), that they stand or "supposit" for propositions. Thus, Antonio Coronel tells us:

[Modes] are understood categorically when they are taken nominally because they signify some thing or things. ... 'Possible' as a second intention supposits for a possible proposition, 'necessary' for a necessary proposition, 'contingent' for a contingent proposition, and 'impossible' for an impossible proposition.

What is the nature of these propositions to which second intention modes refer? The 20th century reader must always guard against confusing the concept of propostio held by 15th and 16th century Nominalists with 20th century conceptions. One common conception of the proposition held by 20th century philosophers is that a proposition is common to a set of synonymous declarative sentences. In this sense of 'proposition' two sentences will express the same proposition if they have the same meaning.

In the Renaissance, however, a propostio was the linguistic entity by means of which propositional meanings are expressed and not an entity which is identical to the meaning of a sentence. In fact, the propostio is best described as an indicative sentence token which can be true or false. Modern Scholastics in

55(Coronel, 1517): sigm. g i8. "[Modi] sincategorematici capiuntur quando accipiuntur adverbaliter quia tunc nil nec aliquo significatur." ("Modes are understood syncategorematically when they are taken adverbially because then they signify no thing or things.") See also (Tartaret, 1500): fol. xiii8, quoted on p. 29.

56Specifically, they "ampliate" the other terms. See section 2.6.

57(Coronel, 1517): ibid. "[Modi] cathegorice capiuntur quando accipiuntur nominaliter quia aliquod vel aliqua significat. ... 'Possible' secunde intentionali supponit pro propositione possibili, 'necessarium' pro propositione necessaria, 'contingens' pro propositione contigenti, 'impossibile', pro propositione impossibilis." See also (Brussels, 1497): fol. xxi8, quoted on p. 18.


general further held that there were three kinds of *propositio*: written, spoken, and mental, corresponding to the three types of language distinguished originally by Boethius. Spek and written languages are only conventionally meaningful while mental language is naturally meaningful and common to all persons. Thus, the mode of a composed modal proposition supposes for one or more written, spoken, or mental sentence tokens. Thus, Antonius Coronel has told us that the term 'possible' in 'Socrates to run is possible' refers to either a written, spoken, or mental possible sentence token.

2.5 The Syntactic Difference

The second distinguishing mark between second intention and syncategorematic modes is that second intention modes may appear as the subject or predicate of propositions, but syncategorematic modes may not. In this section we will explain this distinction and then consider some of the problems which surrounded Nominalist characterizations of the relationship between the syncategorematic mode and its copula.

In the logic texts of the late 15th and early 16th centuries, it was almost universally accepted that a "second intention" mode appears either as the subject or the predicate of the proposition in which it appeared. So, George of Brussels says:

when the modes are understood as second intentions, then they are divisions (*differentiae*) of propositions, and as such they generate composed modal propositions. In that case they take either the subject or the predicate position

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when they are placed in propositions.\textsuperscript{61}

In composed modal propositions, the mode appears either in the subject or the predicate position. These, however, are not strictly speaking modal propositions and George of Brussels calls them "absolutely non-modal modal propositions" (modales simpliciter de inesse). He offers as an example 'Hominem currere est possible' ('A man to run is possible') in which 'hominem currere' is the subject, 'possible' the predicate, and 'est' the copula, which is not determined in any way by a determinatio. Another example would be 'Possibile est hominem currere' ('Possible is a man to run'), in which 'possibile' is the subject, the total phrase 'hominem currere' is the predicate, and again 'est' is the undetermined copula.\textsuperscript{62}

Wherever the mode appeared, the other term or "extreme" of the proposition consisted of at least one noun in the accusative case conjoined with an...

\textsuperscript{61}(Brussels, 1497): fol. xxi\textsuperscript{r}. "Sed quando [modi] capiuntur ut sunt termini secundae intentionis, tunc sunt differentiae propositionum, et sic faciunt propositiones modales compositas, et sic se tenent a parte subjecti vel a parte predicati quando ponuntur in propositionibus." See also (Brussels, 1497): fol. xxxiv\textsuperscript{r}, (Hagenau, 1667): sign. i 1', (Mair, 1514): fol. xxxv\textsuperscript{r}, (Magistris, 1490): sign. dd 3\textsuperscript{a}, 4\textsuperscript{a}, (St. Mark, 1507): sign. J vii\textsuperscript{r}, and (Eck, 1516): fol. xx\textsuperscript{r}. Even the great Scotist Tartaret reiterates the view: (Tartaret, 1500): fol. xiii\textsuperscript{r}. "Alio modo [modi] capiuntur secunde intentionaliter, et sic sunt differentiae propositionum et dicuntur facere propositionem modalem compositam. Ex quo sequitur quod duplex est propositio modalis, scilicet composita et divisa. Composita est in quâ modus subjicitur vel praedicatur, ut 'possibile est Sórem currere.'" (In another sense, modes are understood second intentionally and as such are divisions of propositions, and they are said to generate composed modal propositions. From this it follows that modal propositions are twofold: that is, composed and divided. A composed [modal proposition] is one in which the mode is a subject or a predicate.) On the equation of composed modal propositions with propositions containing second intention modes see section 2.1. For further discussion of the claim that second intention modes may appear as subjects of propositions, see section 3.1.

\textsuperscript{62}Ibid. "[Propositiones modales] compositae sunt in quibus modus subjicitur vel predicatur, et istae non sunt proprie propositiones modales sed sunt vocatae modales simpliciter de inesse, ut 'hominem currere est possible'. Ibi hoc complexum 'hominem currere' est subjectum, et iste terminus 'possible' est predicatum, et hoc verbum 'est' sumptum sine aliqua determinatione est copula. Similiter 'possible est hominem currere'. Ibi 'possible' est subjectum, et hoc toum 'hominem currere' e[st] predicate, et hoc verbum 'est' sumptum sine aliqua determinatione est copula." See also (Tartaret, 1500): fol. xiii\textsuperscript{r}, (Caubraith, 1509): fol. cxv\textsuperscript{a}, (Enzinas, 1523): fol. xxxiv\textsuperscript{r}, (Cueto, 1528): fol. xxxvi\textsuperscript{a}.
infinitive verb. Such a phrase was called the "dictum" of these propositions.63

Examples would be

George to run is possible (Georgium currere est possibile)

and

Possible is George to run (Possibile est Georgium currere)

The dictum of these propositions is "George to run" (Georgium currere). Since second intention modes appear in composed modal propositions, the general form of composed modal propositions for our Nominalists was either:

MODE is DICTUM

or

DICTUM is MODE

where ‘MODE’ ranges over the four modes (in adjectival form) and ‘DICTUM’ ranges over dicta.

I will be translating dicta such as Georgium currere with the rather cumbersome English phrase George to run. Other possible translations would be ‘that George runs’ or ‘for George to run’. I opt for the more cumbersome translation because I think it will help lend plausibility to the Nominalist view that the dictum of a composed modal proposition is much like a proper name for sentences.64 Second, the other two translations would tempt one to translate possibile est Georgium currere as either ‘it is possible that George runs’ or ‘it is possible for George to run’ neither of which mimics the grammar of the Latin statement. The Latin sentence is often considered a categorical proposition and neither English translation could easily be so interpreted.

Syncategorematic modes, on the other hand, were considered akin to

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63For example, see (Monte, 1500): sign. d viiivb. "Primo sciendum est quod in qualibet propositione modali reperitur dictum et modus. Unde quando in modalibus modus est nomen, tunc dictum est oratio imperfecta composita ex accusativo ca su et verbo infinitivi modi, ut in ista 'Socratem currere est possibile'. Hoc totum 'Socratem currere' est dictum." ('First one should know that one finds in each modal proposition a dictum and a mode. Thus when the mode is a noun in modal propositions, then the dictum is an imperfect expression composed from [a noun] in the accusative case and a verb in the infinitive mood, as in this 'Socrates to run is possible'. This total expression 'Socrates to run' is the dictum.')

64See p. 75.
adverbs precisely because they are not constituents of the subject or predicate of the proposition, but "determine" the copula. Indeed, syncategorematic modes usually took the form of adverbs such as ‘necessarily’ (*necessario*), although they sometimes appear as prepositional phrases as ‘of necessity’ (*de necessitate*) or as verbs such as ‘can’ (*potest*). Since these appear in divided modal propositions, the form of the divided modal proposition often was:

**SUBJECT MODE is**65 **PREDICATE**

where ‘SUBJECT’ ranges over subject terms of propositions and ‘PREDICATE’ over predicates. ‘MODE’ in this case ranges over the modal terms expressed either adverbially, prepositionally, or as verbs. Thus, examples of divided modal propositions would be:

George possibly is running (*Georgius possibiliter est currens*)

and

George can run (*Georgius potest currere*)

The Nominalists as well as other Renaissance Scholastics apparently had difficulty characterizing the relation between a syncategorematic mode and the rest of the proposition to which it belonged. Renaissance Scholastics followed the lead of Medieval logicians like Peter of Spain, whose definition of ‘mode’ as "a determination adjoining a thing" was almost universally repeated,66 and described the relation between the syncategorematic mode and the copula of the proposition to which it was attached as that holding between a "determination" and what it may

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65 Other verbs besides "is" may appear in the propositions. Such propositions can be standardized by using a form of the verb "to be" plus the present participle: Georgius currit => Georgius est currens.

determine, its "determinabila." 67

Unfortunately, it is unclear what a "determinatio" is besides a name for
terms which do not function as subjects, predicates, copulas, nor as propositional
connectives such as the logical constants. In other words, 'determinatio' seems
little more than a handy term for problematic expressions which do not easily fit
into any available standard syntactic category. Still, a long list of the various
meanings of the term 'determinatio' was a common form of introduction into a
discussion of modal propositions in logic texts of the time. 68

One problem which illustrates the unclarity of the notion of determinatio
was the question, hotly debated by the Nominalists, whether syncategorematic
modes were "part of" the copula or not. The question at the heart of the controversy
seems to be whether a syncategorematic determinatio is part of its determinabile or
not.

For example, John Mair said that the syncategorematic modes were part of

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67 (Tartaret, 1500): fol. xiii². "Secundo modo [modi possunt capi] sincategorematico et sic
quaedam sincategoremata [determinantes] copulam, et tunc dicuntur facere propositionem modalem
divisam. ... Sed modalis divisa est propositio categorica in qua modus se tenet ex parte copulae
tangunt determinatio eius, ut 'homo possibiliter est currens'." ("In the second sense [modes can be
understood] syncategorematically, and as such are each syncategorematic terms [determining] the
copula, and then they are said to generate a divided modal proposition. ... But a divided modal
proposition is a categorical proposition in which the mode appears next to the copula just as a
determination of it, as in 'a man possibly is running'.")

68 See, for example, (Soto, 1967): fol. 72²b-73³a, who distinguishes among (i) "substantive
determinations," as homo in animal homo est rationale (homo "determines" animal), (ii) "nominal
determinations," such as albus in albus homo est rationale, and (iii) "verbal determinations," of
which there are five sorts: (a) those which "denote some good or bad quality" of the verb they
modify, such as bene in Petrus bene legit, (b) those which measure the "duration and change"
expressed by the verb they modify, such as die in Mathusalem die vixit, (c) temporal adverbs, such as
heri in Magister heri non, sed modo legit, (d) those which "signify some composition of the subject
with the predicate" (the modes of modal propositions belong to this category) and finally (e) verbal
moods, such as the optative or subjunctive.
the copula.\textsuperscript{69} One problem with Mair’s opinion which was discussed by some of his students arose because of the commonly held doctrine that syncategorematic modes do not only amplify the copula but also at least the predicate, if not the subject, of the proposition in which they appear as well.\textsuperscript{70} The general principle underlying this argument, Robert Caubraith tells us, is that a syncategorematic term is not part of a phrase when the syncategorematic term affects other terms besides the one to which it is immediately added. Otherwise, one would not be able to prove that ‘every’ in ‘every man is an animal’ is not part of the subject, which it presumably is not because it affects the meaning of the predicate as well.\textsuperscript{71}

Caubraith will finally deny that a syncategorematic mode is part of the copula to which it applies, but before doing so, he suggests some ways Mair might

\textsuperscript{69}(Mair, 1514): fol. xxxii\textsuperscript{a}. “Dicitur quod modus est pars copulae.” George of Brussels denies that the syncategorematic mode is part of the copula at (Brussels, 1497): fol. xxii\textsuperscript{a}. See p. 18. Pierre Tartaret makes much of the distinction between adverbial and nominal modes in this context. In (Tartaret, 1500): fol. xiii\textsuperscript{a}, he says: "Et adverte quod quando modus tenetur adverbialiter, tunc ‘est’ dicitur esse copula totalis et modus determinatio et non est pars copulae, ut ‘Socrates possibiliter currit’, sed quando modus tenetur nominaliter tunc aggregatum ex isto verbo ‘est’ et isto infinitivo ‘esse’ explicite vel implicite dicitur esse copula totalis, sic quod ‘est’ est pars minus principalis et ‘esse’ est pars principalis, ut ‘Socratem possibile est esse album’. Aggregatum ex ly ‘est’ et ‘esse’ dicitur esse copula totalis.” (And note that when the mode it taken adverbially, then ‘is’ is said to be the total copula, and the mode is a determination and not part of the copula, as in ‘Socrates possibly runs’, but when the mode is taken nominally, the aggregate from this verb ‘is’ and this infinitive ‘to be’ is said explicitly or implicitly to be the total copula, such that ‘is’ is the “less principal” part and ‘to be’ is the principal part, as in ‘Socrates possibly is to be white’. The aggregate from ‘is’ and ‘to be’ is said to be the total copula.) Others, however, make no distinction between ‘Socrates possibiliter est albus’ and ‘Socrates possible est esse album’. Both ‘possibiliter’ and ‘possibile est’ are considered syncategorematic modes in case they appear in the middle of the proposition and “divide” it. See, for example, (Mair, 1514): fol. xxxii\textsuperscript{a}, (Brussels, 1497): fol. xxii\textsuperscript{b}.

\textsuperscript{70}Ampliation is discussed in section 2.6.

\textsuperscript{71}(Caubraith, 1509): fol. cxxii\textsuperscript{b}. "In hac propositione ‘Socrates possibiliter est currere’ ly ‘possibiliter’ non est pars copulae, ergo falsum est dicere quod principalior pars copulae modo determinatur. Antecedens probatur: virtus de ly ‘possibiliter’ agit ultra copulam, predicatum ampliandi, ergo non est pars copulae. Tenet consequentia quia quando virtus alicuius syncategorematis agit ultra aliquem terminum, non est pars cum illi. Alius nescire probare quod ly ‘omnis’ non sit pars subjecti huius ‘omnis homo est animal’.” ("In this proposition ‘Socrates possibly is running’ ‘possibly’ is not part of the copula, therefore it is false to say that the more principal part of the copula is determined by the mode. The premise is proven: the force of ‘possibly’ carries beyond the copula by ampliating the copula, therefore it is not part of the copula. The implication holds because when the force of any syncategorematic term carries beyond some [other] term, it is not part [of a whole] along with the other. Otherwise you cannot prove that ‘every’ is not part of the subject of ‘every man is an animal’.")
avoid the problem just described. We should distinguish, he says, between the case in which the force of the syncategorematic term affects terms beyond the term to which it immediately applies (i) insofar as it shifts the supposition of the terms in general and (ii) insofar as it shifts only the ampliation of the terms.\textsuperscript{72} We will learn in section 2.6 that ampliation is a subclass of supposition and thus Caubraith is distinguishing (i) syncategorematic terms which affect the supposition of another term in any way whatsoever from (ii) terms which affect the supposition specifically with regard to ampliation. This distinction allows Caubraith to separate the case of syncategorematic terms such as ‘every’, which falls under case (i) but not case (ii), and the syncategorematic modes which fall under case (ii). This provides an adequate response to the first objection.

Caubraith’s solution, however, leads to another difficulty because an imaginary opponent could mount a plausible attack in terms of ampliation alone. The best reason for saying that the syncategorematic mode ”determines” the copula is that the mode ampliates the copula. But it would then follow that it determines the subject and the predicate, too, since the mode ampliates these as well. But if this argument is accepted, then it would seem to follow that if the syncategorematic mode is part of the copula, then it would be part of the predicate and subject, too.\textsuperscript{73}

The response to this objection, Caubraith says, is to note that the

\textsuperscript{72}Ibid.: fol. cxxii\textsuperscript{a}. “Quandocumque virtus alicuius syncategorematis agit ultra terminum cui immediate additur, non est pars cum illo. Distinguitur vel quando agit ultra quoad suppositionem transeat, vel quoad ampliationem solum, et sic negatur.” (”Whenever the force of any syncategorematic term carries beyond the term to which it is immediately added, it is not part of a whole"] with it. One should distinguish between the case when [the force] carries beyond the term insofar as it shifts the supposition or insofar as it shifts the ampliation alone, and as such it is denied [that the syncategorematic term is not part of a whole along with the term to which it is added].”)

\textsuperscript{73}Ibid. “Contra: si ly ‘possibiliter’ determinaret compilum, vel hoc esset ipsam ampliando vel aliquo alio modo. Non potest dici secundum. Etsi detur primum sequitur quod determinaret subjectum et predicatum postquam utrumque eorum ampliat. Etsi hoc totum concedas sicut concedendum est, sequitur quod modius esset pars predicati sicut et copulae cum utriusque sit determinatio.” (”Contra: if ‘possibly’ should determine the copula, either this would be by ampliating it or by some other method. The second cannot be held. Even if one holds the first, it follows that ‘possibly’ determines both the subject and the predicate because it ampliates each. Even if you concede all of this (as you should), it follows that the mode would be part of the predicate just as [it is part of] the copula since it would be the determination of each.”) A very similar argument appears in (Coronel, 1517): sign. g \textsuperscript{i}r.
"aggregate" of a determinatio and a determinabile is not always one term. A determinatio and determinabile are most likely to form one term when a syncategorematic term is the determinatio and a categorical term is the determinabile, but this does not occur, he claims, in the case of the syncategorematic modes where a syncategorematic mode is the determinatio and a syncategorematic copula 'est' is the determinabile. Caubraith's opponent might still demand to know why the syncategorematic mode is better described as part of the copula and not the predicate since it appears to be a determinatio of both, and the only answer available, Caubraith thinks, is that it is a convention among logicians to view it as such.\footnote{Ibid. "Ad hoc respondetur sicut dictum est, et ad illud quod infers, quod modus esset pars predicati, hoc nego. Et ad probationem dico quod non universaliter quodlibet aggregatum ex determinabilibus et sua determinatione est unus terminus et hoc maxime quando determinatio est: syncaetheogremea respectu determinabilis cathegorematici. Secus est quando determinabile est syncaetheogremea verbae. Etsi petas quare illa determinatio[n[ius est pars copulae quam predicati, viso quod utiusque sit determinatio. Dicitur quod maxima ratio est usus artis rarum taliter loquentium." (To this one answers just as I said, and to that which you infer, that the mode would be part of the predicate, this I deny. And [in response] to the proof I say that it is not universally [the case] that every aggregate of a determinabile and its determinatio is one term and this [is] especially so when the determinatio is a syncategorematic term in relation to a categorical determinabile. It is otherwise when the determinabile is a syncategorematic verb. And if you respond [by asking] why the determinatio is part of the copula rather than the predicate, I see it as a determinatio of both. One should claim that the main reason is the practice of logicians who speak in this way.)}

Given Caubraith's tenacious defense of this view that the syncategorematic mode is part of the copula, it is surprising that he finally concedes that his defense of it is too weak. But concede it he did, concluding that the term 'is' has the same meaning in both 'Socrates is a man' and 'Socrates possibly is a man'.\footnote{Ibid. "Et licet istud sit valde commune et probable, propter tamen rationes factas et similes, mallem dicere modum non esse partem copulae, sed quod verbum in modali divisa sit copula totalis, ita quod copulae istorum sint synonimae: 'Socrates est homo', 'Socrates possibiliter est homo', quod aliqui adversariorum de ly 'necessario' patentur, sed quia cum quodlibet ratio de alijs, sequitur quod si hoc de uno concedatur, et de quolibet alio concedi debet, et in hoc sto." (And although this is acceptable to most and with reason, I would rather say, because of the reasons given and others, that the mode is not part of the copula, but that the verb in a divided modal proposition is the total copula, such that the copulas in the following [examples] are synonimae: 'Socrates is a man'; 'Socrates possibly is a man', which some of my adversaries acknowledge [is true] of 'necessarily', but because the reasoning seems [to hold] for the other [modes] equivalently, it follows that if this should be conceded for the one, it must be conceded for all the rest, and in this I stand.)}
Although there was general agreement among the Nominalists that composed modal propositions are generated by second intention modes and the divided modal propositions are generated by syncategorematic modes, there was no unanimity concerning two other important issues. First, we have seen that George of Brussels follows Jean Buridan in holding that divided modal propositions are the "true" modal propositions, while composed modal propositions—because their copula is not "determined" by a mode and because they behave logically as other non-modal propositions with regard to their quality, and in the logical relations expressed by the modal square—arc actually mere non-modal, de inesse propositions. The only reason composed modal propositions are discussed in the section of a logic text devoted to modal propositions is that they appear to be similar to the divided modal propositions. Thus, George seems to have accepted John Dorp’s claim that composed and divided modal propositions do not share some common feature which entails that they belong to the same genus, as humans and peropactyls share animality. No, composed and divided modal propositions have only an apparent similarity or "analogy" such as exists between George Bush the man and a photograph of him. The proponents of this view were forced to concede some surprising opinions: for example, that every modal proposition is divided, that every modal proposition is a composed modal proposition, and that no

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76 (Brussels, 1497): fol. xxii^a*. "Sed de qualitate modalium compositarum eodem modo dicendum est sicut de illis de inesse, sed quod quando verbum principale uniens predicatum materiale cum subiecto negatur, tunc est negativa, sed quando non negatur, tunc est affirmativa" ("But concerning the quality of composed modal propositions, it should be discussed just as in the case of the de inesse propositions, such that when the principal verb which unites the material predicate with the subject is negated, then it is a negative proposition, but when it is not negated, it is an affirmative proposition."); fol. xxiiii^b. "Secundo notandum est, quod oppositiones in modalibus compositis eodem modo sumuntur sicut illis de inesse" ("Second it should be known that the oppositions among composed modal propositions are taken in the same way as those of the de inesse propositions.").

77 (Buridan, 1965): sign. d 1^a-b. "In ista parte dividitur propositio modalis in modalem compositam et modalem dividam, non tamquam genus in species, sed tamquam terminus analogus in sua analogata." ("In this part the modal proposition is divided into the composed and the divided, not as genus into species, but as an analogical term into its separate meanings.") See also (Coronel, 1517): sign. g 1^b. The example of the picture comes from (Mainz Commentary, 1489): sign. d ii^i. "Quemadmodum enim homo pictus quandoque homo appellatur proper similitudinem quam gerit cum vero homine, sic etiam modalis composita consuevit dici modalis." ("For just as a pictured man is called a man in a certain way because of the similarity it shares with a real man, so also it is customary to call a composed modal proposition "modal.")
composed modal proposition is a modal proposition.\textsuperscript{78}

Some contemporaries of George of Brussels, however, followed the lead of Johannes Versor, who claimed that both composed and divided modal propositions are truly (\textit{simpliciter}) modal propositions.\textsuperscript{79} Johannes de Magistris and Jodocus Trutvetter were aware of both opinions.\textsuperscript{80} Robert Caubraith believes that those taking Versor’s route must concede that this proposition ‘\textit{Socrates to run} is possible’ is both a non-modal (\textit{de inesse}) proposition and a modal proposition. He suggests, however, that they might claim that this proposition is not modal and non-modal in the same respect (\textit{secundum eandem rationem}) and that it is perfectly acceptable that one proposition belong to two members of a division as long as it

\textsuperscript{78}Ibid: sign d 1\textsuperscript{a}. It is obvious why Dorr accepts ‘\textit{omnis propositio modalis est modalis divisa}'. With true scholastic subtlety he accepts ‘\textit{omnis propositio modalis est modalis composita}' because the subject ‘\textit{propositio modalis}' is equivocal and in this case the predicate truly signifies one of the \textit{equivocata} of the subject (ibid.): "Patet virtute huius regula: Talia sunt subjecta qualia permetuntur ab eorum predicatis. Nam in illa propositione ponitur terminus equivocus a parte subjecti. Et a parte predicati ponitur determinatio potens sibi competere pro uno suo signicatorem, et non pro aliis signicatis. Ergo tale predicatum restringit subjectum ad standum praeclare pro tali significato." ("It is proven in virtue of this rule: whatever type the subjects are, such type is permitted of their predicates. In fact, in this proposition an equivocal term is placed in the subject. And in the predicate a determined which can belong to the subject in one of its meanings, but not for the others. Therefore such a predicate restricts the subject to standing precisely for that meaning.") He does not, however, allow us to conclude from these two propositions that \textit{modalis composita est modalis divisa} because the argument commits the fallacy of equivocation. See also (Tartaret, 1500): fol. xii\textsuperscript{a-b}, (Coronel, 1517): ibid., and (Caubraith, 1509): fol. cxxii\textsuperscript{a-b}.

\textsuperscript{79}(Versor, 1981): fol. 40G. "Patet quod tam in modalibus divisis, quam compositis, modus determinat totam compositionem dicti, licet differenter, ideo utraque est simpliciter modalis." ("It is clear that the mode determines the total composition of the dictum just as much in divided as in composed modal propositions, although differently, therefore each is truly a modal proposition.") Joannis de Monte also thinks that there is determination in composed modal propositions in (Monte, 1500): sign. d viii\textsuperscript{a-b}: ((Cologne), 1495): fol. lx\textsuperscript{i}; admits that composed and divided modal propositions are two species of the single genus of modal propositions.

\textsuperscript{80}(Magistris, 1490): sign. dd 4\textsuperscript{i}. "Et de modalibus sunt duae opiniones, quorum una est quod modalis composita non est modalis, sed solum divisa. Alia dicit quod tam modalis divisa quam composita sunt simpliciter modales, et hanc opinionem videtur maxime insequi auctor noster." ("And concerning the modal there are two opinions, of which one is that the composed modal proposition is not a modal proposition, but only the divided [is]. Another opinion states that the divided modal as well as the composed modal propositions, and our author [Peter of Spain] seems most probably to assert this opinion.") Magistris later seems to support Buridan's view: (ibid.) "Scieendum est quod modales composita non est modales sed de inesse." ("It should be known that composed modal propositions are not modal propositions, but are \textit{de inesse}.") Cf. (Trutvetter, 1501): sign. BB iii\textsuperscript{a-v}.
does so only "materially" and not "formally."81

A second problem sometimes raised with the Nominalists' characterization of composed and divided modal propositions concerned the proposition 'Socrates to run possibly is possible'. This proposition seems to be a modal proposition, but Robert Caubraith suggests one might argue that it is neither a composed nor a divided modal proposition. This conclusion follows because otherwise one would have to say that it is both composed and divided, which claim contradicts the usual point of view that the two classes of modal propositions are mutually exclusive. The proposition seems to be divided because a mode determines the copula (that is, 'possibly' determines 'is'), and it seems to be composed because a mode (namely, 'possible') is a predicate within it. But then the same proposition according to the same signification is both composed and divided, which is not acceptable.82

Caubraith himself responds to this problem by claiming that 'Socrates to run possibly is possible' is in fact both composed and divided, adding that this solution is acceptable when there is more than one mode, and one determines the

81(Caubraith, 1509): fol. cxii2a. "Secundum enim tenentes istum terminum 'propositio modalis' dici univoce de modalis composita et divisa ... conceditur quod eadem propositio est de inesse et modalis, sed hoc non secundum eandem rationem, nec invenit membra bonae divisionis coincidere materialiter, nanquam tamen formaliter." ("For according to those holding that the term 'modal proposition' is said univocally of both composed and divided modal propositions ... it is conceded that the same proposition is de inesse and modal, but it is not so in the same respect, nor is it unacceptable that the members of valid division coincide materially. However, [they must] never [coincide] formally.") See also (Celaya, 1515): fol. 73vb.

82(Caubraith, 1509): ibid. "Ista 'Socratem currere possibiliter est possible' est propositio modalis, et tamen non composita nec divisa, igitur. Maior est manifesta et minor ostenditur qua ratione esset divisa: quia copula determinatur modo. Eadem enim ratione esset composita, postquam modus predicatur. Etsi sic eadem propositio secundum significationem esset composita et divisa, quod videtur inveniens." ("This 'Socrates to run possibly is possible' is a modal proposition, and nonetheless is neither composed nor divided, therefore. The major premise is obvious and the minor is shown by the reason it is divided: because the copula is determined by a mode. In fact, it is a composed modal proposition for this very reason: because the mode is predicated. And if so, the same proposition according to its signification would be composed and divided, which seems unacceptable.")
copula while the other appears as the predicate. In other words, the proposition is both composed and divided, but not with regard to the same mode at the same time.

2.6 Modal Ampliation

The final difference between syncategorematic and second intention modes is that syncategorematic modes are said to amplify other terms in the propositions in which they appear while second intention modes do not. George of Brussels gives a representative definition of "ampliation" which is very complex, but still worth considering as a typical discussion of this term. Before considering the details of this extremely difficult definition, we should make a few general remarks concerning the notion of ampliation.

In late scholasticism some logicians were of the opinion that the supposition or reference of terms in a proposition was tied down to one of five "divisions of times" (differentiae temporum): the present, past, future, the possible, and the imaginable. For example, in ‘George is human’, the subject term ‘George’

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83 Cauraith, 1509): fol. cxxiiib. "Concessa maiore, negatur minor, et ad probationem dictur quod illa modalis est composita et divisa, nec hoc inconvenit, quando in ipsa plures ponuntur modi quorum unus est extremum et alter determinat copulam, cuissmodi in proposita propositione contingit." ("After the major is conceded, the minor denied, and it is said against the inference that this proposition is both a composed and divided modal proposition, nor is this inapposite, when there are several modes placed in it, of which one is an extreme term and the other a determination of the copula, as occurred in the proposition set forth.") See also (Colaya, 1515): fol. 73v.b.

84 (Mair, 1514): fol. cxxii8a. "Tertio animadverte quod modus faciens modalem compositam non ampliat. ... Modus faciens modalem divisiam ampliat nisi restringatur." ("Third, note that a mode generating a composed modal proposition does not amplify. ... A mode generating a divided modal proposition ampliates unless restricted.") See also (Cauraith, 1509): fol. cxxii8a. (Truquetor, 1501): sign. BB iii6, (Enzinas, 1523): fol. xxxii8a, Dorp in (Buridan, 1965): sign. d 4va and d 5va-b.

85 According to (Mairi, 1972), p. 182, Marsilius of Inghen held such a view. George of Brussels clearly follows Marsilius at fol. cxx2a.

86 Only one scholastic I know was uncomfortable with calling the latter two "times": John Dorp in (Buridan, 1965). He says "tres sunt differentiae temporum, scilicet, praesens, praeteritum, et futurum, et sunt aliae copulae differentias diversas importantes, scilicet, potest esse et potest imaginari esse, respectu quarum copularum termini ampliatur." ("There are three divisions of times, namely, the present, past, and future, and there are other copulas expressing distinct divisions, namely, ‘can be’ and ‘can be imagined’ with regard to which copulas the terms are amplified.")
was thought to supposit only for the presently existing human being named George because the verb in this proposition is in the present tense. In ‘Adam was’, ‘Adam’ (it is always assumed that this is the biblical Adam) supposit only for an individual who existed in the past, and who does not now exist.

If however we wished to truly assert of someone who is presently alive, that he is engaged in an activity which took place in the past, then the reference or supposition of this person’s name had to be "extended" or made "more ample." Otherwise, everytime we tried to ascribe a past activity of someone in the present, we would assert a falsehood because the subject term of such a proposition would fail to refer or supposit and all affirmative propositions in which the subject term fails to refer were deemed false. Thus, if we wished to say on a Monday morning of George who is at work signing papers at his desk that ‘George was fishing’ this would be false. For if the verb ‘was’ ties the reference of ‘George’ to George in the past, then the proposition is false if we have in mind that ‘George’ refers to this George we see at work on Monday.

Such examples prompted scholastics to claim that a past tense verb such as ‘was’ "ampliated" the subject term ‘George’ to supposit for the George "who is or was." Thus, the amplified sense of the term ‘George’, which it must have in the proposition posited in order that that proposition be true, would be ‘George, who is or was, was fishing.’ The term ‘Adam’, however, in ‘Adam was’, just as ‘the Antichrist’ in ‘the Antichrist will be’, is not amplified because it only supposit in one time only. Its supposition is not extended or "ampliated" to any of the other "times." We will find that the four modal terms interpreted as syncatagorematic terms amplify to the first four times: the past, present, future, and the possible (or what "can" (potest) be). But, we will allow George of Brussels to initiate us further into the mysteries of term ampliation.

Since ampliation, George tells us, is a type of supposition and supposition is a relation between a word and what it refers to, ampliation should now be viewed as a type of relation between words and extramental entities:

Ampliation is supposition of a term for its referent (significato) or referents

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87(1497): fol. cxxviiibr-va.
(significatis) with respect to a sign importing diverse divisions of times disjunctly (disjunctim), or [the supposition] of anything similarly amplified in relation to a term which supposits with regard to many divisions of time dividedly.\textsuperscript{88}

An example of these amplified terms would be the term 'man' in 'man was an animal' which is amplified to stand for men who are and were.\textsuperscript{89}

George now proceeds to give a line by line exegesis of his definition. The term "supposition" appears in the definition "to show that no term is amplified unless this term supposits."\textsuperscript{90} Scholastic logicians energetically scrutinized this notion of supposition, and each logician had his own way of dividing up its various subspecies. For our purposes we may avoid these complications. We need only state that supposition is the reference of a term within the context of a proposition.\textsuperscript{91}

Further, supposition is a more common term than ampliation although ampliation has a greater connotation than supposition.\textsuperscript{92} The point seems to be that although ampliation is a type of supposition, or reference, supposition is reference only to presently existing individuals while ampliation is reference also to past, future, possible, and imaginable (but not possible) individuals. Thus, ampliation "connotes" more sorts of individuals than supposition.

The phrase "for its referent (significato)" is included in the definition because of singular terms such as Peter in 'Peter ran'. Although the term 'Peter' is

\textsuperscript{88}Ibid. "Ampliatio est suppositio termini pro suo significato vel suis significatis respectu signi importantis diversas differentias temporum disjunctim, vel alieius constituens amplius in ordine ad illum terminum supponetem respectu plurium differentiarum temporis divium."

\textsuperscript{89}Ibid. "Exemplum: ut 'homo fuit animal' ibi ille terminus ampliatur ad standum pro hominibus qui sunt et fuerunt."

\textsuperscript{90}Ibid. "Dicitur notanter in differentiatione suppositio ad denotandum quod nullus terminus ampliatur quin ille terminus supponat."

\textsuperscript{91}This is the view of most logicians of the time. See (Ashworth, 1974): pp. 78-80. We will need to discuss some of the complexities of supposition theory in the next chapter.

\textsuperscript{92}Ibid. "Unde supposition et ampliatio se habent sicut magis commune et minus commune. Similiter sicut minus connotativum et magis connotativum. Unde ille terminus 'suppositio' est terminus magis communis et minus connotativus, et ille terminus 'ampliatio' est terminus magis connotativus et minus communis." ("Whence supposition and ampliation are related just as a more common term to a less common one. Similarly, just as less connotative to more connotative. Hence this term 'supposition' is the more common but less connotative term and this term 'ampliation' is the more connotative and less common term.")
ampliated it does not refer to many Peters but to one only. Such ampliation is to be called "ampliation of times," George says, and not "ampliation of supposition" because there is only one person referred to albeit at different times.\textsuperscript{93} Here, unlike Peter of Spain and most logicians of the 14th and early 15th century who held that only common terms such as 'man' can be amplified, George of Brussels holds that singular terms such as 'Peter' may also be amplified. George follows John Dore\textsuperscript{94} and, apparently, Albert of Saxony\textsuperscript{95} in this.

The definition includes the phrase "for its referents (significatis)" because of common terms which supposit for many individuals whether amplified or not. George gives the example 'a man was' (homo fuit) in which the term 'man' can refer to any man who was. Ampliation of common terms should be called "ampliation of times and suppositions" presumably because the supposition of a common term such as 'man' will change depending on the time under consideration due to changes in the human population.\textsuperscript{96}

The definition includes the phrase "with regard to a sign" in order to denote the term "on account of which ampliation comes about," that is, the term which causes the other, "passive" terms to amplify. This term is that "ampliating instrumentally" or "ampliating principally."\textsuperscript{97} This sign is said to

\textsuperscript{93}Ibid. "Dictur notanter pro suo significato propter terminos singulares, ut dicendo 'Petrus [cu]currit'. Ibi ille terminus 'Petrus' ampliatur et tamen non supponit pro pluribus significatis sed pro uno tantum. Et talis ampliatio solet vocari 'ampliatio temporalum' et non 'suppositorum' quia in tali ampliacionem terminus non accipitur pro pluribus significatis quam si non ampliatetur, sed bene accipitur pro uno significato in ordine ad diversas differentias temporum." ("Note that I said 'for its referent' because of singular terms, as when we say 'Peter ran'. Here this term 'Peter' is amplified, but it does not suppose for many referents but only for one. And such ampliation is usually called 'ampliation of times' and not 'of supposition' because in such ampliation the term is not taken for more referents than if it were not amplified, but it is correctly taken for one referent in relation to diverse divisions of times.")

\textsuperscript{94}(Buridan, 1965): sign. l 2\textsuperscript{v}.

\textsuperscript{95}Quoted in (Maierú, 1972): p. 186.

\textsuperscript{96}Ibid. "Dictur notanter pro significatis <quia> propter terminos communes qui pro pluribus significatis supponunt quando ampliatur quam quando non ampliatur, ut 'homo fuit'. Et talis ampliatio solet vocari 'ampliatio temporalum et suppositionum'."

\textsuperscript{97}Ibid. "Dictur notanter respectu signi etc. ad denotandum illud per quod fit ampliatio, puta ipsum amplians instrumentale. Et ipse intellectus est amplians principale."
import diverse divisions of times, which is such a sign that by reason of its conception fixes the reference of a term in relation to diverse divisions of times.\textsuperscript{98}

The term "disjunctly" (\textit{disjunctim}) appears in the definition because if the sign were to import "dividedly" (\textit{divisum}) or "copulatively" (\textit{copulative}) then it may not be the case that the term is actually amplified by the sign.\textsuperscript{99}

George later in his discussion gives his reasons why the ampliating terms import "disjunctly" but not "copulatively" when he considers the question: how is ampliation to be expressed. He unsurprisingly states that ampliation is to be expressed "disjunctly" (\textit{disjunctim}) but not in three other possible ways, that is, (1) "disjunctively" (\textit{disjunctive}), (2) "copulatively" (\textit{copulative}),\textsuperscript{100} and (3) "copulately" (\textit{copulatim}). I digress to present this discussion.

\textbf{2.7 Expressing Ampliation}

Ampliation, George tells us, is not expressed "disjunctively" (\textit{disjunctive}), that is, by means of a "disjunctive hypothetical" proposition. This means that the proposition

\begin{quote}
A man was not an animal
\end{quote}

is not expressed as the disjunction

\begin{quote}
A man, who is, was not an animal or a man, who was, was not an animal.
\end{quote}

The relative clauses ‘who is’ and ‘who was’ make explicit the fact that the first occurrence of ‘man’ in the first disjunct refers to men who exist now while and the second occurrence in the second disjunct refers to men who existed in the past. The reason why we don’t want to understand the false proposition ‘a man was not an

\textsuperscript{98}Ibid. fol. cxxvii\textsuperscript{a-b}. "Unde illud signum dicitur importare diversas differentias temporum, quod est tale signum quod ratione ipsius intellectus accipit terminum in ordine ad diversa\textsuperscript{s} differentias temporum."

\textsuperscript{99}Ibid. "Dicitur non tantenter \textit{disjunctim} quia si importaret divisum vel copulatim, tunc non oporteret quod terminus ampliaretur."

\textsuperscript{100}George seems to equate this with "dividedly" (\textit{divisum}).
animal' in this way is because the resulting disjunction is *true* in a possible case.\footnote{Ibid. "Dubitatur quomodo ampliatio debet exprimi. Dicitur primo quod non debet exprimi disjunctiva, hoc est, per propositionem hypotheticam disjunctivam, quia tunc talis propositionis esset vera: 'homo non fuit animal' quia sensus eius esset 'homo qui est non fuit animal vel homo qui fuit non fuit animal'. Modo ista disjunctiva in casu possibili esset vera." ("It is asked how ampliation may be expressed. It is first said that it may not be expressed disjunctively, that is, by means of a hypothetic disjunctive proposition, because then such a proposition as 'a man was not an animal' would be true because the sense of it would be 'a man, who is, was not an animal or a man, who was, was not an animal.' In this sense this disjunction is true in a possible case.")} The disjunction is true apparently because of the first disjunct. A newborn infant (setting aside the abortion controversy) would be one example of a presently existing human who was not an animal in the past because he did not exist.

Nor is ampliation to be expressed "copulatively" (*copulative*), that is, by means of a "hypothetical copulative" proposition, which we would now call a conjunction. George offers the proposition:

Everything creating necessarily is God

as an example. If we express its ampliation "copulatively," the sense of the proposition is:

everything creating, which is, necessarily is God and everything creating, which was, necessarily is God and everything creating, which will be, necessarily is God and everything creating, which can be, necessarily is God.

Again, the relative clauses indicate which "time" the creating beings are in. The term 'necessarily' here ampliates to four "times" as we will see below.

Now, George explains, assuming the situation in which God now creates nothing but then immediately after will create, the proposition 'everything creating necessarily is God' as understood above is false because the first conjunct is false.\footnote{Ibid. "Nam ponatur casus quod Deus iam nihil creet, sed immediate post creabit, tunc ista est falsa 'omne creans necessario est Deus' si ampliatio exprimeretur copulative quia sensus eius esset 'omne creans quod est necessario est Deus et omne creans quod fuit necessario est Deus' et sic de aliis differentiis temporum. Modo prima pars illius copulative est falsa." ("In fact let the case be assumed that God now creates nothing, but immediately afterward will create, then this 'everything creating necessarily is God' is false, if ampliation is expressed copulatively, because the sense of this would be 'everything creating, which is, necessarily is God, and everything creating, which was, necessarily is God' and so for the other divisions of times.")}

If, however, we express ampliation "copulatively" then the contradictory of 'everything creating necessarily is God' will also be false, which cannot be since
real contradictories are never false at the same time. The contradictory of ‘everything creating necessarily is God’ is, according to George:

Something creating possibly is not God,

which, when its ampliation is expressed copulatively, states:

Something creating, which is, possibly is not God and something creating, which can be, possibly is not God and something creating, which was, possibly is not God and something creating, which will be, possibly is not God.

George thinks this is false because its second conjunct is false.\(^{103}\)

Nor can ampliation be expressed "copulately" (copulatim), that is, by means of a categorical proposition with a conjoined term because then again two contradictories would be false at the same time. Thus, the propositions ‘everything creating necessarily is God’ and ‘something creating possibly is not God’ will both be false.

If we keep the same situation as before, then the sense of the first will be:

Everything creating, which is, could be (potuit esse), and will be able to be (poterit esse), necessarily is God.

Here, ampliation is expressed by conjoining the relative clauses. The resulting proposition is not compound or "hypothetical." It is on the contrary simple and "categorical." How exactly this latter proposition differs from the copulative version is far from clear. Nor is it clear why George uses the terms potuit and poterit esse rather than the expected forms of esse, namely, fuit and erit. I suspect this is just sloppiness on his part. In any case, the resulting proposition is false, in

\(^{103}\)Ibid. “Et cum hoc [‘omne creans necessario est Deus’], ista etiam esset falsa: ‘aliquod creans possibiliter non est Deus’ cum sensus eius esset: ‘aliquod creans quod est possibiliter non est Deus et aliquod creans quod potest esse possibiliter non est Deus’ sic de aliis differentiis temporum. Modo secunda pars est falsa, ergo tota copulativa est falsa, et per consequens ista proposition est falsa ‘aliquod creans possibiliter non est Deus’ et sic duae contradictoriae essent simul falsae.” (“And with this [‘everything creating necessarily is God’] this also would be false: ‘something creating, which is, possibly is not God and something creating, which can be, possibly is not God’ and so on for the other divisions of times. In this sense the second part is false, therefore the total conjunction is false, and thus this proposition is false ‘something creating possibly is not God’ and therefore two contradictories would be false at the same time.”)
George’s opinion.\textsuperscript{104}

Although he does not bother to give the expanded expression of ‘something creating possibly is not God’, the expanded version would apparently be:

Something creating, which is, was, will, and can be, possibly is not God.\textsuperscript{105}

George claims that this is false according to the common opinion.\textsuperscript{106}

Finally we learn how ampliation should be expressed, that is, "disjunctly" (\textit{disjunctim}). It is to be expressed by means of a proposition with a disjunctive term "in which temporal divisions are taken disjunctly."\textsuperscript{107} These "temporal divisions" are to be taken "purely differentially" (\textit{pure differentialiter}) such that the verb ‘is’ expresses present time, ‘was’ past time, and (we are to infer) ‘will be’ future time, and ‘can be’ possibility.\textsuperscript{108} Thus, to express ampliation is "to place the sign explicitly which formally imports these divisions of times, the times, that is, to

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\textsuperscript{104}Ibid. "Tertio dicitur quod ampliatio non debet exprimi copulatim, hoc est, per propositionem cathegoricam de copulato extremo, vel de copulata parte extremi quia unc iterum duae contradictoriae essent simul falsae, scilicet, istae duae ‘omne creans de necessitate est Deus’ et ‘aliquid creans possibiliter non est Deus’, rententio casu primo posito. Nam sensus primae esset ‘omne creans quod est, potuit esse, et poterit esse de necessitate est Deus’. Modo ille sensus est falsus." ("Third it is said that ampliation may not be expressed copulatively, that is, by means of a categorical proposition with a copulated extreme term, or with a copulated extreme part because then again two contradictories would be false at the same time, namely, these two ‘everything creating of necessity is God’ and ‘something creating possibly is not God’, when the first case assumed is retained. In fact the sense of the first would be ‘everything creating, which is, could be, and will be able to be, of necessity is God’. In this way the sense is false.")

\textsuperscript{105}Here we use forms of \textit{esse} as opposed to \textit{posse}. If George is serious about using \textit{posse}, the expanded version would be ‘something creating, which is, could be, and will be able to be, possibly is not God’.

\textsuperscript{106}Ibid. "Et etiam secunda est falsa, ut communiter dicitur."

\textsuperscript{107}Ibid. "Quarto dicitur quod ampliatio debet exprimi disjunctim, hoc est, per propositionem de disjuncto extremo in qua differentiae temporales disjunctim accipiuntur." ("Fourth, it is said that ampliation may be expressed disjunctly, that is, by means of a proposition with a disjoined extreme term in which temporal divisions are taken disjunctly.")

\textsuperscript{108}Ibid. "Et in expressione ampliationis differentiae temporales debent accipi pure differentialiter, ut quod ly ‘est’ debet tantum valere sicut in tempore praesenti et ly ‘fuit’ tantum praecise sicut in tempore praeterito, et sic de aliis."
which the (ampliated) term is ampliated. Thus, the ampliation of ‘a man was an animal’ is expressed so:

A man, who is or was, was an animal.

Here, George claims, the phrase ‘who is or was’ formally and explicitly imports those divisions of times to which the term ‘man’ is ampliated.

Does expressing ampliation "disjunctly" avoid the problem which appears when it is expressed "conjunctly," namely that contradictories can be simultaneously true if expressed conjunctly? The example of a contradictory pair George offers was ‘everything creating necessarily is God’ and ‘something creating possibly is not God’. We may for illustrative purposes express the first conjunctly using modern symbolic logic, thusly:

\((x)((C x \land P C x \land F C x \land M C x) \rightarrow L(x = d))\)

where ‘\(C x\)’ is a predicate meaning ‘\(x\) creates’, ‘\(P\)’ is a temporal operator meaning ‘it was the case that’ and ‘\(F\)’ means ‘it will be the case that’, ‘\(L\)’ means ‘it is necessary that’, ‘\(M\)’ ‘it is possible that’ and ‘\(d\)’ is a singular term referring to God.

Assuming that we have placed the necessity operator in the appropriate place and that only the individual \(d\) possibly satisfies the predicate \(C x\), then this proposition is true. It is true because the antecedent of the implicit conditional is false for every individual, since we are to assume that God, the only individual who can create, does not now create.

Since, however, George believes that the whole proposition is false, he must be assuming "existential import" of the subject terms. He thus assumes that universal affirmative propositions are only true if (at least) all sets denoted by the predicates of the subject terms (that is, terms in the antecedent of the implicit

\(^{109}\)Ibid. "Unde exprimere ampliationem est ponere expresse signum quod importat formaliter illas differentias temporum ad quas talis terminus ampliatur."

\(^{110}\)Ibid.: fol. cxxxix-a-cxxxix. "Ut dicendo ‘homo fuit animal’, ampliation debet sic exprimi ‘homo qui est vel fuit fuit animal’. Ibi hoc totum ‘qui est vel fuit’ importat formaliter et expresse illas differentias temporum ad quas ille terminus ‘homo’ ampliatur."

\(^{111}\)Using esse instead of posse.

\(^{112}\)It would not affect our conclusions if the necessarily operator should be placed before the quantifier or directly after, as long as one places the possibility operator is the same position.
conditional) contain at least one member. Since the set of presently creating beings denoted by the predicate ‘Cx’ is empty, then the whole proposition will be false. Its contradictory,

$$\exists x((Cx \land PCx \land FCx \land MCx) \land \neg (x = d)),$$

is false since nothing satisfies the predicate ‘Cx’.

Does expressing ampliation disjunctively in a similar way leave one of the pair true and the other false? First consider

$$\exists x((Cx \lor PCx \lor FCx \lor MCx) \land \neg (x = d)),$$

George of Brussels never tells us which of the pair is true and which is false on the "disjunctly" interpretation, but the existential proposition here seems to be false because of the claim that it is possible that God not be identical to God. Identity statements are usually taken to be necessary by our authors.

If this is correct, then

$$(x)((Cx \lor PCx \lor FCx \lor MCx) \rightarrow L(x = d))$$

should be true. On the modern "Boolean" interpretation it is, but if we are to be consistent with our old-fashioned interpretation which includes "existential import" to the predicates in the antecedent of our conditional, then it seems to be false. For if all sets denoted by the predicates in the antecedent must be non-empty in order for this proposition to be true, then it is false because the set referred to by ‘Cx’; (the presently creating beings) is empty by assumption.

Perhaps George’s idea here, given that we have a disjunctive subject term, is that only one part of it need refer. Thus, as long as the open sentence ‘FCx’ denotes a non-empty set, then the whole proposition can be true. If so, this will conflict with George’s view that the amplified term (here ‘creates’) must have supposition dividedly in each of the "divisions of time" it covers.113 George’s definition of ‘ampliation’ seems to be unsalvageable.

Returning now to George’s explanation of his main definition,114 we can now understand why George claims that the ampliating sign is said "to import

\[\text{113 See below, p. 46.}\]

\[\text{114 Quoted above, p. 37.}\]
divisions of time disjunctly" because one is to think of the term which is amplified by the ampliating sign as if it were replaced by "a disjunction" which expresses the divisions in times.\textsuperscript{115}

The definition states "in relation to a term which supposit, etc." because if the "ampliative expression" (the ampliating term) should not import diverse differences of times with respect to a supposing term, then such a term is not amplified. Thus, in the proposition 'a man was an animal' the term 'animal' is not amplified even though it appears next to an "ampliative sign" (namely, 'was'). So, the ampliative sign would not import differences of times vis-a-vis 'animal'.\textsuperscript{116} George does not include any "positive" examples illustrating what sorts of cases this latter clause is meant to include as opposed to what it excludes. Perhaps, we might speculate that there will be cases where an ampliating term ampliates a term which is in turn modified by another. Thus, in 'every man was an animal', we perhaps are to conclude that no only 'man' is amplified by 'was' but also the term 'every' as well.

Further, the definition states, surprisingly, "a term which supposit with regard to many divisions of time dividedly" because, George claims,

if such a term should supposit with regard to many divisions of time disjunctly but not dividedly then it could not be the case that such a term would be amplified, as when we say 'Adam was'. Here this term 'Adam' supposit with respect to many divisions of time disjunctly but it does not supposit with respect to these divisions of time dividedly.\textsuperscript{117}

\textsuperscript{115}Ibid.: fol. cxxviii\textsuperscript{ab}. "Unde ille terminus dicitur importare differentias temporum disjunctim qui importat tales differentias temporum ac si loco eius unum disjunctum importans diversas differentias temporum ponereitur." George is a bit sloppy here. 'Eius' appears to refer to the 'terminus' which ampliates or "imports" the divisions of times. What he should say is that the term amplified is the one in whose place (loco) the disjunction is positioned. Thus in homo fuit animal in which fuit is the ampliating and homo the amplified term, we stick in a relative clause roughly in the same place as homo which results in homo qui est vel fuit fuit animal.

\textsuperscript{116}Ibid. "Dicitur notanter in ordine, etc. quia si dictio amplativa non importaret diversas differentias temporum respectu termini supponenis, tunc talis terminus supponens non ampliaret, ut 'homo fuit animal'. Ibi ly 'animal' non ampliatur licet ponatur cum signo ampliativo cum illud signum non importet differentias temporum in ordine ad ipsum."

\textsuperscript{117}Ibid. "Dicitur notanter supponetem respectu illarum, etc. quia si talis terminus supponeret respectu plurium differentiarum disjunctim et non divisum, tunc non oporteret quod tales terminus ampliaretur, ut dicendo 'Adam fuit'. Ibi ille terminus 'Adam' supponit respectu plurium differentiarum temporis disjunctim sed tamen non supponit respectu illarum differentiarum temporis divisum."
The term ‘Adam’ suppositis disjunctly because ‘Adam’ supposited for Adam in the past. So, the disjunction "either ‘Adam’ supposited in the past or it supposits in the present" is true. But ‘Adam’ does not supposit "dividedly," which means, it appears, that ‘Adam’ would have to supposit in both the past and the present to be truly amplified. This makes some sense if one considers that an "ampliated" term is to be made "more ample" such that its supposition is to be expanded from one division of time to at least one other. Thus, if a term such as ‘Adam’ only has supposition in one time, then its supposition cannot really be said to be "expanded" and "ampliated" to another time, at least to present or future time.\(^{118}\)

Finally, George discusses the phrase "division of time" (differentia temporis). We can understand this phrase in two ways, he says, either first intentionally or second intentionally. If we understand first intentionally, then a "division of time" is "one part of time which is not another" part of time, that is, present time, past time, and future time.\(^{119}\) Thus, the phrase "division of time" when viewed as describing non-linguistic entities (that is, when it is a "first intention") is a type of time or "a time" of which there are three: past, present, or future. The term "Division" (differentia) here is probably borrowed from Aristotle’s theory of definition, according to which a term such as ‘human’ is most properly defined in terms of its genus animal and its "division" or "difference" rational. Thus, the division "rational" is a property which separates humans from other animals.

The phrase ‘division of time’ is also understood second intentionally and so a division of time is a sign accidentally expressing time in terms of its being.

\(^{118}\) That ‘Adam’ is not amplified seems to be a common belief. See, for example, (Mair, 1514): fol. lxix\(^b\). "Dicitur 'in ordine ad diversas differentias temporum separatim,' quare subiectum istius non ampliarit 'Adam fuit,' quia licet ista sit vera 'hoc est vel fuit Adam', tamen quia non est verificatio in utraque separatim, subjectum non ampliarit. Licet haec est vera 'hoc fuit Adam', haec tamen non est vera 'hoc est Adam'." ("I said 'in relation to diverse divisions of times separately' for which reason the subject of this 'Adam was' is not amplified because, although 'this is or was Adam' is true, however, because there is no verification of in both times separately, the subject is not amplified. Although 'this was Adam' is true, 'this is Adam' is not.") Dorp makes the point very clearly in (Buridan, 1965): sign. 1 1\(^a\). See also, (Taraturet, 1500): fol. lxix\(^b\), (St. Mark, 1507): sign. S \(^v\).

\(^{119}\) Ibid. "Unde hoc complexum 'differentia temporis', ut ad propositionem sufficit, capitur dupliciter. Uno modo prime intentionaliiter et tunc differentia temporis est una pars temporis quae non est alia, ut tempus praesens, tempus praeteritum, et tempus futurum."
present, past, or future, and any of the other [times] disjunctly, or one of these [times] without the other, as a verb of the past time or present time. Thus, there are usually five divisions of time given, namely, 'is', 'was', 'will be', 'can be', and 'is imagined'.120

Thus, conceived as a type of term, that is, as a second intention, a "division of time" is a term which ampliates others. George distinguishes two types: those "divisions of time" which express several divisions of times121 disjunctly and those which import only one division. He then lists what are the five principal divisions: 'is', 'was', 'will be', 'can be' and 'is imagined'. These are the principal ones in the sense that they denote the five distinct divisions. That there are five was usually held by Nominalists of the period.122

Typically, the one rule of ampliation which plays a role in modal propositions (assuming the copula 'is' appears in the present tense) is that each of the four syncategorematic modes ampliate the terms preceding as well as those

120Ibid. "Alio modo captur secunde intentionaliter et sic differentia temporis est signum accidentaliter importans per modum praeessentialitatis, praeteritionis, vel futuritionis, et sic de aliis disjunctim, vel unum eorum sine alio, ut verbum praeterit temporis vel praesentis temporis. Unde quinque solent poni differentiae temporis, scilicet, est, fuit, erit, potest, et imaginatur." We may owe this term 'praeessentialitatis' to Thomas Aquinas, who may have coined the term in order to describe the way in which God knows future contingents. In the Summa Theologiae I, q.14, art.13 [(Aquinas, 1948): p. 67] we find: "Unde omnia quae sunt in tempore, sunt Deo ab aeterno praesentia, non solum ea ratione qua habet rationes rerum apud se praesentes, ut quidam dicunt, sed quia ejus intuitus furtur ab aeterno supra omnia, prout sunt in sua praesentialitate. Unde manifestum est quod contingentia infallibiliter a deo cognoscuntur, in quantum subduntur divino conspectui secundum suam praesentialitatem, et tamen sunt futura contingentia, suis caussis proximis comparata." (Hence, all things that are present in time are present to God, not only because He has the essences of things present within Him, as some say, but because His glance is carried from eternity over all things as they are in their praeessentiality. Hence it is manifest that contingent things are infallibly known by God, inasmuch as they are subject to the divine sight in their praeessentiality; an yet they are future contingent things in relation to their own causes." Translated by Anton Pegis in (Aquinas, 1945): p. 155.)

121Here 'divisions of times' is used as a first intention.

122See, for example, (Mair, 1514): fol. lixv. "'Differentia temporis' secunde intentionaliter est terminus extrema uniens pro uno tempore et sunt quinque: est, fuit, erit, potest, et imaginatur." ('A 'division of time' second intentionally is a term uniting the extremes for one time, and there are five [divisions]: 'is', 'was', 'will be', 'can', and 'is imagined'.') See also, (Soto, 1980): fol. 44a, (Ashworth, 1974): p. 90, and (Munoz, 1964): p. 239.
following it to supposit for what is, was, will be, or can be.\textsuperscript{123} So, George of Brussels tells us:

Each suppositing term, whether understood as part of the subject or the predicate in relation to the modes, namely, ‘possible’, ‘contingent’, ‘impossible’, and ‘necessary’ taken first intentionally and syncategorematically, [this suppositing term] which has a referent or referents corresponding to four divisions of time, supposits for what is, was, will be, or can be, unless restricted to fewer or only one division of time.\textsuperscript{124}

As an example, George gives us ‘a man possibly is an animal’. Here the term ‘man’ as well as ‘animal’ supposit for men who are, were, will be, or can be.\textsuperscript{125}

It is interesting to note that we are not to interpret every syncategorematic use of ‘can’ and ‘possible’ in the way just outlined. George notes that these terms are understood in a "general" way in this context. These terms are not understood in a "strict" way as they are in the phrases ‘can be’ by itself, or ‘it is possible to be what is’ or ‘it will be possible in the future’. Understood in this way, these phrases

\textsuperscript{123}(Tartaret, 1500): fol. lxix\textsuperscript{vb}. “Tertia regula: quilibet terminus supponens captus respectu huius verbi ‘potest’ vel respectu istorum modorum, scilicet ‘possible’, ‘contingens’, ‘impossible’, et ‘necesse’, prime intentionaliter et syncategorematico captorum supponit pro eo quod est, fuit, vel erit, vel potest esse, dummodo habeat significationem vel significatam correspondentiam vel correspondentiam pluribus differentiis temporum.” (“Third rule: every suppositing term understood in relation to this verb ‘can’ or in relation to these modes: namely, ‘possible’, ‘contingent’, ‘impossible’, and ‘necessary’, viewed first intentionally and syncategorematically supposit for that which is, was, will be, or can be, provided that it has a referent which corresponds or referents which correspond to several divisions of time.”) See also, (Mair, 1514): fol. lxiib\textsuperscript{a}, (St. Mark, 1507): sign. S. vi\textsuperscript{b}, (Eck, 1516): fol. xcvii\textsuperscript{a}, (Soto, 1980): fol. 44\textsuperscript{va-b}, (Ashworth, 1974): p. 91, and (Munoz, 1964): p. 242.

\textsuperscript{124}(Brussels, 1497): fol. cxxviii\textsuperscript{vb}. “Quilibet terminus supponens captus sive a parte subjecti sive a parte predicati ... respectu istorum modorum, scilicet ‘possible’, ‘contingens’, ‘impossible’, et ‘necesse’ prime intentionaliter et syncategorematico captorum habens significatum sibi correspondens vel significata sibi correspondentia ad quattuor differentias temporis supponit pro eo quod est, fuit, erit, vel potest esse, nisi resstringatur ad unam differentiam temporis vel ad pauciores.”

\textsuperscript{125}Ibid. “Exemplum, ut ... ‘homo possibiliter est animal’. Ibi tam ‘homo’ quam ly ‘animal’ supponunt pro hominibus qui sunt, fuerunt, erunt, vel possunt esse.”
are not ampliated to the four divisions of time as the rule requires.\footnote{126}

However, what is important for us to note about George’s opinion is that he goes out of his way to make sure we understand that he is only referring to first intention, syncategorematic modes. In fact, he goes on to state:

It is said in the rule "understood first intentionally and syncategorematically" because if such modes were understood second intentionally (such as would generate composed modal propositions), then they would not have the power of ampliating, such as in the proposition ‘\textit{a man to run} is possible’. Here ‘possible’ only means ‘possible proposition’ and does not amplify the subject.\footnote{127}

The "second intention" modes in composed modal propositions do not amplify and, as we will see in chapter 3, make reference to presently existing sentence tokens, that is, sentence tokens which are presently being written, spoken, or thought about. Thus, ampliation does not apply to these sentences because they are talking about presently occurring linguistic items, not those which were, will be, or can be.

Finally, I would like to consider the question whether this characterization of composed modal propositions as propositions containing second intention modes and the corresponding idea that divided modal propositions are generated by syncategorematic modes are of any philosophical value. I suggest that they really are not, because it is never really clear why the syncategorematic mode "divides" a modal proposition. One can understand easily enough why one might hold that second intention modes generate composed modal propositions. We will learn in our next chapter that the "dictum" in composed modal propositions refers to a non-modal proposition. Since this dictum in effect functions as a singular term, it

\footnote{126}{Ibid. "Unde in propositio hoc verbum ‘potest’ et similiter ille modus ‘possibile’ capiuntur generaliter, et sic illud potest esse vel possibile est esse quod est vel fuit vel potuit esse vel in futurum poterit esse, et non capiuntur sicut prout illud potest esse solum vel possibile est esse quod est vel poterit esse in futurum. Et isto secundo modo non ampliant ad quattuor differentias temporum sic dict dicat regula." ("Thus in the example this verb 'can' and similarly this mode 'possible' are understood generally and as such that can be or is possible to be which is or was or could be or can be in the future, and they are not interpreted strictly just as that can be or is possible to be only which is or can be in the future. And in this second sense they do not amplify to four divisions of time as the rule says.")}

\footnote{127}{Brussels, 1497): fol. cxviii+(vb). "Dicitur notanter in regula prime intentionaler et sincategorematico captorum quia si tales modi caperetur secunde intentionaler prout facient propositiones modales compositas, tunc non haberent virtutem ampliandi, sicut ‘hominem currere est possibile’. Ibi ‘possible’ tantum valet sicut ‘propositio possibilis’ et non ampliat subiectum." See also (Tartaret, 1500): fol. lxixvb.}
"compresses" or "composes" its content into a single unit. However, nothing about a syncategorematic mode seems to compel us to think of it as dividing the proposition in any way. Such a mode is said to "determine" the copula, but this does not seem to imply that it divides the modal proposition.\footnote{Caubraith says that the strongest reason for calling divided modal propositions "divided" is that the mode appears in the middle, which does not happen in composed modal propositions. (Caubraith, 1509): fol. cxxii\textsuperscript{a}. "In modali divisa modus mediat inter partes dict et non in modali composita, et illa est ratio potissima quare una vocatur composita et altera divisa."}

There was some awareness of this problem among our Nominalists. Jeronimo Pardo points out that some logicians\footnote{He could have in mind any one of a number of people. For Richard Billingham, Ralph Strode, John Wycliffe, Peter of Mantua, Paul of Venice, and Cajetan of Thiene see (Maierü, 1972): pp. 368-374 and 463-467.} thought that there was a difference as to how one should interpret the two propositions

*Necessario omnis homo est anima* (Necessarily every man is an animal)

and

*Necessarium est omnem hominum esse animal* (Necessary is every man to be an animal).

The first is to be treated as if it were a divided modal proposition and the second as if it were composed.\footnote{(Pardo, 1505): fol. cviiib. "Sed dices quid dicendum est de veritate istius 'necessario omnis homo est animal'. Respondeo, aliqui dicunt differentia esse inter has propositiones 'necessarium est omnem hominum esse animal' et 'necessario omnis homo est animal'. Nam prima est de modo quae est nonem et probatur officialiter. Secunda vero quae est de adverbio probatur exponibiliter hoc pacto 'omnis homo est animal et non potest esse quin omnis homo sit animal'." ("But you say "what should we say about the truth of this 'necessarily every man is an animal'.") I answer, some say that there is a difference between the propositions 'Necessary is every man to be an animal' and 'necessarily every man is an animal.' In fact the first is 'of a mode' which is nominal and is proven "officially". The second, however, which is adverbial, is proven "expositionally", for example as 'every man is an animal and it not able to be unless every man is an animal'.} Pardo himself believes that one may interpret 'Necessario omnis homo est animal' in both ways, that is, one can view it as simply being equivalent to 'Necessarium est omnem hominum esse animal' and thus it is a composed modal proposition, or one may say that necessario determines the copula.
and generates a divided modal proposition.\textsuperscript{131} But if we should wonder why viewing \textit{necessario} adverbially would compel anyone to think that is would "divide" the proposition, no explanation is forthcoming.

We have seen that Renaissance Nominalists distinguished composed from divided modal propositions by claiming that composed modal propositions contain second intention modes while divided modal propositions contain syncategorematic modes. Further, we discovered that second intention modes from syncategorematic modes in three ways. Second intention modes (1) signify propositions, (2) appear as either the subject or predicate of the propositions, but (3) do \textit{not} amplify the other terms in the propositions of which they are part. Syncategorematic modes, on the other hand, (1) do not have signification unless taken in conjunction with another term—specifically, (2) the copula of the proposition in which they occur, and (3) amplify the other terms in the proposition of which they are part to what is, was, will be, or can be. Keeping these points in mind, we may turn to the nominalist discussions of the truth and falsity of divided modal propositions, which we consider in chapter 4, and of composed modal propositions, which is the topic of the next chapter.

\textsuperscript{131}Ibid. "Sed quicquid sit de hoc, dico quod ista propositioni ‘necessario omnis homo est animal’ posset distinguiri aut ty ‘omnis homo <est animal>’ accipitur materialiter et tunc est una modalis vera. Si vero accipitur significative, dicendum est sicut tangatur circa primam actionem, quod si omnis contenido illam non posse esse modalem compositam pro eo quod ty ‘necessario’ est adverbium quod non potest esse subjectum vel predicatum, respondero: si vis ut accipiat adverbialiter tunc accipietur ut determinatio copulae et tunc erit modalis divisa." ("But whatever is the case concerning this, I say that this proposition ‘necessarily every man is an animal’ could be distinguished whether ‘every man is animal’ is taken materially, and then it is a true modal proposition. If however it is taken significatively, one should claim just what was touched upon in the first interpretation. Because if you contend at all that this cannot be a composed modal proposition for the reason that ‘necessarily’ is an adverb which cannot be a subject or predicate, I answer: if the meaning is taken adverbially, then it is taken as a determination of the copula and then it will be a divided modal proposition.") The addition of ‘<est animal>’ is justified insofar as Pardo himself claims that he is interpreting ‘\textit{necessario omnis homo est animal}’ as a composed modal proposition, in which case one would wish to take the whole proposition ‘\textit{omnis homo est animal}’ materially. ‘\textit{Primam actionem}’ seems to refer to the first interpretation mentioned in the previous footnote.
Chapter 3

The Truth and Falsity of Composed Modal Propositions

In the next two chapters we present the basic strategy followed by Nominalist logicians of the Renaissance for determining the truth and falsity of modal propositions. The main strategy is that suggested by Ockham, according to which the goal of the truth definitions is to translate modal propositions into propositions of the form

\[ p \text{ is MOD} \]

where \( \text{MOD} \) is one of the four standard modes: that is, either 'necessary', 'contingent', 'possible', or 'impossible', and \( p \) is a non-modal (a so-called \textit{de inesse}) proposition.

Since the Nominalist logicians of the Renaissance distinguished two basic types of modal propositions, that is, composed and divided modal propositions, there were two methods corresponding to the two types of propositions for changing modal propositions into propositions of the form: ‘\( p \text{ is MOD} \)’. In this chapter, we consider the method used by Renaissance Nominalists to change composed modal propositions into this standard form. Specifically, we discover in section 3.2 that two closely related methods for determining the truth or falsity of composed modal propositions were offered by these Nominalists. Section 3.3 and section 3.4 discuss respectively these two methods. Since the second method determines the truth and falsity of composed modal propositions by means of the "supposition" of the terms in such propositions, section 3.5 discusses the nature of the supposition of the "dictum" in these. In sections 3.7-3.9 we consider some of the consequences of the nominalist conception of the "dictum" in composed modal propositions.
Before we consider these topics, one prior question must be dealt with: what is the "canonical form" of the composed modal proposition? Although we learned in the last chapter that the second intention mode may appear in the subject or predicate place in a composed modal proposition, and therefore both of the propositions

Possible is George to run (Possibile est Georgium currere)

and

George to run is possible. (Georgium currere est possibile)

would have the canonical form, several logicians of the Renaissance held that the second intention mode should only appear in the predicate position. We will now turn our attention to this controversy.

3.1 Predicates or Subjects?

Most Nominalist logicians of the Renaissance accepted the view handed down from Jean Buridan that in composed modal propositions the second intention mode which generates such propositions may appear in either the subject or predicate position:

One should understand that a composed modal proposition is a proposition in which either the mode is predicated of the dictum or the dictum of the mode: for example, 'a man to run is possible' or 'possible is a man to run'.132

Buridan's opinion contradicted the highly respected, earlier opinion of Peter of Spain, whose logic book was the usual textbook for the first year of logic study at universities during the late medieval period. Peter of Spain states:

One should know that the "verbum" must be the subject and the mode the predicate in modal propositions. All other propositions are non-modal.133

The common interpretation of this opinion was that Peter was using the term

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'verbum' as a synonym for the term 'dictum'.

Many Renaissance logicians accepted Peter of Spain's opinion unqualifiedly, but it is interesting that most of these were either self-proclaimed Thomists or Scotists. Some Scotists, however, qualified Peter of Spain's view.

Two well-known difficulties with Peter of Spain's position were discussed because aspects of Peter's view seemed to be in conflict with Aristotle's discussion of modal propositions. First, Aristotle uses phrases such as "possible to be"—

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134(Magistris, 1490): sign. dd 4ra. "Verbum dicitur subjici, modus autem praedicari. Quod notabile sic intelligitur in modalibus compositis. Verbum, id est, dictum, per quod intelligitur propositio de inesse, dicitur esse subjectum et modus praedicatum." ("Verbum is said to be the subject, the mode, however, the predicate. Note that it is so understood in composed modal propositions. The verbum, that is, the dictum, by means of which the de inesse [non-modal] proposition is conceived, is said to be the subject and the mode the predicate.") See also (Brussels, 1497): fol. xxiia, (quoted and discussed at p. 58), (Tartare, 1500): fol. xiiib, (Cologne, 1493): fol. lix, (Orbellis, 1489): sign. b 4ra.

135Among the works by Thomistic authors we find (Versor, 1981): fol. 49G-H, (Cologne, 1493): fol. lix, (Hundt, 1505): fol. iv, and (Soto, 1980): fol. 73vb, where Soto says "Et quanquam modus praeceda[s], semper accipitur tanquam praedicatum, ut est apud Aristotelem secundo Periher. cap. 3. [chap. 12 21b10-ff]: Possibile est esse, contingens est esse, etc. Est enim phrasis graeca, ut praedicatur anteponatur subjecto. Quare idem est "Petrum disputare est possibile", & 'possible est Petrum disputare', & utroque est praedicatur." ("And even if the mode should precede [the dictum], it is always interpreted as a predicate, just as Aristotle holds in the second part of On Interpretation, chap. 3: possible is to be, contingens is to be, etc. For it is a Greek usage, that the predicate is placed before the subject. Thus this 'Peter to dispute' is possible is the same as this 'possible is Peter to dispute' and in both the mode is predicated.") Soto's view here may be partially explained by his almost "Fregian" view of predication. See (Nuchelmans, 1980): p. 49. Among the works of Scotists one finds (Tartare, 1500): fol. xiiib.

136Nicolaus de Orbellis, for example, claims in (Orbellis, 1489): sign. b 4ra-2 that "Petrus Hispanus" dicit etiam quod in modalibus verbum debet subjici, modus autem predici. Circa quod notandum quod per 'verbum' intelligitur verbum infinitivi modi cum accusativo quod etiam vocatur dictum, quod quidem debet subjici, modus autem praedicari, non quantum ad situm terminorum, ut patet in exemplis auctoris [ident Petrus Hispanus] positis, in quibus saepe modus a parte subjecti ponitur. Non accipitur itaque subjici in proposito pro subjicto propositionis, sed pro ratione determinabilis. ... Modus autem est determinatio ipsum dictum determinans." ('[Peter of Spain] further states that in modal propositions the verbum must be subject, the mode the predicate. Concerning this one should note that by verbum is understood a verb of the infinitive mood with an accusative [noun], which further is called a 'dictum', which further must be the subject, the mode, however, the predicate, not with regard to the place of the term, as is clear from the examples given by our author [i.e., Peter of Spain], in which the mode is frequently placed in the subject position. Therefore, the dictum is not taken in the subject according to this view insofar as it is the subject of the proposition, but insofar as it has the nature of a determinable term. ... The mode however is the determination determining that dictum.") The Scotist Ioannis de Monte, however, proposes a solution quite similar to that of George of Brussels in (Monte, 1500): sign. e iv. See p. 58.
διανομήν εἶναι, in which the mode appears as subject and the infinitive ‘εἶναι’ is something of a variable for dicta—when he presents the modal square of opposition in chapters 12 and 13 of On Interpretation. Various responses to this conflict were proposed ranging from (i) claiming that it does not matter where the mode appears when one is discussing the modal square to (ii) blaming Aristotle’s practice on the fact that he wrote in Greek.137

Second, Aristotle in the Prior Analytics, chapter 3 held that one may convert modal propositions, but such conversion does not seem possible if the inference from ‘Socrates to run is possible’ to ‘possible is Socrates to run’ turns out to be an inference from a well-formed proposition to an ill-formed one. Thus, one seems forced either to accept ‘possible is Socrates to run’ as a perfectly good modal proposition or to reject Aristotle’s theory of modal conversion.

The usual response to this argument was to distinguish two kinds of modal conversion. Conversion is a term denoting a group of inferences, the conclusion of which is a proposition whose subject term appears as the predicate term of the premise and whose predicate term appears as the subject term of the premise. Thus, we may infer from

No presidents are runners

to

No runners are presidents

by "conversion."

For modal propositions, medieval logicians noticed that two types of conversion can be distinguished. There was first what one might call "total-conversion" or conversion "quoad se totam" in which the positions of the mode and the dictum were switched. For example, the inference from

George to run is possible’

to

‘possible is George to run’

is conversion quoad se totam. Second there is an "inter-dictum" conversion or

137 For the first strategy see ([Cologne], 1493): fol. lix H and the second see (Soto, 1980): fol. 73
H, quoted above on p. 55.
conversion *quoad dictum* which occurs in inferences where the terms *within* the dictum were converted. An example of this type of modal conversion would be the inference from

*No presidents to be runners* is possible
to

*No runners to be presidents* is possible.

Logicians who followed Peter of Spain’s view on the canonical form of composed modal propositions would then claim that conversion *quoad dictum* was the sort of conversion Aristotle was concerned with in chapter 3 of the *Prior Analytics* but he did not sanction conversion *quoad se totam*.

Conversion *quoad se totam* had been developed with some success within the Nominalist tradition, however, and thus the modern Nominalists had strong motivation for either rejecting Peter of Spain’s point of view or coming up with some way of making his view compatible with this type of conversion. George of Brussels, however, seems to take the second approach. We will see that he advocates conversion *quoad se totam*, but placates Peter of Spain by claiming that there is something out of the ordinary about composed modal propositions in which the dictum appears in the predicate position. George claims that such propositions—as, for example, ‘possible is George to run’—contain *indirect* predication while the converse of these—such as ‘George to run is possible’ contains *direct* 

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138 Sometimes called conversion *quoad partem* as in ([Cologne], 1493): fol. lix.

139 (Versor, 1981): fol. 41C-D, ([Cologne], 1493): ibid., which states "Dicendum [est] quod Aristoteles docet convertere propositionem modalem quoad partem, et non quoad se totam quia scilicet convertitur quoad se dictum et partes eius, et sic conversio illa non mutat situm modi." ("One should say that Aristotle instructs us to convert a modal proposition with regard to part and not with regard to the whole because, namely, it is converted with regard to the dictum and its parts, and as such this conversion does not change the position of the mode.") See also (Hundt, 1505): fol. ivii, which says "Nota modales secundum se totas non convertuntur quia modus non potest poni a parte subjecti, nec dictum in praedicato." ("Note that modal propositions with regard to the whole proposition are not converted because the mode cannot be put in the subject place nor the dictum in the predicate.")

140 For some of this successful development see (Buridan, 1967): pp. 70-72.
predication. This remark about "direct predicacio..." is interesting enough to deserve some comment.

The notion of direct predication is dependent upon the idea that terms are ordered. Some terms are "higher" than others in the sense that the higher terms are truly predicated of the lower when these are universally quantified, and therefore the class of substances denoted by the higher term contains the class denoted by the lower, but not vice versa. Porphyry's Tree is, of course, the ordering of terms accepted by Scholastics, and accordingly, 'every human is an animal' would be an example of a proposition in which the higher or "superior" term 'animal' is predicated of the lower or "inferior" term 'human'. Indirect predication was simply the opposite of direct predication and occurred when an inferior term was predicated of a superior as in 'an animal is human' and although some propositions containing indirect predication were true, they go against the order governing

141 (Brussels, 1497): fol. xxi². "Propositio modalis composita est propositio cathogorica in qua unitur aliquis istorum quattuor modorum cum praedicatio vel subiecto mediante copula non modificata, et haec...expositio magis videtur esse secundum magistri Petri Hispani, ut patet ex notabilis quod ponit post diffinitionem propositionis modalis, dicens quod in modalibus verbum debet subjici, modus vero praedicari, quod notabile sic intelligitur. In modalibus, verbum, hoc est, dictum sive propositione de inesse, debet esse subjectum, et modus debet esse praedicatum saltem ubi est praedicatio directa. ("A composed modal proposition is a categorical proposition in which any of these four modes is united with a predicate of a subject along with an unmodified copula in between, and this explication seems to follow our teacher Peter of Spain more closely, as is clear from the notes he put after the definition of a modal proposition, saying that in modal propositions verbum must be the subject, the mode, however, the predicate, which, we should note, must be explained in this way. In modal propositions, the verbum, that is, the dictum or de inesse, non-modal proposition, must be the subject, and the mode must be the predicate only in the case that there is direct predication.") See also (Monte, 1500): sign. e i².

142 (Brussels, 1497): fol. xxvi-xxvii². "Praedicatio directa est praedicatio in qua praedicatur superius de suo inferiori.... Exemplum...ut 'homo est animal'! ("Direct predication is predication in which the higher term is predicated of its inferior.... An example...is 'man is an animal'.") The history of direct predication is not well researched. Maierù quotes only one passage containing an occurrence of praedicatio directa, a passage by Strode at (Maierù, 1972): p. 442, n. 205, with no explanation of the term. Some discussion of modern scholastic views is available in (Angelelli, 1967): pp. 132-133, n. 68 and (Hickman, 1980): pp. 25-27. Peter of Spain speaks of "recta praedicatio" at (Peter of Spain, 1972): p. 85, II. 5 and 6 but does not define it. Ockham has an interesting discussion of direct and indirect predication in (Ockham, 1974a): pp. 95-97. George's definition of direct predication may be borrowed from Paul of Venice. See (Paul of Venice, 1970): p. 21. John Mair offers a definition similar to George's at (Mair, 1514): fol. cxxii. Domingo de Soto attacks these at (Soto, 1980): fol. 55v and in (Soto, 1967): fol. 47F-49A.
Porphyry’s Tree.\textsuperscript{143}

Although George of Brussels’ solution has the virtue of reconciling Peter of Spain’s doctrine with Buridan’s \textit{quod se totam} conversion, George never fully explains his remark concerning direct predication. What his explanation would require is some description of the ordering among \textit{second intentions} which would justify his distinction between direct and indirect predication in propositions containing second intention terms such as the second intention modes. Porphyry’s Trees, in their ordinary manifestations at any rate,\textsuperscript{144} are not available to provide this ordering since they (usually) only deal with first intention terms, and George does not provide any basis for thinking that ‘possible’ in ‘\textit{George to run} is possible’ is in any way “superior’ to ‘\textit{George to run}’.

Other Nominalists simply seem to reject Peter of Spain’s position. For example, Robert Caubraith claims that both ‘\textit{Socrates to run} is contingent’ and ‘contingent is \textit{Socrates to run}’ are both perfectly good composed modal propositions.\textsuperscript{145} Caubraith himself quotes Peter of Spain’s position as an objection to his own point of view, but in response Caubraith claims that one must understand Peter’s doctrine as holding only in most cases (\textit{regulariter et ut in pluribus}).\textsuperscript{146} Of course, he says, we are more likely to say ‘\textit{Socrates to run} is contingent’ than ‘contingent is \textit{Socrates to run}’. However, one may make an exception to this rule as long as the dictum is taken to supposit materially, and Caubraith would like us to

\textsuperscript{143}(Brussels, 1497): ibid. “\textit{Sed praedicatio indirecta est illa in qua inferius praedicatur de suo superiore... Exemplum... ut ‘animal est homo’.” (“But indirect predication is that in which the inferior is predicated of its superior... An example...is ‘animal is a man’.”)

\textsuperscript{144}But, for some discussion of an “eleventh category” among Scholastics, see (Hickman, 1980): pp. 172-177.

\textsuperscript{145}As long as the dictum ‘\textit{Socrates to run}’ is understood to have material supposition. See (Caubraith, 1509): fol. cxxii\textsuperscript{a}.

\textsuperscript{146}Ibid. Contra. “\textit{Modus in illa [sc. ‘possibile est Socratem currere’] non praedicatur, ergo non est modalis composita. Tenet consequentia per illud commune, ‘in modalibus verbum debet subjici, modus autem praedicari’.” (“The mode in this [namely, ‘possible is \textit{Socrates to run}’] is not predicated, therefore it is not a composed modal proposition. The implication holds because of this commonly [held opinion], ‘in modal propositions, the \textit{verbum} must be the subject, the mode, however, the predicate’.”)
use the sign of material supposition ‘ly’ to show this. Thus, this proposition ‘possible is ly Socrates to run’ is an example of an acceptable case of the mode appearing in the subject place and the dictum in the predicate spot.\(^{147}\)

Thus, for the majority of our Nominalists, there are two canonical forms of composed modal propositions. In one, the dictum appears as the subject and the second intention mode as the predicate; in the other, the second intention mode appears as the subject and the dictum appears as the predicate. We are now in a position to consider the methods by which the Nominalists attempted to determine the truth and falsity of composed modal propositions.

### 3.2 Two Methods

There were two methods for determining the truth value of composed modal propositions in use among the Nominalists of the Renaissance. The first method seems to derive from the theory of disputation, in which Scholastics attempted to develop argument-forms (or probationes) to defend propositions for public disputations and for expressing disputed points in philosophical treatises. The second method derives directly from discussions of the truth and falsity of modal propositions such as found in Ockham’s works.

\(^{147}\) (Caubraith, 1509): Ibid. "Dicitur quod illa auctoritas [id est, Petrus Hispanus] potest exponi tam de modali composita quam divisa. Si primum, sensus est quod in modali divisa verbum, id est, copula verbalis debet esse determinabile et modus determinatio. Si secundum, debet sic intelligi: verbum in modali composita, id est, dictum (ubi est suppositio synecdochica) debet subjici, id est, debet esse subjectum et modus praedicatum, et hoc regulariter et ut in pluribus. Regularius enim dicimus 'Socratem currere est contingens' quam 'contingens est Socratem currere', vel sic glosemur. Universaliter in modali composita modus debet praedicari nisi dictum a parte praedicati supponat materialiter, cuiusmodi in hac contingit ‘possibile est ly Socratem currere’." ("It is said that this authority [i.e., Peter of Spain] can be interpreted just as much with regard to a composed modal proposition as a divided one. If we take the first, the sense is that in a divided modal proposition the *verbum*, that is, the verbal copula must be the determinable term and the mode the determination. If we take the second, it must be understood in this way: the *verbum* in composed modal proposition, that is, the dictum (here we have ‘synecdochal supposition’) must be the subject, that is, it must be the subject and the mode the predicate, and this regularly and for the most part. We say ‘Socrates to run is contingent’ more often than ‘contingent is Socrates to run’, or so it is glossed. Universally the mode in a composed modal proposition must be predicated unless the dictum in the predicate position supposits materially, as is the case in this ‘possible is ly Socrates to run’.") Concerning the material supposition of the dictum in composed modal propositions, see section 3.5.
By the time of the Renaissance, the two methods were often both presented as part of a typical investigation of the truth and falsity of composed modal propositions. For example, John Mair offers both to his students in this passage:

You will hunt for composed modal truths both *per officiantes* and by means of the supposition of the terms just as in the case of other non-modal (*de inesse*) propositions.\(^{148}\)

We now turn to an exposition of the first method.

### 3.3 Method I: *Per Officiantes*

John Mair explains Method I in this way:

To "*officiate* (*officare*) a composed modal proposition is to put in the place of the dictum the proposition of that dictum along with this complex term 'this proposition' while leaving everything else the same. For example, 'a man to be an ass is impossible' is "officiated" in this way: 'this proposition 'a man is an ass' is impossible.' 'Necessary is God to be' is officiated as: 'something necessary is this proposition 'God is'.' 'Both contingent contradictories to be true' is possible' is officiated: 'This proposition is possible 'both contingent contradictories are true'," which is false.\(^{149}\)

In other words, one "officiates" a composed modal proposition by simply translating it from its typical form in which there occurs an infinitive clause called a *dictum*--as in "*hominem esse animum est impossibilis*"--to a proposition in which the phrase 'haec propositio' is placed before an indicative sentence corresponding to the *dictum*--as in 'haec propositio "homo est asinus" est impossibilis'.

The expression 'terminus officialis' seems to be derived from the theory of "proving a proposition (probatio propositionis)" as it developed during the late

\(^{148}\)(Mair, 1527): fol. lxvii\(a-b\). "Modalium compositarum veritates per officiantes & extremorum suppositionem instar aliarum de inesse venaberis."

\(^{149}\)(Mair, 1527): fol. lxvii\(a-b\). "Modalium compositarum veritates per officiantes & extremorum suppositionem instar aliarum de inesse venaberis. . . . Officiare modalem compositam non est aliud quam loco dicti ponere propositionem cuius est dictum cum hoc complexo 'talis propositio' caeteris intactis reliquis, ut 'hominem esse asinum est impossibile' sic officiatur, talis propositio 'homo est asinus' est impossibilis; 'necessa est deum esse', aliquid necessarium est talis propositio 'deus est'; 'utrumque contradictoriorum contingentium est verum' , talis propositio est possibilis 'utrumque contradictoriorum contingetium est verum' , modo hoc est falsum." For an almost direct quotation of this, see (Caubraith, 1509): fol. cxxiii\(v-b\).
Medieval period. Essentially the aim of this enterprise was to invent premises which would "prove" (probat) a given conclusion one wished to defend. Jeronimo Pardo presents us with an example of how we may construct a probatio of ‘Socrates to run is possible’:

This is why some say that this proposition ‘Socrates to run is possible’ and other composed modal propositions are proven officially (probantur officialiter) in this way: this proposition ‘Socrates runs’ is possible and it signifies Socrates to run, therefore Socrates to run is possible.\footnote{Pardo, 1505: fol. cvi\textsuperscript{a-b}. Pardo describes his method as "taking the sense" of the composed modal proposition. However, the similarity of it to Maïr’s second method is evident: "... sit prima regula succincta de modalibus compositis...si sensus modalis compositae explicatus per propositionem dicto correspondentem sit verus, ipsa est vera; si falsa, ipsa est falsa. Ista regula in hoc videtur fundamentum accipere: quia tale dictum supponit pro propositione sibi correspondentem. Ergo loco illius dicti licet ponere propositionem tali dicto correspondentem, ut dicendo ‘Socratem currere est possibile’, ty ‘Socratem currere’ supponit pro illa propositione ‘Socrates currit’, ut communis logicorum est sententia quod statim discutietur. Ergo convenienter datur sensus talis propositionis ‘Socrates currit est possibile’ et ita per eius sensum habet veritas et falsitas cognosci.” (“The first rule put forth is with regard to the composed modal propositions...if the sense of the composed modal proposition, which is made explicit by means of a proposition which corresponds to the dictum, is true, then the composed modal proposition is true, if it [the sense] is false, then the composed modal proposition is false. This rule seems to have its basis in the fact that such a dictum supposits for a proposition corresponding to it. Therefore, in place of the dictum one may put a proposition corresponding to such a dictum, as when one asserts ‘Socrates to run is possible’, ‘Socrates to run’ supposits for this proposition ‘Socrates runs’, just as the common opinion of logicians holds which is often taught. So, ‘Socrates runs is possible’ appropriately gives the sense of such a [composed] proposition, and thus its truth and falsity must be determined by its sense.”)}

We should note, however, that Pardo here suggests that the per officiantes method is derived from the method of supposition (our "method II"). Pardo does not even think there are two methods since he holds that the supposition method is the primary way to determine the truth value of composed modal propositions.\footnote{Maierù, 1972: p. 451-467.}

\footnote{Maierù, 1972: pp. 343-403.}
However, more attention was paid to the second method by the Renaissance Nominalists, and we now turn to it.

3.4 Method II: *per extremorum suppositionem*

John Mair explains the nature of the second method for determining the truth value of composed modal propositions when he states that the truth of a composed modal proposition is conceived of just as any other non-modal (*de inesse*) proposition since it is a non-modal proposition. If the proposition is affirmative, its truth is determined by means of its terms supposing for the same thing.\textsuperscript{154}

Thus, the truth of a composed modal proposition is determined by the same basic formula which also applies to other non-modal propositions: \textsuperscript{155}

‘A is B’ is true =df the supposition of A is the same as the supposition of B.

Setting aside the complications which arise for such a definition of truth even in the case of *de inesse* propositions which contain nothing resembling a modal term, several difficulties arise which are specific to composed modal propositions. Consider the example Mair offers:

*every a being to be God is necessary.*

This proposition is true just in case, Mair says, the term ‘necessary’ supposit for any necessary proposition that the subject does.\textsuperscript{156} It is unclear, however, what exactly the supposition or reference of the dictum is, nor how the quantifier ‘every’ is to be interpreted. We consider these two questions in turn.

\textsuperscript{154}(Mair, 1514): fol. xiii\textsuperscript{a}. Circa ista dubitatur quomodo cognosciur veritas modalis compositae. ... Ad primum dicitur quod modalis composita cognosciur sicut aliae propositiones de inesse cum ipsa est de inesse. Si est affirmativa, per hoc quod extrema eius supponunt pro eodem. See also (Caubraith, 1509): fol. cxxi\textsuperscript{vb}, (Pardo, 1505): fol. cvii\textsuperscript{a}.

\textsuperscript{155}Concerning the claim that composed modal propositions are *de inesse* propositions, see section 2.5.

\textsuperscript{156}ibid: fol. xxxiii\textsuperscript{a-b}. "Patet exemplariter: ‘omne ly ens esse deum est necesse’. ‘Necesse’ pro qualibet propositione necessaria supponit."
3.5 The Supposition of the Dictum

Renaissance Nominalists consider two possible ways in which the dictum of a composed modal proposition may supposit or refer: (1) "personally," which is considered synonymous to "significatively", or (2) "materially." Thus, for example, Jeronimo Pardo states:

this proposition 'Socrates to run is possible' should be conceived as if 'Socrates to run' has supposition for this proposition 'Socrates runs' either with material or personal supposition, according to the common opinion of logicians.\textsuperscript{157}

In general, the "personal supposition" of a term such as 'George' was taken to be the individual human being named George, whereas the "material supposition" was the very term 'George' itself. Thus, the term 'George' materially supposits for itself and other occurrences of 'George', but it personally supposits for the person George.

Whither "simple" supposition, which is a third type of supposition commonly set alongside personal and material? Simple supposition was usually given the realist interpretation that when a term has simple supposition, it stands for the "universal or common nature which is the primary meaning of that term"\textsuperscript{158}

Naturally, Nominalists would not be happy with such a universal, and many Nominalists of the period followed Buridan's view, according to which simple supposition is considered a special case of material supposition.\textsuperscript{159} In an interesting text, Antonio Coronel rejects the possibility that the dictum in a composed modal proposition has simple supposition because he does not believe that there is any

\textsuperscript{157}(Pardo, 1509): fol. cvii\textsuperscript{a}. "Capiatur ista propositione 'Socratem currere est possibile', si ly 'Socratem currere' supponeret pro ista propositione 'Socrates currit' aut suppositione materiali aut personali.; ut est communis opinio logicorum." The application of the distinction between personal and material supposition to the dictum appears in the work of Peter of Ailly and Jean Buridan. See (Ailly, 1681): sig. i 6\textsuperscript{a} (cited and discussed in (Nuchelmans, 1980): pp. 67-68). Buridan's views are discussed in (Nuchelmans, 1973): p. 249. The Renaissance Nominalists seem to follow Buridan most closely.


kind of simple supposition distinct from material supposition.\footnote{See (Corone, 1517): sign. g ii, where he states: “Noluimus ponere suppositionem simplicem distinctam a materialem.” (“We do not wish to posit a simple supposition distinct from material supposition.”)} Furthermore, most Nominalists of the time would reject the notion of a the dictum standing for a universal entity, something akin to what is referred to by the term ‘proposition’ as used nowadays.\footnote{Haack, 1978: pp. 76-77.} They usually reject such a notion of proposition in the context of arguing against Gregory of Rimini’s \textit{complexe significabile}.\footnote{Concerning which see (Ashworth, 1978): pp. 88-99, (Nuchelms, 1980): pp. 53-54, and my last chapter.} It is interesting to note, however, that in the 14th century, the heretic John Wycliffe apparently held the view that the dictum in composed modal propositions does indeed have simple supposition.\footnote{Quoted in (Maieru, 1972): p. 371. “Et sic sensui composito deservit supposicio simplex” (“And thus simple supposition is retained in the composed sense.”) Soto reports such a view in (Soto, 1980): fol. 75v.} Two difficulties were brought against the view that the dictum has personal supposition for a proposition. First, as Pardo tells us:

Personal supposition is supposition of a term for what it "ultimately" means. But this proposition ‘Socrates runs’ is not the ultimate meaning of this complex expression ‘Socrates to run’ since it does not signify this expression naturally, properly, or conventionally, whether ultimately or by imposition.\footnote{Pardo, 1505: ibid. “Sed quod non personaliter [supponit] probatur ratione quia suppositio personalis est suppositio termini pro suo significato ultimo. Sed illa propositio ‘Socrates currit’ non est significatum ultimaum huius complexe vocalis ‘Socratem currere’ cum non significet illud naturaliter, proprie, aut ad placitum, ultimate seu ex imposizione.”}

"Natural," "proper," and "conventional" are types of supposition commonly distinguished by scholastic logicians and their precise meanings were universally disputed. However, we can state the upshot of this objection without sinking into the quagmire of supposition theory by saying that a dictum never refers to a proposition in any normal or "proper" fashion, whether as a function of any natural ability of our minds to fix the references of terms, or by any conventional determinations of the meanings of terms.
Pardo's description of the problem seems to assume the view that a
dictum has personal supposition for those entities referred to by the terms of the
dictum.\footnote{I discuss his view in section 5.3 below. Jerome of St. Mark seems to express the same type of objection. See (St. Mark, 1507): sign. I v. “Verbi gratia, si dicam 'Petrum currere est possible',
tale dictum 'Petrum currere' potest capi dupliciter, significative scilicet et materialiter. Si capiatur
significative et personaliter, tunc ad videndum pro quo supponit tale dictum secundum Buridanum,
resolvendus est accusativus in nominativum et infinitivus in participium, ut 'Petrum currere' sic
resolutor, id est, 'Petrum existens currens', et tunc pro illo, pro quo supponit istud aggregatum
'Petrus existens currens'. Pro eodem supponebat isuid dictum ‘Petrum currere’.” (“For example, if I
say ‘Peter to run’ is possible’, the dictum ‘Peter to run’ can be understood in two senses, namely,
significatively and materially. If it is understood significatively and personally, then in order to see
for what the dictum supposits according to Buridan, the accusative term should be changed into a
nominative [term] and the infinitive into a participle, just as ‘Peter to run’ is resolved in this way,
that is, ‘Peter existing running’, and then [this dictum ‘Peter to run’] supposits for that for which this
aggregate ‘Peter existing running’ supposits. This dictum ‘Peter to run’ supposits for the same.”)
Unfortunately, Jerome does not state exactly what it is that ‘Peter existing running’ supposits or
refers to. According to Buridan, of course, it is the individual man Peter and this is most probably
what Jerome expects us to conclude.} Thus, the dictum

\textit{George to be a runner}

was usually thought to have personal supposition for the referents of the terms
‘George’ and ‘runner’. This opinion—that the dictum has personal supposition for
those entities referred to by its terms—was defended by Jean Buridan in the late
middle ages and was widely accepted among our Nominalists.\footnote{Buridan’s view is available in (Buridan, 1977): p. 23 and (Buridan, 1964): fol. xxx\footnote{a}. Buridan’s explication of the signification of dictums and propositions was well-known to our
authors. For citations see (Ashworth, 1978): p. 100, n. 85. Also, see section 5.3 below.} Thus, our
Nominalists will, at least initially reject the notion that a dictum has personal
supposition for propositions because they usually accept the idea that the dictum
supposits or refers to individuals.

A second difficulty with the view that the dictum has personal supposition
for a proposition appears in the work of Robert Caubraith. He claims that the
dictum cannot have personal supposition for a proposition because its second
intention predicate, that is, the second intention mode, forces the subject to have
material supposition. Thus, the dictum 'George to be running' in 'George to be running is possible' has material supposition because it has a second intention predicate: the second intention modal term 'possible'.

Cabraith probably has in mind the doctrine held by some logicians of the period that a second intention term such as 'species', in a proposition such as 'man is a species', was thought to force the first intention subject, in this case 'man', into material supposition. Otherwise, if the term 'man' retained personal supposition, according to which it would refer to individual men, then 'man is a species' would false because individual men are not species.

The usual opinion among our Nominalists was that the dictum in composed modal propositions had material supposition for a proposition. Thus, John Mair claims that the dictum 'a being to be God' in 'every being to be God is necessary' has material supposition for the proposition 'a being to be God'.

Two objections to this view were sometimes stated. Pardo here tells us the first:

But that [a dictum in a composed modal proposition] does not have material supposition is shown: first, because a term does not supposit materially unless it supposit for itself or terms similar to it, and by extension one should add: or for terms synonymous to it whether written or in the mind. But none of these should be said [of the manner in which the dictum supposit for a proposition], as is clear

\[167\] Ibid. "Non primum quia terminus primae intentionis a parte subjicii respectu praedicati secundae ab ipso restringitur ad supponendum materialiter." ('Not the first [i.e., the dictum does not have personal supposition for a proposition] because a term of first intention in the subject along with a predicate of second [intention] is restricted by this [the predicate] to suppositing materially.' See also (Hagenau), 1967): p. 117.


\[170\] (Mair, 1514): fol. xxxii\textsuperscript{a-b}. "Subiectum illius [sc. omne ly ens esse deum est neesse'] supponit materialiter" ('the subject of this [namely, 'every a being to be God is necessary'] supposits materially'), and fol. xxxii\textsuperscript{a}. "In modalibus compositis ali termini a copula et modo tenetur materialiter" ('In composed modal propositions the terms other than the copula and the mode are taken materially.') The view that the dictum in such modal propositions has material supposition appears in the work of Buridan, as in (Buridan, 1965): d 5\textsuperscript{a}. Pseudo-Scotus (in (Scotus, 1968): fol. 310\textsuperscript{b}) and Albert of Saxony (see (Maierü, 1972): p. 366) repeat the view. See also ibid.: p. 355, n. 122 and p. 363, n. 151.
enough.\textsuperscript{171}

The dictum ‘Socrates to run’ therefore refers materially to itself, namely to ‘Socrates to run’ and to other tokens of its type, such as this next occurrence: ‘Socrates to run’. Further it can, "by extension," refer materially to the thought in my mind which has the same meaning as the written expression ‘Socrates to run’. The proposition ‘Socrates runs’ does not enjoy such a relationship to ‘Socrates to run’, mainly because it is not a dictum.

A second reason why the dictum cannot have material supposition for a propositions is

because a term which supposit for something must be verified of it or of a name adequately signifying it, but ‘a man to run’ is not verified (assuming material supposition) of this proposition ‘a man runs’. This is proven because this [proposition] is false when the terms have material supposition: “"a man runs" is "a man to run"."\textsuperscript{172}

The proposition

‘A man runs’ is ‘a man to run’

is false because the subject term does not refer to the same thing as the predicate term. The point can be made more clearly if we understand that this proposition says the same thing as

This expression ‘a man runs’ is this expression ‘a man to run’

which is clearly false.

John Mair, who accepts the view that the dictum in a composed modal proposition has material supposition for a proposition, attempts to answer such objections by distinguishing two ways in which the dictum of a composed modal proposition may supposit materially. In his example ‘every a being to be God is necessary’ the subject, that is, the dictum ‘a being to be God’, can supposit

\begin{footnotes}
\footnote{\textsuperscript{171}Ibid: fol. cv\textsuperscript{i}\textsuperscript{a-b}. “Sed quod non supponat materialiter probatur. Tum primo, quia terminus non supponit materialiter nisi pro se vel sibi simili, et ampliando additur vel sibi synonymo in scripto vel in mente, sed nullum istorum est dicendum, ut satis patet.” This objection is repeated by Robert Caubraith at (Caubraith, 1509): fol. cxxii\textsuperscript{r-b}.

\footnote{\textsuperscript{172}Ibid. “Tum secundo, quia terminus qui supponit pro aliquo debet verificari de illo vel de nomine adequate significante illud. Sed ly ‘hominem currere’ non verificatur secundum suppositionem materialis de illa propositione ‘homo currit’. Probatur quia haec est falsa terminis materialis satis: ‘ly “homo currit” est ly “hominem currere”’.”}}
Dictum
A being to be God

Material
Supposition

supposits for a proposition corresponding to the dictum

supposits for itself

A being is God
A being to be God

Figure 3-1: The Supposition of the Dictum in Composed Modal Propositions according to John Mair materially in two ways. In one way, Mair says, the subject can supposit for its dictum, that is, for itself. In that case ‘every a being to be God is necessary’ would be false because the terms would not supposit for the same thing. The predicate ‘necessary’ supposits (as a second intention) for a necessary proposition, namely ‘a being is God’ but the subject supposits for a dictum, presumably for ‘a being to be God’, which is not a proposition. Thus, if we understand material supposition in the standard manner, according to which a term refers to itself, then all composed modal propositions would be false. However, Mair points out that if we understand material supposition in a second way, such that the dictum supposits for the proposition of which it is the dictum, then this proposition ‘every a being to be God
is necessary' is true.\textsuperscript{173} In other words, the dictum, 'a being to be God', understood as having material supposition in the second sense, supposits for the proposition 'a being is God'. The two meanings of material supposition according to Mair are illustrated by figure 3-1, and the sense of Mair's example is that every occurrence of the proposition 'a being is God' is a necessary proposition.

Robert Caubraith offers the view that one can actually defend either the claim that the dictum in composed modal propositions supposits personally for propositions or the view that it supposits materially for propositions. If one views the dictum in terms of personal supposition, then one can, he says, still make sense of the alleged rule which states that a second intention predicate makes the subject term stand materially. One would only need to claim that the predicate is applied to the subject insofar as it is not signifying in an "ultimate" way, Caubraith says, and one would then say that it equivocally signifies (ultimately) Socrates (as an extramental entity) and (non-ultimately) a proposition. The dictum has this latter non-ultimate signification because it is the custom of logicians to view it in such a

\textsuperscript{173}(Mair, 1514): fol. xxxiii\textsuperscript{rb}. "Subiectum illius [sc. 'omne ly ens esse deum est necesse'] supponit materialiter et hoc duobus modis. Uno modo pro illo dicto, et sic propositio est falsa cum extrema non supponunt pro eodem cum praedicatum pro sola propositione necessaria supponit. Subiectum ex hypothesi solum accipientur pro illo dicto quod non est propositio. Si illud dictum supponit pro propositione cuius est dictum, tunc illa propositio est vera." ("The subject of this [that is, 'every a being to be God is necessary'] supposits materially and such in two ways. In one way [it supposits materially] for this dictum, and as such the proposition is false because its terms do not supposit for the same thing since the predicate supposits only for a necessary proposition. The subject by assumption is only taken for this dictum which is not a proposition. If this dictum supposits for the proposition of which it is the dictum, then this proposition is true.")
Figure 3-2: The Supposition of the Dictum in Composed Modal Propositions according to Robert Caubraith way.¹⁷⁴

¹⁷⁴(Caubraith, 1509): fol. cxxiiib, "Dico quod indifferenter potest s[u]stentari, quod [dictum] suppo[n]it personaliter vel materialiter pro propositione cuius dictum. Si dicatur primum, ad rationem in contrarium dicetur quod regula allegata intelligi debet quando praedicatum secundae intentionis potest competere subjecto pro significato non ultimato, et consequenter dicetur quod dico Socratem ad extra et tale propositionem significat. Et si quaeris a quo imponebatur ad significandum talem propositionem, dicetur quod talis modus praesentandi ex consuetudine et usu logicorum nobis constat, quod sufficit ad illud dictum talem propositionem significare." ("I claim that it can be argued either way, that the dictum supposits either personally or materially for the proposition of which it is the dictum. If the first is asserted, it should be said of the reason given to the contrary that the rule provided must be understood when a predicate of second intention can belong to a subject [standing] for its non-ultimate meaning, and thus it would be held that it equivocally signifies both the extramental Socrates and such a proposition. And if you ask me, by what is it made to signify such a proposition, it is asserted that such a mode of expression is established by the habit and usage of our logicians, which suffices for this dictum to signify such a proposition.") For a similar solution see Coronel in (Coronel, 1517): sign. g iiæ.
If, however, one follows the more usual view concerning the dictum of such propositions—namely, that the dictum has material supposition, then, Caubraith continues, the dictum is said to be similar in meaning to a proposition only so long as one takes the dictum in its "ultimate" sense. Strictly speaking, he continues, the dictum does not *ultimately* stand for itself or expressions similar to it, but for the proposition of which it is the dictum. So it is understood by the logic community.\(^{175}\)

Thus, Caubraith's truly scholastic strategy for avoiding at least some of the objections listed is to add to the distinction between material and personal supposition another, that is, the distinction between "ultimate" and "non-ultimate" signification. At the level of mental language, scholastics of the period distinguished mental language which had only conventional signification ("non-ultimate" mental language) from mental language which was "naturally" significant and common to all human beings.\(^{176}\) Thus, in Caubraith's opinion, the "real" or "ultimate" meaning of the dictum in a modal proposition is, taken *materially*, a proposition, but taken *personally*, an individual being or beings. Conventionally and "non-ultimately," the dictum in a modal proposition, taken *materially*, stands for itself and synonymous dictums, taken *personally*, it stands for a proposition. These results are summarized in figure 3-2.

\(^{175}\)Ibid. "Si vere dicatur secundum (ut nunc communiter tenetur), ad obiectionem in contrarium dicetur quod illa proposition est similis tali dicto accepto pro suo significato materiali ultimato. Unde dictum non ultimate materialiter praeceps supponit pro ipso dicto et similibus dictis, sed materialiter ultimate supponit pro propositione cuius est dictum." ("If however the second is asserted (as is now commonly held), it would be said to the objection for the contrary that this proposition is similar to such a dictum taken for its ultimate material signicate. Thus, the dictum does not precisely supposit in a material and ultimate manner for this very dictum and similar dicta, but is suppositus ultimately and materially for the proposition of which it is the dictum.") See also (Coronel, 1517): ibid.

3.6 The Contingency of Composed Modal Propositions

This view that the dictum of a composed modal proposition supposits or refers to a proposition was thought to imply that at least some composed modal propositions are contingent. This claim is interesting in that it shows that during the late middle ages and Renaissance periods scholastics had at least begun to focus attention on "iterated modalities." An iterated modality, broadly understood, occurs when one modal term appears within the scope of another modal term. Thus, in

It is necessary that it is contingent that George is fishing

we have an iterated modality because 'it is contingent that' appears within the scope of 'it is necessary that'.

Thus, for example, Robert Caubraith claims:

There is no question that some composed modal proposition is contingent. This is true now: 'Socrates to run is possible', but having assumed that there is no such proposition as 'Socrates runs', [the composed modal proposition] is false.177

Since propositions are contingent entities from the Nominalist perspective, composed modal propositions which make reference to these will, for

177(Caubraith, 1509): fol. cxxiii vb, "Quod aliqua [propositio modalis composita] sit contingens, non est quaestio. Ista nunc est vera 'Socratem currere est possibile', et posito quod non sit aliqua talis propositio 'Socrates currit', ipsa est falsa." See also (Mair, 1527): fol. lxvi vb, discussed in (Coombs, 1990).
the most part,¹⁷⁸ be contingent, too.¹⁷⁹ To see how propositions are contingent, we
must remind ourselves of the typical late scholastic notion of propositions.¹⁸⁰
Following Boethius, Renaissance scholastics held that propositions, just as any other
linguistic expression, come in three forms. Some are written, some are spoken, and
some are thought about. Written propositions are contingent in the sense that it is
possible that they exist and possible that they do not. Bear in mind that a written
proposition usually corresponds to what we would call a written sentence token.
Thus, the written sentence

George is running

is possible (since it actually exists), but it is also possible that it had not come into
existence since it is possible that I had never been born and thus would not be
around to write it here. Spoken propositions are also ephemeral since the sound
waves which make them up quickly dissipate. Finally, mental propositions were
considered, at least by the Nominalists of this time, to be individual thoughts in
individual minds. Thus, these exist as long as we think about them, but when we
get distracted or forgetful, they cease to exist.

So, the composed modal proposition ‘George to run’ is possible will be
true only if some token of ‘George is running’ exists. If it is possible that no such

¹⁷⁸I say "for the most part" because both Caubraith and Mair believe that some composed modal
propositions are necessary.

¹⁷⁹Jean Buridan is explicit on this point in (Buridan, 1965): sign. d 5th: "Omnis propositio est
contingens." ("Every proposition is contingent"). John Dorp adds in his commentary (ibid: sign. d
5th): "Solus Deus est necessarius. ... Ex quo sequitur...nulla propositio saltem creato est necessaria
quia quaelibet talis potest non esse. Ex quo sequitur eiam quod capienda ‘contingens’ ut est
differentia entis, quaelibet propositio est contingens." ("Only God is necessary. From which it
follows that no proposition, at least, no created one, is necessary because each such [proposition] can
fail to be. From which it follows also that when interpreting ‘contingent’ as a division of being,
every proposition is contingent.") We must not misinterpret Dorp here. Considered as "beings" or
"things" (res), propositions are contingent entities. He is quite explicit in saying that "contingent" is
a "first intention term" referring to a division or type of being (differentia entis). However,
propositions can be necessary (where ‘necessary’ is now used in its second intention sense) when
they signify a necessary state of affairs: "sed alio modo capiuntur dicti termini ut sunt differentiae
propositionum et prout sunt termini secundae intentionis, et sic ‘necessarium’ est propositio
significans qualiter nescesse est esse." ("But in another sense the terms mentioned [that is, the modes]
are interpreted as divisions among propositions and thus they are terms of second intention, and so
‘necessary’ is a proposition signifying whatever necessarily is [the case].")

proposition exist, then it is possible that ‘George to run is possible’ be false because the subject term would have no reference or supposition. Since apparently our Nominalists thought that the existence of ‘George is running’ is a contingent matter, they believed that composed modal propositions such as ‘George to run is possible’ is contingent.

3.7 The Quantity of Composed Modal Propositions

We now turn to the question: how do we assign truth-values to affirmative composed modal propositions containing quantifiers? Specifically, how do we determine whether John Mair’s example ‘every a being to be God is necessary’ is true or not? Let us look to the work of George of Brussels for some answers.

George of Brussels’ discussion of quantification of composed modal propositions is typical of the Nominalist approach. His view appears in the context of his discussion of the “quantity” of composed modal propositions:

One should know that in composed modal propositions, if there is no quantifying sign taken with the total subject, then the proposition is indefinite. For example, this proposition ‘every man to run is impossible’ is indefinite because this total phrase ‘every man to run’ is the subject and it supposits for such propositions as ‘every man runs’ whether spoken, written, or mental. ... If such a proposition or those similar to it must be made universal, then the expression ‘ly’ must be added to the total dictum with the universal sign (in the neuter gender) preceding this expression. One may of course say the same for the other quantifying signs. Some examples: ‘Every ly every man to run is possible’, ‘Some ly every man to run is possible’, ‘This ly every man to run is possible’, ‘Not ly every man to run is possible’, ‘No ly every man to run is possible’. And one may also apply this to the other modes.\(^{181}\)

\(^{181}\)(Brussels, 1497): fol. xxiv\(^{a}\). Notandum est quarto quod si in modalibus compositis non sumatur aliquod signum quantificans ad totum subiectum, tunc propositio est indefinita. Ut ista ‘omnia hominem currere est impossibile’ est indefinita quia hoc totum ‘omnia hominem currere’ est subiectum et supponit pro talibus propositionibus ‘omnia homo currit’, tam vocalibus tam scriptis quam mentalibus. ... Et si talis propositio vel sibi similis debet fieri universalis, tunc toti dictio debet addi ista dictio ‘ly’ et signum universale neutri generis praecedens illam dictionem, et similiter dicendum de aliis signis quamlibet. Exemplum, ut ‘omne ly omem hominem currere est possibile’, ‘quoddam ly omem hominem currere est possibile’, ‘istud ly omem hominem currere est possibile’, ‘non ly omem hominem currere est possibile’, ‘nullum ly omem hominem currere est possibile’. Et similiter dicendum est de aliis modalibus. See also (Pardo, 1505): fol. cxi\(^{a}\). (St. Mark, 1507): sign. J v\(^{f}\), (Caubraith, 1509): fol. cxxii\(^{v}\)-cxxiii\(^{v}\), and (Enzinas, 1523): fol. xxxiii\(^{v}\).
The view that such sentences are indefinite even when the dictum contains a quantifier within it appears already in Buridan,182 and in Pseudo-Scotus.183 Quantification over sentences appears quite early.184 William of Sherwood apparently rejected such a view.185 Pseudo-Scotus also quantifies over sentences.186

In the cited passage George of Brussels tells us that we must distinguish (i) composed modal propositions in which the quantifiers 'every' and 'some' occur as part of the dictum from (ii) those in which the quantifier is "outside" it, where the quantifier quantifies over the whole dictum insofar as it quantifies over the propositions for which the dictum materially supposits. When, as in case (i), the quantifier is part of the dictum, then the quantifier does not quantify the composed modal proposition because it does not affect the quantity of the the modal proposition in any way. Thus, the proposition 'every man to be running is possible' may appear to be a universal proposition, but it really is not. It is actually "indefinite," that is, it has no explicit quantifier. When, as in case (ii), the quantifier appears outside of the dictum, then the quantifier does affect the quantity of the proposition, and 'every some man to be running is possible' is a universal composed modal proposition.

These Nominalists felt no need to elaborate on the truth conditions of quantified composed modal propositions any more than George does. The reason for this lack of interest seems to be that once George's distinction has been made, then the quantified composed modal propositions may be treated as any other non-

182(Buridan, 1965): sign. d 5\textsuperscript{vb} and (Buridan, 1976): p. 70.

183(Scotus, 1968): p. 310\textsuperscript{a}.


186(Scotus, 1968): ibid. One commentator takes these passages to be evidence that Pseudo-Scotus "über mögliche Welten quantifiziert und damit auch einen starken Begriff von möglicher Welt kennt und verwendet." See (Burkhardt, 1983): p. 282. This reading is not justified. Pseudo-Scotus is not quantifying over possible worlds here, but rather over propositions. Pseudo-Scotus believes, just as Buridan, that the dictum in composed modal sentences supposits materially for its "corresponding proposition."
modal, *de inesse* quantified propositions, and one can turn to the non-modal square of opposition to analyze them.\(^{187}\) Thus, these Nominalists seem to believe that quantification over propositions, which takes place in quantified composed modal propositions, does not entail any more problems than the quantification in *de inesse* propositions over such individual entities such as humans and rocks.

This view of quantification of composed modal propositions may explain why no effort was extended towards giving truth conditions for negative composed modal propositions such as 'no Socrates to be an ass is possible.' One may perhaps determine the truth value of this proposition by first determining the truth value of its affirmative contradictory 'Some Socrates to be an ass is possible'.

### 3.8 Ascent and Descent

One implication of the Nominalist method for assigning truth values to composed modal propositions is that the dictum as a whole comes to be viewed as a single term. For example, John Mair states:

> Perhaps you claim 'a man to be an animal is contingent' is not a proposition, nor is anything similar to it. ... One should respond that this whole dictum ['a man to be an animal'] is understood materially just as one term, and one should fix one's attention on the whole and not on the parts.\(^{188}\)

In the next two sections we will explore some of the implications which Nominalists drew from this point of view. The implications become most obvious in two further general areas of Renaissance modal logic, namely, (1) in the discussions of modal "ascent" and "descent" and (2) in discussions of conversion *quoad dictum* in composed modal propositions. We will briefly have a look at the former in this section, and we will move to conversion in the next.

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\(^{187}\) Pardo, 1505: fol. cvii\(^{a}\). "Et secundum istam...acceptionem datur sensus modalium compositarum, ut in regula tacum est, ut sensus istius 'hominem currere est possibile' est iste 'talis propositione 'homo currit' est possibilis' & possunt fieri universales, particularis, indefinitas, et singulares sicut in figura de inesse." ('And following this interpretation, the sense of the composed modal propositions, as is touched upon in the rule, is given just as the sense of this 'a man to run is possible' is this 'such a proposition "a man runs" is possible' and universal, particular, indefinite, and singular [propositions] can occur just as in the non-modal figure [of opposition]."

\(^{188}\) Mair, 1527: fol. lxvii\(^{b}\). Forte dicis 'hominem esse animal est contingens' non est proposition, nec aliqua similis. ... Respondetur hoc totum capitur materialiter pro uno termino. Ad totum et non ad partes habendus est obtuitus.
Descent, in general,
was the inference of a set of singular propositions from a quantified proposition,
and ascent was the inference of a quantified proposition from a set of singular
propositions.\textsuperscript{189}

Jeronimo Pardo is but one logician of the period who claimed that
although such propositions as "every man to be an animal is necessary" and "every
being to be God is possible" are true, the "descendants" (descendentes) of such
propositions, that is, singular propositions containing an instantiation of one of the
terms of the dictum as their subject, can be false. Pardo considers the descendant
"this man to be an animal is necessary" of "every man to be an animal is necessary",
and decides it is false when one refers to Socrates.\textsuperscript{190} Although it accordingly
remains unclear why Pardo believes "every man to be an animal is necessary" is
true, but "this man to be an animal is necessary" is not, he is quite justified in
thinking that there is no inference or "descent" from the former to the latter. If the
dictum of the first proposition is understood to have material supposition, then this
total dictum functions as a single term. The quantifier 'every' is merely part of an
expression, namely, the total dictum, which is a single term suppositing for a
proposition. Thus, Pardo rightly points out that simply because we see a quantifier
as part of the dictum, we must not assume that it functions as a quantifier usually
does in normal contexts.\textsuperscript{191}

\textsuperscript{189}(Ashworth, 1974): p. 213.

\textsuperscript{190}(Pardo, 1505): fol. cvii\textsuperscript{a}. "Ex hoc patet quod istae propositiones sunt verae 'omnem hominem esse animal est necesse', 'omnem ens esse deum est possible', 'omne animal esse hominem est falsum' ut patet earum sensum explicando. Et si dictatur quod descendentes sunt falsae descendo sub ly 'hominem', nam illa est falsa 'hunc hominem esse animal est necesse' demonstrando Socratem..." ("From this it is clear that these propositions are true 'every man to be an animal is necessary', every
being to be God is possible', 'every animal to a man is false', as is obvious by explicating their
sense. And if it is asserted that the descendents are false when descendint under [the term] 'man',
indeed this is false 'this man to be an animal is necessary' referring to Socrates.") See also (St.
Mark, 1507): sign. J v\textsuperscript{a}-vi\textsuperscript{b}, and (Caubraith, 1509): fol. cxxiii\textsuperscript{a}. The source of this type of view

\textsuperscript{191}(Pardo, 1505): fol. cvii\textsuperscript{b}. See also (Mair, 1527): fol. lxvii\textsuperscript{a}, quoted above, p. 77, and (St.
Mark, 1507): sign. j vi\textsuperscript{b}, who, in responding to the same argument, says "Respondeo quod argumentum prae supponit unum falsum, vindelicet quod ly 'hominem' distribuat, quod est falsum quia ly 'omnem' tenetur materialiter. Modo signum materialiter sumptum non distribuit." ("I respond
that the argument presupposes one falsehood, namely that [the term] 'man' is distributed, which is
false because 'every' is taken materially. A sign understood materially does not distribute.")
Pardo's point may be clarified if we return to the 20th century for a moment and remind ourselves of a famous argument discussed by Willard van Orman Quine. Quine, we recall, made much of the fact that the argument from

9 is necessarily greater than 7

and

the number of planets = 9

to

the number of planets is necessarily greater than 7.

is invalid. Quine's explanation of the invalidity was to claim that modal terms such as 'necessarily' and 'possibly' generate "referentially opaque" contexts. The implications for the application of normally acceptable logical principles to such contexts are profound: we are not allowed to quantify over singular terms occurring in such contexts, nor are we permitted to substitute equivalent expressions (such as 'the number of planets' and "9") for one another in "opaque" contexts.\textsuperscript{192} Quine's recommendation for avoiding such fallacious arguments as the one cited is that we consider the modes to be "semantical" predicates of names of sentences. Thus, if we understand that the expression

'9 is greater than 7'

in

'9 is greater than 7' is necessary

is not a sentence but rather a name of a sentence generated by means of the "single quotation mark" convention, then we will not be tempted to make the mistake of thinking that '9' by itself is a singular term and thus available for quantification and substitution.\textsuperscript{193} The reason for this is, thanks to the convention that expressions occurring within single quotation marks are singular terms, that the logical form of "'9 is greater than 7' is necessary" is 'A is necessary' while that of "'the number of planets is greater than 7' is necessary" has the form 'B is necessary'. Since A is nowhere identified with B, we have no grounds for thinking that 'A is necessary' implies that 'B is necessary,' and the proposition 'the number of planets = 9' is in


turn actually irrelevant to the resulting alleged inference.\textsuperscript{194}

Once we have recalled Quine's views, we may note the similarity it bears
to those of Pardo. By holding that the dictum of

\textit{every man to be an animal} is necessary

has material supposition, Pardo believes that the terms that make up this dictum
occur in an "opaque" context. Thus, the logical form of this proposition is ‘A is
necessary’ while that of

\textit{this man to be an animal} is necessary

is ‘B is necessary’, where, again, there is no reason to believe that $A = B$.

Robert Caubraith offers an example of the failure of modal ascent for
composed modal propositions when discussing an objection to his—that is, the
common--view concerning the truth conditions for composed modal propositions:

It would follow [from my (Caubraith's) view] that this is false: ‘\textit{both (utrumque)
of a pair of contradictory contingent propositions to be true} is possible’ because
the sense is this: this proposition ‘both of a pair of contradictory contingent
propositions are true’ is a possible proposition, which is clearly false. But, that
the original sentence is true is proven thusly. These propositions follow validly
from it: ‘\textit{this member of a pair of contradictory contingent propositions to be true}
is possible’ and ‘\textit{this (other) member of a pair of contradictory contingent
propositions to be true} is possible.’ Therefore, \textit{both of a pair of contradictory
contingent propositions to be true} is possible [is proven true] by ascent and the
total antecedent is true, and thus, so is the consequent.\textsuperscript{195}

Thus, for example, one might "ascend" from the set containing the two
propositions

\textit{‘Socrates is running’ to be true} is possible

and

\textit{‘Socrates is not running’ to be true} is possible

to

\textit{both of these two contradictory contingent sentences to be true} is possible

if the argument of Caubraith's opponent is correct.

\textsuperscript{194}Ibid. p. 172.

\textsuperscript{195}(Caubraith, 1509): fol. cxxiii\textsuperscript{v}. "Sequercur hanc esse falsam ‘utrumque contradictorium
contingentium esse verum est possibile’ cum sensus sit alis: haec propositione ‘utrumque
contradictorium contingentium est verum’ est propositione possibili, qui manifeste falsus est, sed quod
illa sit vera probatur. Bene sequitur ‘hoc contradictorium contingentium esse verum est possibile’ et
‘hoc, etc.’ Ergo utrumque contradictorium contingentium esse verum est possibile, per ascensum, et
totum antecedens est verum, ergo etiam consequens."
Caubraith responds to the objection by conceding that the sentence ‘that both of a pair of contradictory contingents is true is possible’ is false, and then attacking the proof of the opponent showing that it is true because it may not be argued by ascent.

Thus, just as it is not acceptable to make syllogisms under part of the dictum in a composed modal proposition but [it is acceptable to make syllogisms] under the total dictum, so one may not ascend under part of such a dictum but only under the total dictum. The reason is that the dictum in these sentences has a unitary significance and is considered a simple term.\textsuperscript{196}

Caubraith’s opinion here has much in common with the points of view already expressed by Quine and Pardo. Caubraith’s opponent understands the above argument to claim that the propositions

\[ p \text{ to be true} \]

and

\[ \neg p \text{ to be true} \]

ascend to

\[ \text{both } p \text{ and } \neg p \text{ to be true} \]

while Caubraith insists that the dictum ‘\( p \text{ to be true} \)’ be taken as a single term. Thus Caubraith would prefer that we understand the premises of the argument to be

\[ A \text{ is possible, and} \]

\[ B \text{ is possible} \]

which do not imply the original conclusion. Clearly "both" is acting as a quantifier in this argument, so we may conclude that Caubraith is disallowing the application of a rule of inference very similar to universal generalization precisely for the reason that the subjects of sentences containing second intention modes are taken as an inviolate unit (that is, \textit{habens unicam acceptionem}). This example of the failure of modal ascent, coupled with examples of the failure of descent, lead Caubraith to conclude that one may ascend, descend, and syllogize with regard to the total

\textsuperscript{196}Ibid. “Ad secundum conceditur propositionem assumtam esse falsam et ad eius probationem negatur consequentia, nec arguitur per ascensum. Unde sicut non licet syllogizare sub parte dicti in modali composita sed sub totali dicto, ita non licet ascendere sub parte talis dicti sed sub ipso dicto totali et ratio est quia dictum in modali composita unicam habet acceptionem et terminus simplex reputatur.” Cf. (St. Mark, 1507): sign. J vi\textsuperscript{f}.
dictum but not any part of it.197

3.9 Conversion quoad dictum

When we turn to the doctrine of conversion *quoad dictum*, however, we discover that the dictum of composed modal propositions is not as inviolate as the Nominalist views concerning ascent and descent suggest. Renaissance Nominalists championed both conversion *quoad se totam*, in which the mode and the total dictum exchanged positions,198 and conversion *quoad dictum*, in which the terms within the dictum are exchanged.199 Conversion *quoad dictum* clearly requires that there be some way to get inside the dictum, that is, to provide some means to allow inferences which would be appropriate given the apparent logical form of the dictum.

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197Ibid. "Quare sub toto est ascendendum, descendendum, et syllogisandum, et non sub partibus." ("Thus, one should ascend, descend, and make syllogisms under the whole and not under the parts of a dictum.")

198(Brussels, 1496): fol. xcviia-xcixb. "Quae rur utrum propositiones de necessario eodem modo convertantur sicut illae de inesse. ... De compositis potest dupliciter intelligi. Uno modo quod eodem modo convertantur mere de inesse et tunc ad quæstionem dicitur quod non solum propositiones modales de necessario compositae sed universaliter omnes propositiones modales compositae convertuntur quoad se toto sicut illae de inesse. Exemplum ut 'necess est hominem currere, ergo hominem currere est necessa'. ... Dubitatur primo utrum propositiones de impossibili eodem modo convertantur sicut illae de necessario. Ad dubium [dicitur] quod propositiones de impossibili compositae quoad se totas eodem modo convertantur sicut illae de inesse et sicut illae de necessario. ... Dubitatur secundo utrum propositiones de possibili...eodem modo convertantur sicut illae de inesse. Ad dubium dicitur quod propositiones de possibili compositae quoad se totas eodem modo convertantur." ("One might ask whether *de necessario* propositions are converted in the same way as *de inesse* propositions. ... With regard to composed modal propositions [conversion] can be understood in two ways. First, that they are converted in the same way as simple *de inesse* propositions and then it is said to the question that not only composed modal propositions *de necessario* but in general every composed modal proposition is converted with regard to the total (*quoad se totas*) just as the *de inesse* propositions. For example, 'necessary is a man to run, therefore, a man to run is necessary'. ... One might first wonder whether propositions *de impossibili* are converted in the same manner as *de necessario* propositions. To this question it is said that composed *de impossibili* modal propositions with regard to the total (*quoad se totas*) are converted just as the *de inesse* and *de necessario* propositions are. ... Second, one might wonder whether *de possibili* propositions...are converted in the same way as the *de inesse* propositions. To this question it is answered that composed *de possibili* propositions with regard to the total (*quoad se totas*) are converted in the same way.")

199See p. 56.
The usual way suggested to make the logical form of the dictum available for inference seems to go back to Ockham.\textsuperscript{200} George of Brussels explains the general strategy in this passage:

Composed modal propositions may be further understood to convert \textit{quoad dicta}, but composed modal propositions \textit{de necessario} do not, properly speaking, convert, nor is the inference from one composed modal proposition to another sound unless the existence (\textit{constantia}) of the proposition for which the dictum of the conclusion suppositos is given. Further, this kind of argument is not conversion but succeeds because of this rule: if the premise is necessary, the consequent will be necessary, if it is formed. An example is: ‘\textit{a man to be an ass is necessary},’ and this proposition ‘\textit{an ass is a man} exists, therefore ‘\textit{an ass to be a man is necessary}.’\textsuperscript{201}

The rule to which George appeals seems to be:

‘\textit{A to be B is necessary}’ implies ‘\textit{B to be A is necessary}’ only if (i) the propositions ‘\textit{A is B}’ and ‘\textit{B is A}’ exist, (ii) \textit{A to be B suppositos} for ‘\textit{A is B}’ and \textit{B}.


\textsuperscript{201}Ibid.: fol. xcviia-b. “Alio modo potest intelligi quod [modales compositae] convertantur quoad dicta, et illo modo propositiones modales de necessario compositae non proprie convertantur. Nec est consequentia bona ab una propositione ad aliam nisi ponatur constantia propositionis pro qua dictum consequentis supponit, et ille modus arguendi non est conversio sed tenet per istam regulam: Si antecedens est necessarium, consequens erit necessarium si formetur. Exemplum ut ‘hominem esse assinum est necesses, et haec propositio ‘asinus est homo’ est, ergo ‘asinum esse hominem est necesses.’” George does not mention whether composed \textit{de possibili} propositions convert \textit{quoad dictum}, but he does explicitly state that composed \textit{de impossibili} do not so convert (fol. xcix b) ‘quia non oportet si antecedens alicuius consequentiae sit impossibile, quod consequens eiusdem sit impossibile, ut non sequitur: omne ens esse lapidem est impossible et ista propositio ‘lapis est ens’ est, ergo lapidem esse ens est impossible, cum antecedens sit verum et consequens falsum.’ (“Because it is not necessary that if the premises of an argument is impossible, that its the conclusion will be impossible, just as it does not follow: \textit{every being to be a stone} is impossible and this proposition ‘a stone is a being’ exists, therefore, \textit{a rock to be a being} is impossible, since the premisses are true and the conclusion is false.”) Compare (Buridan, 1976): p. 73.

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to be A supposit for ‘B is A’, and (iii) ‘A is B’ implies ‘B is A’.\textsuperscript{202} The conflict between George’s view concerning conversion \textit{quo ad dictum} and the common opinion concerning modal ascent and descent is obvious. Since ‘every human is an animal’ implies ‘Socrates is an animal’ then it follows from George’s rule (and the assumption that both propositions exist) that ‘\textit{every human to be an animal} is necessary’ should imply ‘Socrates to be an animal is necessary’. But this is precisely the type of descent which is rejected by the Renaissance Nominalist tradition. No Renaissance Nominalist of whom I am aware, however, noticed this conflict.

We have learned in this chapter that Nominalist logicians of the Renaissance believed that composed modal propositions appear in two “canonical forms,” one in which the \textit{dictum} appears as subject and the mode as predicate, and one in which the mode is subject and the \textit{dictum} is predicate. We then discovered that there are two methods for determining the truth and falsity of modal propositions: (1) the method \textit{per officiantes} of the terms, a method which stems from Late-Medieval doctrines concerning the \textit{probatio} of propositions, and (2) the method \textit{per extremorum suppositionem}. The latter method, which determines truth and falsity by means of the supposition of the terms, presupposes the notion that the \textit{dictum} is understood to function as a single term which—as was usually, but not universally, claimed—materially supposit for a presently written, spoken, or thought sentence token. This in turn implied that many composed modal

\textsuperscript{202}That both \textit{dicta} must supposit (not just that of the \textit{consequens}) and that the “conversion” of the \textit{dicta} depends on the real conversion of the propositions for which they supposit is clear from George’s more careful statement of what takes place in conversion \textit{quo ad dicta} for composed \textit{de necessario} propositions (ibid): “Propositiones modales compositae de necessario bene convertuntur posita constantia propositionis pro qua dictum consequentis supponit, et capiendo conversionem pro consequentia qua arguitur a propositione cuius pars, scilicet dictum, supponit pro conversa cum constantia propositionis quae est convertens illius conversae ad propositionem in qua dictum supponit pro convertente, et talis conversio formatur de conversione proprie dicta.” (“\textit{Composed de necessario} modal propositions are validly converted assuming the existence of the proposition for which the dictum of the the conclusion supposit, and by taking conversion [to mean] the implication by which it is argued from a proposition whose part, namely the dictum, supposit for the converse, along with the existence of the proposition which is the converting proposition of this converse to a proposition in which the dictum supposit for the converting proposition, and such a conversion is formed by conversion properly speaking.”) In my statement of the rule, ‘A is B’ would be the so-called “converse” (\textit{conversa}) and ‘B is A’ is the “converting” (\textit{conversens}) proposition.
propositions are contingent because their terms refer to the propositions, which are contingent entities. The view that the terms of composed modal propositions refer or supposit for sentence tokens was consistently applied within the theory of quantification in such propositions, but we found that the theory of conversion conflicts with it. We now turn to an examination of the truth-conditions for divided modal propositions.
Chapter 4

The Truth and Falsity of Divided Modal Propositions

We now turn to Nominalist accounts of the truth and falsity of divided modal propositions. Renaissance Nominalists in general found it a much more difficult task to account for the truth and falsity of divided modal propositions than for the composed propositions. This is evident when one compares the number of pages devoted to the discussion of the truth and falsity of composed modal propositions with that of the divided propositions. Jeronimo Pardo in his Medulla devotes only one folio page (front and back) or 4 columns to the composed modal propositions but 19 folio pages (76 columns) to divided modal propositions. Robert Caubraith in his Quadrupertitum satisfies himself with half a folio page (one and one-half columns) for the composed modal propositions but devotes over 13 folio pages (53 and one-half columns) to divided modal propositions.

Their discussions of the truth and falsity of modal propositions usually proceed in the following way. First, they propose a general rule or rules for determining the truth or falsity of the divided modal propositions and then they consider a large number of possible counterexamples to this rule or rules. Then, in the context of responding to these possible counterexamples, the logicians either propose modifications to the original rules or add further rules. Since it would be impossible to present all the details of all the arguments surrounding all of the counterexamples, we will focus on the main strategies for determining the truth or

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203 One source of these counterexamples seems to be treatises on Sophismata such as (Paul of Venice, 1491).
falsity of divided modal propositions derived from these counterexamples and
devote our attention only to the most important of these.

The general procedure for determining the truth value of the divided
modal propositions will be presented in section 4.1 of this chapter. In sections 4.2
through 4.4 I will consider how the general procedure was applied to certain types
of propositions.

4.1 Reduction to De inesse Propositions

Jeronimo Pardo asserts the main rule for determining the truth value of
divided modal propositions accepted by Renaissance Nominalists:

(Pardo 1) Each divided modal proposition is reducible (that is, its truth can be
made evident) through one or many necessary or contingent, possible or
impossible...non-modal (de inesse) propositions depending on which modes
appear in such a proposition.204

Pardo explains this rule in this way:

Thus, if the proposition contains the mode "possible"205 it must be reduced to one
or many non-modal (de inesse) possible propositions, that is, its truth is revealed
through one or more possible non-modal (de inesse) propositions. Similarly if the
proposition contains the mode 'necessary',206 its necessity is revealed through
one or many necessary de inesse propositions. The same holds for the other
modes.207

The method outlined by Pardo translates or "reduces" the divided modal
proposition into at least one non-modal (de inesse) proposition. Once one has
determined what the relevant non-modal proposition is (or if many are required,
what these are) one then determines whether that non-modal proposition has (or

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204Ibid. "Quaelibet modalis divisa vera est reducibilis (id est, manifestabilis sua veritatis) per
unam vel plures de inesse necessarias vel contingentes, possibiles vel impossibiles...secundum
exigentiam modorum positorum in tali modali divisa."

205He calls such divided propositions "de possibili" propositions.

206Pardo calls such "de necessario" propositions.

207Ibid. "Nam si [propositio] sit de possibili, debet reduci ad unam vel plures de inesse possibiles,
id est, debet sua veritas manifestari per unam vel plures de inesse possibiles. Similiter si sit de
necessario, debet manifestari sua necessitas per unam vel plures de inesse necessarias, et sic de allis
modis."
those non-modal propositions have) the modality which was expressed by the mode in the original modal proposition. Thus, in the divided modal proposition ‘Socrates possibly runs’ one determines what its non-modal or de inesse counterpart is, in this case: ‘Socrates runs’, and whether this non-modal propositions is possible. The procedure results in one or more propositions of the form: ‘p is MOD’, where ‘p’ is non-modal and MOD is one of the four modes. In our example, the result would be “‘Socrates runs’ is possible.” Pardo’s first rule is often reiterated by other Nominalists, and it was clearly the main method for determining the truth and falsity of the divided modal propositions for these logicians.208

When determining the truth value of complex divided modal propositions, however, Pardo and his contemporaries rely a great deal on one particular aspect of Pardo’s first rule: namely, that certain types of divided modal propositions are reduced not only to one de inesse, but to many (plura). Naturally, we would expect Pardo to explain exactly in which cases we should reduce a given proposition to one de inesse and in which cases we must reduce such to many. But since his procedure is to propose rules on a rather piecemeal basis in reaction to counterexamples, Pardo never gives a universal method to determine for every constructible divided modal proposition whether it is reduced to one or to many de inesse propositions.

However, he does propose some rules in order to deal with certain categories of divided modal propositions. Such discussions are generally divided into three parts, one part dealing with divided modal propositions containing the modal terms "necessarily," or "of necessity" (called de necessario propositions), another dealing with divided modal propositions containing the modal term "possibly" or "can" (potesi) (called de possibili propositions), and sometimes a third part concerning divided modal propositions containing the modal term "contingently" understood in its "specific" sense (specialiter capto), that is, in its "two-sided" sense.

Pardo discusses de necessario propositions first (ibid.: fol. cvii2va-cx1vb),

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followed by propositions *de possibili* (cxi\textsuperscript{vb}-cxx\textsuperscript{va}), and then finishes with the propositions *de contingenti* (cxx\textsuperscript{va}-cxx\textsuperscript{iii\textsuperscript{vb}}). John Mair and his students reversed the order of presentation, beginning with *de possibili* propositions and then moving to the *de necessario*. In any case, we will follow Pardo's order and begin with the *de necessario* propositions.

Before looking into the specific rules for determining the truth value of certain types of divided modal propositions, two complications should be considered. First, we should note that Jeronimo Pardo is alone among the Renaissance Nominalists in claiming that one may also determine the truth value of divided modal propositions by "reducing" them to composed modal propositions:

(Pardo 2) every true divided modal proposition is reducible to a true composed modal proposition. That is, its truth can be known by means of the truth of some composed modal proposition.

Pardo in fact claims that this is the "principal" rule for determining the truth value of divided modal propositions, and that the rule we have called "Pardo 1" is derived from this "principal" rule. Indeed, he says, the truth and falsity of the divided modal propositions is known (*eius veritas habet cognosci*) by means of the truth and falsity of the composed. However, none of his contemporaries of whom I am aware defend, attack, or even mention this "Pardo 2." Since our aim is to discover the usual, "common" opinion of these Renaissance Nominalists, and "Pardo 1" was universally accepted, we will consider it the "main rule." Still, since we will be looking at some of Pardo's texts which make reference to "Pardo 2," we will dignify it with its own number. The reader must, however, bear in mind that "Pardo 2" is peculiar to the work of Jeronimo Pardo.

The second complication is that the rules noted so far, as well as those to

\begin{itemize}
\item Pardo appends three short sections to his discussion of divided modal propositions: one concerning the question whether 'true' and 'false' are modal terms (cxx\textsuperscript{iii\textsuperscript{vb}}-cxxv\textsuperscript{va}), a second on divided propositions containing the term 'essentialiter' (cxxv\textsuperscript{va}-cxxvi\textsuperscript{ia}), and a final section on those containing the term 'scitum' ('it is known that') (cxxvi\textsuperscript{ia-b}).

\item (Pardo, 1505): fol. cvi\textsuperscript{va}. "Omnis...modalis divisa vera reducibilis est in modalem compositam veram, id est, eius veritas habet cognosci per veriatur alicuius modalis compositae."

\item Ibid. "Regula principalis de modalibus divisus est haec.... Et ex isto sequitur alia regula quae est ista...."
\end{itemize}
come, only deal with affirmative propositions. The question thus naturally arises, what are we to do with negative propositions, that is, with negations? Robert Caubraith is one of the few among our Nominalists who gives an indication why there is no need for an additional discussion concerning the negative propositions:

With regard to the second article [of my (Caubraith’s) work], in which the discussion of the truth and falsity of the divided modal proposition comes, it should be announced beforehand that such [a proposition] has two forms, namely, the affirmative and the negative, of which the latter must be measured by means of the former, such that whatever is the reason (causa) for the truth of the affirmative proposition, will in any case be the reason for [the falsity] of its negative which contradicts it, just as the reason for the falsity of an affirmative proposition will be the reason of the truth of its negative.212

This seems to offer the reason why Renaissance logicians generally only discuss the truth value of affirmative modal propositions (whether composed or divided). For once we know the general circumstances in which a certain type of affirmative proposition is true, then we know, the view seems to hold, the circumstances in which the negation of such propositions is false. Further, if we know the situations which make the affirmatives false, we will know when the negatives are true. This line of reasoning also seems to explain why de impossibili propositions—that is, divided modal propositions containing the mode “impossibly”—are usually not discussed since their truth value may be determined by means of the well known equivalence rules holding between these and de necessario and de possibili propositions. Thus, the reason (causa) for the falsehood of de possibili propositions can be viewed as the reason for the truth of de impossibili propositions.

212(Caubraith, 1509): fol. cxxiiiib. "Quantum vero ad secundum articulum, in quo veritate et falsitate modalis divisa discutendum venit, praemittendum est talem esse duplicem, affirmativam videlicet et negativam, quorum secunda per primum mensurati debet, sic quod quicumque est causa veritatis affirmativae, causa saltum negativae ei contradicentis erit, sicut et causa falsitatis affirmativae, causa veritatis negativae [erit].” See also (Mair, 1527): fol. lxviiiia.
4.2 *De necessario* Propositions

We now follow Pardo’s order for presenting the way in which the truth values of certain types of *de necessario* propositions are determined. We will turn to the views of other Nominalists where there is a substantial disagreement with Pardo’s approach.

4.2.1 Distributed Subject Terms

Pardo’s first rule concerning *de necessario* divided modal propositions states:

(Pardo 3) in order to determine the truth of propositions *de necessario*\(^ {213} \), whose subject is distributed, it is required that the predicate be said necessarily of each individual for which the distributed term supposits.\(^ {214} \)

An example of a term with distributed supposition is ‘man’ in ‘every man is an animal.’ ‘Man’ in this context (thanks to ‘every’) supposits for all the presently existing men. Pardo then proceeds to inform us how to determine the number of such *de inesse* propositions to which a *de necessario* proposition containing a distributed subject reduces.

It follows that such a proposition...can be reduced to as many *de inesse* necessary propositions as there are individuals under the distributed term.\(^ {215} \)

These rules, in essence, tell us that we must “reduce” divided modal propositions into a *conjunction* of propositions, each conjunct of which has a non-modal, *de inesse* singular proposition as its subject and the mode “necessary” as its

\(^{213}\)These are divided modal propositions containing the mode ‘necessarily’.

\(^{214}\)(Pardo, 1505): fol. cix\(^ {213} \). Sciendum est quod ad veritatem propositionis de necessario, cuius subjectum distribuitur, requiritur quod predicatum dicitur necessario de quolibet singulari pro quo supponit terminus distributus.

\(^{215}\)Ibid. “Ex quo sequitur quod ipsa...habet reduci in tot de inesse necessarias quot sunt singulartaria termini distributi.”
Thus, ‘every being necessarily is’ reduces to
‘Socrates is’ is necessary and ‘Plato is’ is necessary and...and Being$_n$ is’ is necessary.

Pardo decides that this conjunction is false apparently because he holds that the entities referred to by the terms of de necessario propositions must be necessary in the absolute sense. More will be said about absolute necessity in Chapter 5 (p. 163) For the present we should note that the only entity which is absolutely necessary, that is, which necessarily exists even if there were nothing else related to it, is God. Thus, Pardo held that the only true affirmative de necessario propositions were those whose terms referred to necessary beings:

every affirmative divided proposition de necessario either of whose terms supposits for a contingent being (that is, a created being) is false and impossible.

Thus, it is clear that this, ‘a man necessarily is animal,’ is false because one being to which necessity is applied, namely ‘animal’, is contingent.

Pardo concludes that ‘every being necessarily is’ is false because at least one of the conjuncts of its reduction (such as ‘Socrates is’) is contingent. A similar argument about a contingent future being shows the falsity of ‘every future being necessarily is a future being.’

216(Ashworth, 1974): p. 208, where she says, "a term with distributive supposition had conjunctive reference, in the sense that the sentence in which it appeared was equivalent to a set of conjoined sentences, each with a singular term in place of the original noun. For instance, 'All men are mortal' is equivalent to 'Man$_1$ is mortal and man$_2$ is mortal and...and man$_n$ is mortal'; and the original sentence is true only if all the conjuncts are true."

217(Pardo, 1505): "Ly 'necessario' autem in modali divisa non potest bene ferri in aliquam rem nisi sit necessaria, etiam necessitate absoluta." ("[The term] 'necessary' further cannot be correctly ascribed to any entity in a divided modal [proposition] unless [that entity] is necessary, and with absolute necessity.")

218(Pardo, 1505): fol. cvii"a. "Omnis propositio modalis divisa de necessario affirmativa cuius alterum extremorum supponit pro re contingenti (puta pro re creat][) est falsa et impossibilis. Ideo patet quod ista est falsa 'homo necessario est animal' quia res super quam fertur necessitas, scilicet 'animal', contingens est." Pardo could have made his point using ‘homo’ as an example of a contingent being, but he probably focusses on ‘animal’ to emphasize that the predicate term must also refer to a necessary being.
4.2.2 Determine Subject Terms

After dealing with divided modal propositions de necessario with distributed subject terms, Pardo turns his attention to such propositions whose subject terms have determinate supposition. An example of a term with determinate supposition is ‘man’ in ‘some man is an animal.’ ‘Man’ in this context (because of ‘some’) supposit for at least one presently existing man. Pardo’s rule for these states:

(Pardo 4) In a similar way, a de necessario proposition whose subject supposit determinately requires for its truth that its predicate necessarily be said of some individual under the subject.219

Thus, Pardo says, ‘a man necessarily is an animal’ is false because ‘animal’ is not said necessarily of any single man.220 In other words, just as a proposition containing a subject term with distributed supposition may be interpreted as a conjunction of propositions, so a proposition containing a term with determinate supposition may be interpreted as a disjunction of propositions, each of whose subjects is a de inesse proposition containing a singular term referring to an individual falling under the original determinately supposing term. So, we reduce the divided proposition ‘a man is necessarily an animal’ to

‘Socrates is an animal’ is necessary or ‘Plato is an animal’ is necessary or ... or “Person, is an animal” necessary.’

Both of Pardo’s rules 3 and 4 are assimilated, and often combined, by later Nominalists. For example, we find in Antonio Coronel:

For the truth of a de necessario affirmative proposition in which the mode is not negated it is necessary and sufficient that some of its non-modal (de inesse) propositions be necessary if it is indefinite. If, however, it should be universal, then it is necessary and sufficient that every one of its non-modal (de inesse) propositions be necessary.221

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219Ibid. cix“a. “Similiter propositio de necessario cuius subiectum supponit determinate requirit ad eis veritatem quod predicatum necessario dicatur de aliquo singulari subjecti.”

220Ibid. “Ideo ista est falsa ‘homo necessario est animal’ quia ‘animal’ de nullo homine singulari dicitur necessario.”

221(Coronel, 1517): sign. g v“a. “[A]d veritatem propositionis de necessario affirmativa in qua modus non negatur requiritur et sufficit quod aliqua eius de inesse sit necessaria si indiffinita. Si autem fuerit universalis, requiritur et sufficit quod quaelibet eius de inesse sit necessaria.”
Robert Caubraith,²²² and Ferdinandus de Enzinhas,²²³ reiterate this rule.

4.2.3 Past and Future

The next rule indicates how the truth and falsity of divided modal propositions containing past tense or future tense verbs (such as ‘Adam necessarily was a being’ [Adam necessario fuit ens]) are to be determined:

(Pardo 5) Divided modal propositions, when the modes are joined to verbs of the past or future tense, first must be reduced to propositions of the present tense while keeping the modes the same, and after that they must be reduced to de inesse propositions.²²⁴

Thus, ‘Adam necessarily was a being’, is first reduced to ‘Adam necessarily is a being’, whose de inesse is ‘Adam is a being’. ‘Adam is a being’ however is a contingent proposition, so ‘Adam necessarily was a being’ is false.²²⁵

Robert Caubraith points out that ‘Adam was’ was sometimes thought to be a necessary proposition because of the rule that “every true affirmative proposition about the past is necessary.”²²⁶ Pardo however refuses to concede that

²²²(Caubraith, 1509): fol. cxxxivᵃᵇ.
²²³(Enzinhas, 1523): fol. xxxiiiᵃᵇ
²²⁴(Pardo, 1505): fol. cviiiᵇ. "Modales divisae quando modi iunguntur verbis praeteritis aut futuri temporis, primo habent reduci in propositiones de praesenti talibus modis manentibus, et postea illae habent reduci in propositiones de inesse."
²²⁵(Ibid.: fol. cviiⁱᵃᵇ. "Potest dici...quod istius propositionis ‘adam necessario fuit ens’ cognoscibilis est sua veritas non solum penes ly ‘necessario’ sed penes ly ‘fuit’. Ideo primo ipsa habent reduci ad propositionem de praesenti, puta ad istam ‘adam necessario est ens’, et postea ista ‘adam necessario est ens’ habent reduci in istam...’albis propositio est necessaria ‘adam est ens’,’ et sua de inesse debet dari [per] istam: ‘adam est ens’ quae contingens est.” (“It can be asserted...that the truth of this proposition ‘Adam necessarily was a being’ is known not only with regard to ‘necessarily’ but with regard to ‘was’. Therefore, this can first be reduced to a present tense proposition, namely, to this ‘Adam necessarily is a being’ and after that ‘adam necessarily is a being’ can be reduced to this...such a proposition is necessary: ‘Adam is a being’ and its de inesse must be given [by means of] this: ‘Adam is a being’.”)
'Adam necessarily was a being' is true because Adam was a contingent being and thus it is simply false to say of Adam that he necessarily exists or necessarily existed.\textsuperscript{227}

Pardo's view may lead one to conclude that we should simply ignore the tense of verbs in divided modal propositions, which would be a very strange result. However, Pardo accepts (in a modified form) the common opinion (ascribed to Buridan in the margin of Pardo's text) that

Propositions about the past or future are not true unless a proposition about the present corresponding to them was or will be true.\textsuperscript{228}

Thus, the tense of the verbs in a proposition about the past are not ignored; they are pushed into what we would now call the "metalanguage," just like the modes. Thus, 'Socrates ran' is true only if 'Socrates runs' was true. As Pardo himself tells us:

a proposition about the past or the future is said to be true or false in virtue of a proposition about the present. Thus a proposition about the present is called by logicians 'absolutely first' (\textit{simpliciter prima}) because other propositions must be called true or false in virtue of it.\textsuperscript{229}

Robert Caubraith prefers to deal with the proposition 'Adam necessarily was' by first making the well-known\textsuperscript{230} distinction between necessity \textit{per se} and necessity \textit{per accidens}:

\textsuperscript{227}(Pardo, 1505): fol. cviiib. "Respondeo: licet ista propositio communiter soleat concendi: 'adam necesse est fuisse ens', videtur tamen simpliciter neganda [esse] quia quercro quod est illud ens quod importatur cum dico 'adam necesse est fuisse ens'? Aut est ipse adam aut non. Si dicatur quod est ipse adam quod fuit et supra ipsum denotatur ferri necessitas, ergo est falsa. Si dicatur quod non est adam, non posset poni..." ("I answer: although this proposition is usually conceded: 'Adam necessarily was a being', it appears, however, that it should be completely denied because I ask what is this being referred to when I say 'Adam necessarily was a being'? Either it is Adam himself or not. If it is asserted that it is Adam himself who was and necessity is said to belong to him, then ['Adam necessarily was a being'] is false. If it is asserted that it is not Adam, then this cannot be held.") Francisco Suarez agrees with Pardo concerning the contingency of Adam although it is not known whether Saurez ever read Pardo. See (Craig, 1988): p. 215.

\textsuperscript{228}ibid.: fol. lxxiiiav-cvb. "Propositiones de praeterito vel futuro non sunt verae nisi propositio de praesenti eis respondens fuit vel erit vera."

\textsuperscript{229}ibid.: fol. lxxvib. "Propositio de praeterito vel futuro dicitur esse vera vel falsa ratione propositionis de praesenti, unde propositio de praesenti vocatur a logicos simpliciter prima quia ratione eius aliae propositiones habent dici verae vel falsae." This view probably has its source in Ockham. See (Ockham, 1974b): pp. 269-270.

'Necessary' is understood in two ways (when this noun is viewed second intentionally). In one way [it is understood as standing] for "necessarily per se" and is a necessary proposition, not falsifiable, referring to a state of affairs which cannot be otherwise than is signified by this proposition. In another way ['necessary' stands] for "necessarily per accidens" and is a proposition referring to a state of affairs which cannot now be nor similarly could be in the future otherwise than is signified by this proposition. [That state of affairs] however, could have been otherwise [i.e., in the past].

Thus, Caubraith suggests these two notions of necessity:

$p$ is necessary per se if and only if the state of affairs signified by $p$ cannot (non potest) be otherwise.

$p$ is necessary per accidens if and only if the state of affairs signified by $p$ cannot now (nunc non potest) be otherwise and it cannot be otherwise at any future time.

The main difference between the two types of necessity is that per accidens is temporally indexed to the present and future while per se necessity is not so restricted. Thus, ‘George Bush won the election on November 3rd, 1988’ is per accidens necessary since it cannot now fail to be the case that George Bush won the election nor can this fail to be the case at any future moment. The doctrine is based on the idea that once past events have taken place, they cannot be undone by any created being and perhaps cannot be undone even by God, and thus are necessary after they occur. However, before November 3rd, 1988, it was possible (although unlikely, it seems in hindsight) that George Bush had lost the election. Thus, this event is contingent per se. Per se necessary propositions refer to states of affairs which cannot ever be changed or "be otherwise" no matter what time it is. Thus, ‘God exists’ would be the best example of a per se necessary proposition from the perspective of the Late Scholastics.

After making these distinctions, Caubraith points out that some have claimed that ‘Adam necessarily was’ is indeed false. However, whether its $de$

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231 (Caubraith, 1509): fol. cxxxviii. "'Necessaria' dupliciter capitur (secunde intentionaliter capio vocabulo). Uno modo pro necessario per se et simpliciter, et est propositione necessaria non falsificabilis sic se habens quod non potest dari alter quam per illam significatur. Alio modo pro necessaria per accidens et est propositione sic se habens quod nunc non potest esse nec similitur in futurum poterit esse alter quam per illam propositionem signifcetur. Potuit tamen alter fuisset."


233 Celaya holds a view similar to the one Caubraith presents here at (Celaya, 1515): sign. O ii.
inesse ‘Adam was’ is necessary or not depends on whether one means per se necessity or necessity per accidens. ‘Adam was’ is not necessary per se or simpliciter. It is, however, necessary per accidens because before Adam was created, it was possible for him not to be, and it is possible that the state of affairs which ‘Adam was’ represents to have "been otherwise". But, now and in the future, it is necessary that Adam was. People who take this position further hold that ‘Adam necessarily was’ is false, if ‘necessarily’ expresses per se necessity. However, if ‘necessarily’ asserts per accidens necessity, then this position would hold that ‘Adam necessarily was’ is true.234

Caubraith himself presents the following argument against this solution:

Adam at some time possibly was not.

Therefore, Adam possibly was not.

The premise holds, he claims, because when we consider a time at which Adam did not exist, Adam possibly was not since (clearly) he would not have been at that time. From the stated conclusion, he derives a further one:

Adam possibly was not.

Therefore, Adam not-necessarily was.

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234(Caubraith, 1509): ibid. "Respondetur...distinguendo minorem [quod est, "‘Adam fuit’ est necessaria”]: vel quod sit necessaria simpliciter et sic negatur vel per accidens et sic conceditur. Primum requiritur ad illius modalis [id est, ‘Adam necessario fuit’] veritatem saltem si ly ‘necessario’ dicit necessitatem simpliciter dictam. ("It is answered...by distinguishing the minor [which is "‘Adam was’ is necessary”]: which either is necessary absolutely (per se) and thus it is denied, or it is necessary per accidens and thus is conceded. The former [i.e., that ‘Adam was’ is necessary per se] is required for the truth of the modal proposition [‘Adam necessarily was’] at least if ‘necessarily’ asserts necessity absolutely speaking.")
which contradicts the earlier attempted solution.\textsuperscript{235}

Caubraith thus denies that ‘Adam necessarily was’ is true. Its truth requires, he believes, more than that its non-modal (\textit{de inesse}) counterpart now be necessary \textit{per accidens}. Its truth, he claims, also requires that as often as the \textit{de inesse} had been formed, it would have been necessary \textit{per accidens}.\textsuperscript{236} Thus, ‘Adam necessarily was’ is false, it seems, since the \textit{de inesse} ‘Adam was’ apparently could\textsuperscript{237} have been formed or thought (perhaps by God?) before Adam existed, when it was "still" possible that there be no Adam.

\textsuperscript{235}\textit{Ibid.} "Contra quod tamen sic arguo: adam possibiliter non fuit, ergo adam non necessario fuit. Antecedens est verum ergo et consequens, quod suae contradictoriae falsitatem concludit et per consequens principale intenunt. Veritas tamen ipsius antecedens probatur: Adam aliquo tempore possibiliter non fuit ergo adam possibiliter non fuit. Assumptum patet quotidian hoc tempore (tempus in quo non fuit demonstrando) possibiliter non fuit cum in eo non fuerit, et consequentia principalis videtur tenere." ("Against which however I argue in this way: Adam possibly was not, therefore Adam not necessarily was. The premise is true therefore the conclusion is, too, which proves the falsity of the conclusion and thus what we wanted to prove. However, the truth of its premise is shown: Adam at some time possibly was not, therefore, Adam possibly was not. The assumed [premise] is obvious because at that time (referring to a time at which he was not) Adam possibly was not since at that time he will not have been, and the principal implication seems to hold.")

\textsuperscript{236}\textit{Ibid.} "Quare aliter respondeo, hanc negando 'adam necessario fuit'. Nec ad eius veritatem in illo sensu sufficit quod de inesse illius nunc sit necessaria per accidens, sed requiritur quod nunc sit necessaria per accidens et cum hoc quod quotiens fuisset formata, fuisset necessaria per accidens secundum talem significationem." ("Thus I answer in a different fashion, by denying this: ‘Adam necessarily was’. Nor is it sufficient for its truth in this sense that its non-modal counterpart now be necessary \textit{per accidens}, but it is required that it now be necessary \textit{per accidens} and along with this that whenever it had been formed, it had been necessary per accidens in accordance with this meaning.")

\textsuperscript{237}Caubraith’s use of the "contrary to fact" or "unreal" conditional in "quotiens fuisset formata, fuisset necessaria per accidens" (quoted in the previous footnote) seems to indicate that the \textit{de inesse} need not actually have been formed, but only that it be possible that it had been formed. Thus, Caubraith is not claiming that someone in the past before Adam was created actually formed, said, thought, or wrote the proposition "Adam was".
4.2.4 Connotative Terms

Pardo's next rule deals with *connotative terms* in the predicates of *de necessario* propositions. We turn to the work of George of Brussels to learn what the Renaissance Nominalists understood by the phrase 'connotative term'. Connotative terms are opposed to "absolute terms," and George of Brussels begins by defining the latter:

Absolute terms are terms which are essentially predicated of a pronoun referring to (*demonstrante*) that for which the term suppositis. And these do not extrinsically or intrinsically connote anything with regard to the essential and formal meaning.238

Examples of absolute terms, George says, are 'man,' and 'animal'.239 George includes the phrase "with regard to the term's essential and formal meaning" in order to include terms in the oblique grammatical cases of Latin whose nominative forms are absolute terms.240

Connotative terms, however, are terms which do bring in something extrinsically or intrinsically with regard to the term's essential or formal meaning, such as 'white', 'black', 'rational', 'sensible', etc.241

There are two types of connotative terms: (1) essential connotative terms and (2) accidental connotative terms.242 Essential connotative terms are terms which are predicated essentially of a pronoun referring to that for which the terms

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238 (Brussels, 1497): fol. cxxxiv. "Termini absoluti sunt termini qui praedicantur essentiale de pronominis demonstrantibus illud pro quo supponunt, et non connotant aliquid de sua significatione essentiali et formali, extrinsecus vel intrinsecus."

239 Ibid. "...ut iste terminus 'homo', [et iste] 'animal'."

240 Ibid. "Dicitur notanter de sua significatione formali et essentiali propter obliquos quorum recti sunt termini absoluti, ut iste genitivum 'hominis' et alii obliqui qui...de sua significatione essentiali et formali sunt termini absoluti." ("I said with regard to its formal and essential meaning because of [terms] in the oblique cases of which the nominative case are absolute terms, as, for example, the genitive 'of man' and other [terms] in the oblique case which...with regard to their formal and essential meaning are absolute terms.")

241 Ibid. "Sed termini connotativi sunt termini qui de sua significatione formali et essentiali...aliquid extrinsecus vel intrinsecus, ut 'album', 'nigrum', 'rationale', 'sensibile', etc."

242 Ibid. "Unde terminorunm connotativorum quidam sunt termini connotativi essentiales et quidam sunt termini connotativi accidentales."
supposit and "with regard to the formal and essential meaning bring in something intrinsically but not extrinsically, such as 'rational', 'sensible', etc." 243 Accidental connotative terms are terms which are predicated accidentally of a pronoun referring to that for which the connotative terms supposit, but they "connote something extrinsically of the formal and essential meaning beyond that for which they [the connotative terms] supposit, such as 'white', 'hot', 'cold', etc." 244

Thus, when an absolute term such as 'man' is predicated of a pronoun referring to a man (such as the pronoun 'this' in 'this is a man', assuming that it refers to, say, Dan Quayle), it only "brings in" or "imports" one meaning with regard to this subject. When a connotative term is predicated of a pronoun, such as 'this', which refers to an individual man, there are two cases. First, there is the case where one predicates a term of this pronoun which is "essential" to the man pointed out, and this term brings in some secondary meaning which is "intrinsic" to the man referred to. So, an example of such an "essential" connotative term would be 'rational' in 'this is rational'. The second case of connotative terms holds when one predicates a term of Dan which is "accidental" to him and which in turn "brings in" or "imports" a secondary meaning. An example of an accidentally connotative term would be 'black' in 'this is black' where 'this' points to Dan Quayle.

Connotative terms, then, always have or "bring in" two meanings while absolute terms only "bring in" one. George of Brussels calls the two imported meanings of a connotative: the "material" and the "formal":

A connotative term has a twofold meaning: namely, the material and the formal. The material meaning of a connotative term is the thing (res) for which such a term supposit, and the formal meaning is the thing which such a term brings in or imports beyond the material meaning. For example, the material meaning of the term 'white' is the thing in which the white is, and the formal meaning is the

243 Ibid. "Termini connotativi essentiales sunt termini qui praedicantur essentiale de pronomine demonstrante illud pro quo supponunt, et de formalis et essentiales significations important aliquid intrinsecce et non extrinsecce, ut 'rationale' et 'sensibile', etc."

244 Ibid. "Sed termini connotativi accidentales sunt termini qui praedicantur accidentaliter de pronomine demonstrante illud pro quo supponunt et connotant aliquid extrinsecce de formalis et essentiales significations ultra illud pro quo supponunt."
Finally, we may state Pardo's next rule:

(Pardo 6) When a connotative term appears in the predicate (that is after the copula) in a de necessario proposition, the necessity is said to be carried in the thing (res) for which the connotative term supposits just as much as in its connotation. Therefore, two conditions must be met for such a proposition to be true. First, there must be a necessary union of that for which the predicate supposits with that for which the subject supposits. Second, the necessary union of that connoted by the connotative term with that for which the subject supposits.

It follows from this rule, Pardo claims, that no affirmative de necessario proposition is true in which the predicate connotes a contingent being. Thus, the affirmative de necessario proposition 'God necessarily is creating' is false because 'creating' connotes a contingent being, and Pardo surprisingly believes that 'creating' connotes the creatures created by a creating being. So, Pardo does not deny 'God necessarily is creating' because 'creating' connotes God's presumably contingent act of creating the world (which he admits is the "common" view); rather, he denies it because 'creating' connotes the contingent creatures created by that act. So, he says, when it is claimed, as it usually is, that 'God necessarily is creating' is false because the act of creating is said to be necessary, it is perfectly acceptable to understand 'act of creating' not for the creating act but for

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creatures. Pardo seems hesitant to ascribe contingency to God’s act of creating perhaps because if the act were contingent, one could not claim that the creating of the world was necessitated by one of God’s necessary attributes, such as His goodness or His unbounded love. So, instead, he ascribes the contingency to creatures. However, it is hard to understand how something which necessarily derives from a necessary attribute of God can be contingent.

\[
\text{necessary union}
\]

(1) God  
creating being (i.e., God)  
(material meaning)

\[
\text{necessary union}
\]

(2) God  
created being  
("connotation"  
(formal meaning))

**Figure 4-1: ‘God necessarily is creating’**

Pardo’s interpretation of ‘God necessarily is creating’ is summarized in

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248 Ibid. "Probatur quia necessitas denotatur supra connotatum ferri et supra illud pro quo supponit praedicatum. Sed dictum est quod omnis propositio [de necessario] affirmativa est falsa quando prae dicatum supponit pro re contingenti, ergo similiter omnis propositio affirmativa de necessario est falsa quando connotatum per praedicatum est res contingens. Immo ista est falsa ‘deus necessario est creans’ quia ly ‘creans’ connotat rem contingentem, scilicet creatura a creantem productam, et supra illam denotatur ferri necessitas. Ergo illa propositio est falsa. Immo quando dicitur communiter quod illa est falsa ‘deus necessario est creans’ quia necessitas denotatur ferri supra actum creandi, bonum esset capere ly ‘actum creandi’ non pro creante sed pro creatura." ("This is shown because the necessity is said to be carried by the thing connoted and that for which the predicate supposits. But it was asserted that every affirmative [de necessario] proposition is false when the predicate supposits for a contingent thing, therefore in a similar way, every affirmative de necessario proposition is false when that connoted by the predicate is a contingent thing. So, this is false ‘God necessarily is creating’ because ‘creating’ connoted a contingent being, namely the creature produced by the creating, and necessity is said to be carried by this. Therefore, this proposition is false. Thus, when it is customarily asserted that this is false ‘God necessarily is creating’ because necessity is said to be carried by the act of creating, it would be acceptable to understand "act of creating" not for the creating but for the creature.")
figure 4-1. The two conditions for the truth of an affirmative de necessario proposition are represented in two cases in this figure. Case (1) shows that the first condition is met. There is a necessary union between God and the supposition of ‘creating’, that is, God himself. Case (2) shows that the second condition is not met since God is not in a necessary union with the connotation (formal meaning) of ‘creating’, which Pardo believes is the contingent thing created.

*necessary union*

```
what is or can be creating

God
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Figure 4-2: ‘Creating necessarily is God’

However, Pardo continues, if the connotative term appears as the subject, then the term ‘necessarily’ denotes the necessity of the union of the individual referred to by the predicate with that referred to by the subject. For this reason, ‘creating necessarily is God’ is true because ‘creating’ and ‘God’ both refer to the same thing regardless of the connotation of ‘creating’. Further, ‘creating necessarily is God’ does not claim that God must create, but that the thing (res) which is or can be creating necessarily is God. Pardo’s interpretation of ‘creating necessarily is God’ is illustrated in figure 4-2. Here by the way is an example of ‘necessarily’ ampliating the subject term so that it refers to those things which are in fact creating and those which are able (potest) to create.

Pardo’s was not the only discussion of these propositions. George of

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249Ibid. “Si terminus connotativus ponatur a parte subiecti, ly ‘necessario’ praecise denotat necessitatem unionis rei importatae per praedicatum et rei importatae per subiectum.”

250Ibid. “Ideo tala est harum propositionum differentia ‘deus necessario est creans’ et ‘creans necessario est deus’. Nam ista est falsa ‘deus necessario est creans’ et ista vera ‘creans necessario est deus’. Per eam enim denotatur quod illa res quae est vel potest esse creans necessario est deus.” (“Thus, there is a big difference between these propositions: ‘God necessarily is a creating’ and ‘creating necessarily is God’. In fact, this ‘God necessarily is creating’ is false, and this ‘creating necessarily is God’ is true. By this [latter proposition] it is asserted that this thing, which is or can be creating, necessarily is God.”)
Brussels in fact was famous among the Nominalists working in the early 16th century for his views concerning this proposition 'God necessarily is creating'. He like Pardo believed that 'God necessarily is creating' is false but that 'creating necessarily is God' is true. However, he explains the difference in a different way. His remarks are rather obscure on the topic, which is perhaps part of the reason for the many comments on them. In the proposition 'creating necessarily is God', he says, 'creating' supposits for God and is verified through the proposition 'this possibly is creating' (where 'this' presumably refers to God).  

In 'God necessarily is creating', however, 'creating' does not supposit for God. Although 'this (referring to God) is creating' is true, its truth is not enough to make 'God necessarily is creating' true. What would suffice, George claims, is the truth of 'this necessarily is creating'.

What George may have in mind here is that 'creating necessarily is God' is true just in case there is some individual x such that

\[ x \text{ possibly is creating and } L(x \text{ is God)}, \]

where 'L' means 'it is necessary that'. But 'God is necessarily creating' is true if and only if there is an individual x such that

\[ x \text{ is God and } L(x \text{ is creating and } x \text{ is possibly creating}). \]

I have construed the latter conjunct of the second proposition in this way because of George's remark that 'creating' is amplified "copulatively" instead of "disjunctly" as we have come to expect. Thus, he may be thinking that the second proposition is false because it asserts that God necessarily creates instead of claiming, as his discussion of ampliation in Chapter 2 implied, that it is necessary that either God is

\[ 251 \text{(Brussels, 1497): fol. cxvii. "Immo in ista propositione 'creans necessario est Deus' ly 'creans' supponit pro deo et sic verificatur 'hoc possibiliter est creans'."} \]

\[ 252 \text{Ibid, "Sed in ista 'deus necessario est creans' ly 'creans' non supponit pro deo. Alias illa esset vera. Et licet haec sit vera 'hoc (demonstrato deo) est creans', tamen non sufficit illa verificatio quia a parte praedicati ly 'creans' ampliatur copulativus et non disjunctive. Ideo debet sic fieri verificatio 'hoc necessario est creans'.' ("But in this 'God necessarily is creating', 'creating' does not supposit for God. Otherwise [this proposition] would be true. And although this is true 'this (pointing to God) is creating', however the truth of this not sufficient because in the predicate 'creating' is amplified copulatively but not disjunctively. Thus its truth must come about so: 'this necessarily is creating'.") George's claim that 'creans' is amplified copulative but not disjunctive is not consistent with his earlier presentation of ampliation. See Chapter 2, p. 49.} \]
creating or that it is possible for God to create. Here there seems to be an assumption that possibilities are themselves necessary.

Robert Caubraith interprets George of Brussels as saying that the term preceding the copula modified by ‘necessarily’ must be verified by means of the term ‘possibly’, but that the term following the copula first must be verified by ‘necessarily’.253 Apparently, then, we are to interpret George as holding ‘God necessarily is creating’ to be equivalent to ‘that which is possibly God is necessarily creating’ and ‘Creating necessarily is God’ to ‘that which is possibly creating is necessarily God’.

Pardo also interprets George’s view in this way. He concludes that George wants to understand ‘creating necessarily is God’ as ‘creating possibly is necessarily God’. Pardo then quite correctly wonders whether the term ‘possibly’ is also to be taken as modifying the predicate since George insists that the term ‘necessarily’ in ‘creating necessarily is God’ does so. If so, he infers quite appropriately that this process leads to an infinite regress because the sense of ‘creating possibly is necessarily God’ would be, it seems, ‘creating possibly is possibly necessarily God’.254 Unfortunately, none of the later Nominalists pursues or even seems to be aware of Pardo’s telling remarks here.

Robert Caubraith claims that the "common" view holds that both the term following and that preceding a copula determined by the mode ‘necessarily’ are to be verified by means of the term ‘possibly’. Caubraith himself supports this

253(Caubraith, 1509): fol. cxxvi.iii. "Tenet Georgius bruxellensis (in suis Summulis) terminum praecedentem copulam determinatum per ly necesse deberi verificari mediante posibilitur, sed terminum sequentem priusquam oportet mediante eadem determinazione verificari."

254(Pardo, 1505): fol. cxv.b. "Si dicatur quod non debet sic dari sensus sed isto modo creans posibilitur est necessario deus, consta iterum quarem de ly posibilitur an se teneat a parte praedicati et tunc quarem sensum. Et sic in infinitum procedetur." ("If it is said that the sense [of these propositions] is not given in this [that is, Pardo’s] way, but in this way ‘creating possibly is necessarily God’, against this I would ask about ‘possibly’ whether it should be taken with the predicate and then I would ask its sense. And so [this process] goes on to infinity.")
view. Consequently, Cau braith seems to advocate interpreting ‘God necessarily is creating’ as ‘what is possibly God necessarily is possibly creating.’

To support this view, Cau braith makes what is a common distinction between particular and universal determinations of the copula. It is "common" because it was often held that whatever is necessary holds for all time, and what is impossible never is the case. But, what is possible and contingent is true for at least some time. Some are particular such as 'possibly', 'contingently', 'sometimes' and under this term 'particular' are included singular determinations such as 'today', 'yesterday', 'tommorrow' and other similar terms. Other determinations are universal determinations such as 'necessarily', 'impossibly', 'always', 'never', of which the first two determine the copula in terms of the union and the latter two in terms of time.

Cau braith next suggests that this distinction supports a further distinction

255 (Cau braith, 1509): fol. cxxiii3b. "Ponitur altera illa communio, quam ad praesens sustentabo, tenens quod terminus sequens compulsum determinatum a ly 'necessario' sicut praecedens non debet verificari medianter 'necessario', sed medianter 'possibiliter'." ("This next [view], which I will for the present support, is more often espoused, holding that the term following a copula determined by 'necessarily', just as [the term] preceding, must not be verified by means of 'necessarily' but by means of 'possibly'.")

256 (Pardo, 1505): fol. cviicvb. "Ly 'necessar' et ly 'impossibile' sunt modi universales qui, quando adduntur verbo connotato tempus, distribuunt ipsum pro quilibet tempore importato per ipsum. Sed ly 'possible' et ly 'contingent' sunt modi particulares et faciunt [verbum] accipi pro omni tempore importato disjunctive." ("'Necessary' and 'impossible' are universal modes which, when added to a verb connoting a time, distribute this for every time referred to by this [verb]. But 'possible' and 'contingent' are particular modes, and they cause [the verb] to stand for all time taken disjunctively."). This latter remark means that 'possible' causes the verb to "connote" at least one time or another. Pardo later rejects this common view and suggests that 'necessary' can be called universal and 'possible' particular in so far as the possible is implied by the necessary: "Ly necessary...dictur modus universalis in ordine ad ly 'possible'. Hoc est quia ad ly 'necessar' sequitur ly 'possible' sed non e contra, quasmodum ad propositionum universalem sequitur indiffinita sed non e contra, et ideo non vocatur modus universalis eo quod habeat aliquam virtutem distribuendii." ("'Necessary'...is called a universal mode in relation to 'possible'. This is because 'possible' follows from 'necessary' but not vice versa just as an indefinite proposition follows from a universal but not vice versa, and therefore ['necessary'] is not called the universal mode because has some power of distributing.")

257 (Cau braith, 1509): fol. cxxiii4b. "Duplex est determinatio copulae: quidam particularis ut 'possibiliter', 'contingentar', 'ali quando' et sub particulari comprehenditur determinatio singularis cuiusmodi sunt 'hodie', 'hieri', 'exas' et similia; alia est determinatio universalis ut 'necessario', 'impossibiliter', 'semper' et 'nunquam', quorum duae primae determinant copulam ratione unionis et duae secundae ratione temporis."
as to how to interpret such terms. The predicate terms of propositions containing copulas determined by particular "determinations" are amplified as called for by the term in question. Thus, terms following a copula modified by 'yesterday' amplify to include entities of the past while those following a copula modified by 'possibly' amplify to possible beings. However, predicate terms in propositions with copulas modified by universal determinations need not be verified by means of these universal determinations, but only by the corresponding particular determination.\textsuperscript{258}

Despite all this learned discussion, Caubraith's response to a rather obvious objection is weak. For it may be objected to Caubraith's interpretation of 'God necessarily is creating' that it entails that this proposition is true because the subject and predicate terms supposit for the same thing. The subject term supposits for what is possibly God (namely God) and the predicate for what is possibly creating.\textsuperscript{259}

Caubraith answers that although the subject and predicate terms do supposit for the same it is further required for the truth of propositions in which a universal determination appears that "the predicate belong (\textit{competere}) to the subject in such a way as is denoted by such a proposition." This does not take place in 'God necessarily is creating'.\textsuperscript{260} Unfortunately, Caubraith never explains why it is that the subject does not belong to the predicate in such a way as is denoted by the

\textsuperscript{258}Ibid. "Ponitur talis conclusio: terminus sequens copulam determinatam determinatione particulari debet verificari mediante copula eodemmodo ampliata, et si sequetur copulam determinatam determinatione universalis...non requiritur quod verificetur mediante illa determinatione, sed sufficit quod possit verificari mediante determinatione particulari correspondente sicut et terminus praecedens." ("I propose this conclusion: the term following a copula determined by a particular determination must be verified by means of a copula amplified in the same way, and if it follows a copula determined by a universal determination...it is not required that it be verified by means of this [universal] determination, but it suffices that it could be verified by means of a corresponding particular determination just like the preceding term.")

\textsuperscript{259}The common assumption seems to be that only God can create. See (Brussels, 1497): fol. clix\textsuperscript{b}. Because of mispagination, this page follows fol. cxlviii. However, in (Caubraith, 1509) at fol. cxxxv\textsuperscript{a} Caubraith entertains the possibility of God "communicating" the act of creating to Socrates.

\textsuperscript{260}(Caubraith, 1509): fol. cxxiii\textsuperscript{b}. "Non sufficit suppositio extremorum pro eodem, sed ultra requiritur praedicatum subjecto taliter qualiter denotatur per talem propositionem competere, quod in proposito non observatur."
proposition. If he means that the subject ‘that which is possibly God’ is not necessarily predicated of ‘that which possibly creates’, then he seems to entertain the possibility that it be impossible (not just false) that God create. No late Scholastic would accept such a result.\textsuperscript{261}

4.2.5 Impossible Subject Terms

Pardo’s next rule deals with problems surrounding \textit{de necessario} propositions containing a subject term that cannot supposit or refer. The problem appears when we wonder whether the proposition ‘a chimera necessarily is to be an animal’ is true or false. Pardo makes use of his rule "Pardo 2" to conclude that it would be reduced to the composed modal proposition: ‘\textit{a chimera to be an animal} is necessary’. This, he says, is "clearly" false, perhaps because, as Pardo would say, there cannot be a necessary union of that referred to by the term ‘chimera’ and that referred to by ‘animal’ because ‘chimera’ never refers. In logic texts of the day a ‘chimera’ was any impossible "entity." A more recent example would be the "round square."\textsuperscript{262}

However, Pardo continues, there are good reasons to think that ‘a chimera necessarily is to be an animal’ is actually true. Specifically, its contradictory ‘a chimera possibly is not to be an animal’ happens to be false, thus ‘a chimera necessarily is to be an animal’ must be true. The proposition ‘a chimera possibly is not to be an animal’ is false because it is an affirmative proposition whose subject term does not supposit.\textsuperscript{263}

\textsuperscript{261}Even in the aforementioned case where God communicates the act of creating to Socrates, surely it is at least possible for God to have created everything since is it possible that He had not communicated the act of creating to Socrates and had instead created everything Himself.

\textsuperscript{262}Ibid.: fol. cxv. "Si regula [id est, Pardo 2] esset vera, sequetur quod ista esset falsa 'chimeram necesse est esse animal'. Consequentia est nota cum illa non sit reducibilis in modalem compositam veram."

\textsuperscript{263}Ibid. "Sed falsitas consequentis ostenditur quia sua contradictoria est falsa, ergo ipsa est vera. Antecedens patet quia sua contradictoria est ista 'chimeram possible est non esse animal' et illa est falsa, igitur. Maior conceditur communiter a logicis...sed minor probatur quia illa est una affirmativa cuius subjectum pro nullo supponit, igitur est falsa."
In his attempt to solve this problem, Pardo informs us (without naming names, unfortunately) that the quality of this proposition 'a chimera possibly is not to be an animal' is in doubt among logicians. Propositions, of course, have one of two qualities in traditional logic: they are either affirmative or negative, and the truth of 'a chimera possibly is not to be an animal' depends on which quality we think it has.

Most logicians, Pardo believes, are of the opinion that 'a chimera possibly is not to be an animal' is negative because a proposition is affirmative or negative depending on whether its "principal copula" is affirmative or negative. The "principal copula" is that "according to whose force (exigentiam) the extreme terms [that is, the subject and predicate] are united with one another." These logicians seem to believe that the phrase 'to be' in 'a chimera possibly is not to be an animal' is the principal copula. Since 'to be' is negated, the quality of the proposition is negative.

Pardo, however, thinks there is one way in which one can claim that 'a chimera possibly is not to be an animal' is affirmative and false and yet also claim that its negation is false. To show this, he offers two rules:

(Pardo 7a) First proposition: these modes 'necessary', 'possible', etc., when added to the copula, denote the possibility, or impossibility, etc., of the union

\[\text{Ibid. "Pro solutione scidendum est quod dubium fuit apud logicos de qualitate istius 'chimeram possibile est non esse [animal]."}\]

\[\text{Ibid. "Ex diversa determinatione de qualitate illius dicendum est diversimode de eius veritate aut falsitate."}\]

\[\text{Ibid. "Unde quantum ad hoc videtur esse communis sententia logiconum ut illa sit negativa, cuius fundamentum videtur esse istud: quia secundum affirmationem vel negationem copulae principalis denominanda est propositio affirmativa vel negativa. Copula autem principalis est illa secundum cuius exigentiam extrema uniuntur adinvenem. Sed sic est quod secundum cuius exigentiam de ly 'esse' illa extrema uniuntur adinvenem. Ergo ly 'esse' est copula principalis, et cum ly 'esse' negatur, sequitur quod illa est negativa." ("Thus with regard to this it seems to be the common opinion among logicians that this is negative, the reason for which seems to be this: because a proposition should be called affirmative or negative according to the affirmation or negation of its principal copula. Further, the principal copula is that according to whose force the extreme terms are united with one another. Therefore, 'to be' is the principal copula, and since 'to be' is negated, it follows that this is negative.")}\]

\[\text{Ibid. "Aperio tamen unam viam secundum quam posset concedi quod ista sit affirmativa 'chimeram possibile est non esse animal'."}\]
referred (importatae) to by this copula.\footnote{Ibid. "Prima propositione: illi modi 'necessae', 'possibile', et cetera additae copulae denotant possibilitatem vel impossibilitatem et cetera unionis importatae per illam copulam."}

\textbf{(Pardo 7b)} Second proposition: Such modes do not denote the mode of the union denoted by some copula unless it is immediately united with this copula.\footnote{Ibid. "Secunda propositione: tales modi non denotant tales modum unionis praedictum denotari per aliquam copulam nisi immediate uniantur illi copulae."} So, the 'possibly' in 'a chimera possibly is not to be an animal' does not denote a possible union through 'to be' since it does not appear next to 'to be'. On the contrary, it denotes a possible union through 'is'. Pardo concludes that 'a chimera possibly is not to be an animal' is false since it asserts that a chimera possibly is that which is not an animal and further it is an affirmative proposition whose subject term does not supposit.\footnote{Ibid: fol. cx\textsuperscript{b}-va. "Ex qua propositione [Pardo 7b] sequitur quod dicendo 'chimeram possibile est non esse animal', ly 'possibile' non dicit possibilitatem unionis importatum per ly 'esse' cum non addatur immediate ad ly 'esse' sed denotat possibilitatem unionis denotatam per ly 'est'. ... Et ultra sequitur quod ista est falsa 'chimeram possibile est non esse animal' cum per eam denotet quod chimera possibiliter est id quod non est animal. Ideo concedetur istam propositionem esse affirmativam falsam 'chimeram possibile est non esse animal'." ("From which proposition [Pardo 7b], it follows that by asserting 'a chimera possibly is not to be an animal', 'possibly' does not assert the possibility of the union referred to by 'to be' since it is not added directly to 'to be', but it does express the possibility of the union expressed by 'is'. And it finally follows that this is false 'a chimera possibly is that which is not an animal' since it is asserted by this that a chimera possibly is that which is not an animal. Therefore, it should be conceded that this proposition is a false affirmative [proposition]: 'a chimera possibly is to be an animal'.")}

To anyone who argues that its contradictory 'every chimera necessarily is to be an animal' is affirmative and false, and thus 'a chimera possibly is not-to be an animal' (chimeram possibile est non esse animal) is negative and true, Pardo answers that the correct contradictory of the first is 'a chimera possibly is-not to be an animal' (chimeram possibile non est esse animal).\footnote{Ibid. fol. cx\textsuperscript{b}-va. Et si arguatur sua contradictoria est affirmativa et falsa, scilicet ista 'ommem chimeram necessae est esse animal. Ergo ista est negativa vera. Respondeo contradictoria istius 'ommem chimeram necessae est esse animal' est ista 'chimeram possibile non est esse animal.'} Thus, the contradictory of 'a chimera necessarily is to be an animal' must deny that a necessary union exists between 'a chimera' and 'to be an animal'. The proposition 'a chimera possibly
is-not to be an animal' states this exactly, Pardo claims.\textsuperscript{272}

4.3 \textit{De possibili} Propositions

We now turn to divided modal propositions containing the mode ‘possibly’, that is, to "\textit{de possibili}" modal propositions. As with the \textit{de necessario} propositions, the method for determining the truth value of \textit{de possibili} propositions depends upon the modal character of their non-modal (\textit{de inesse}) counterparts. That is, their \textit{de inesse} counterparts must be possible in order for the \textit{de possibili} propositions to be true. As before, difficulties arise in the application of this conception which generate many supposed counterexamples.

4.3.1 \textit{Ratio Impossibilis}

Pardo’s first rule for \textit{de possibili} propositions states:

\textbf{(Pardo 8)} One should know (as discussed in the principal rule [Pardo 1]) that the possibility of the union of the terms is required for \textit{de possibili} propositions to be true. From which it follows that no affirmative proposition \textit{de possibili} is true when any term carries an impossible aspect [\textit{rationem impossibilem}]. The reason for this is that, as I just said, the possibility of the union of the terms is required for such propositions to be true, but among impossibles such a union is impossible.\textsuperscript{273}

Thus, in the case of \textit{de possibili} propositions, one has to be on the look out for an "impossible aspect" (\textit{ratio impossibilis}) when one tries to determine the truth of such propositions when investigating their \textit{de inesse} propositions. For example, ‘Socrates possibly is when he is not’ is false, Pardo believes, because

\textsuperscript{272}Ibid. "Et ex hoc potest confirmari propositionum quia cum dico ‘chimeram necesse est esse animal’ primum est affirmatur, ergo in dando contradictoriam debet negari maxime cum ly ‘necesse’ denotet necessitatem unionis importatam per ly ‘est’. Ideo sua contradictoria debet esse ista ‘chimeram possibile non est esse animal’.”

\textsuperscript{273}Ibid.; fol. cxii\textsuperscript{b}. “Scendendum est quod, ut dictum est in regula principali, ad veritatem propositionis de possibili requiritur possibilitas unionis extemorum. Ex quo sequitur quod nulla propositio de possibili affirmativa est vera quando aliquod extemorum importat rationem impossibilem, cuius ratio est quia, ut praeclicium est, ad veritatem talis propositionis requiritur possibilitas unionis extemorum, sed inter impossibilita impossibilis est talis unio.”
the predicate brings in an impossible aspect, namely this predicate ‘being when he is not’ (ens quando non est), because this proposition ‘this is a being when it is not’ is impossible when said of anything whatsoever. Thus possibility does not truly belong to that which is a being when it is not.274

4.3.2 One and Many

Pardo’s next rule for de possibili divided modal propositions reveals that, just as in the case of de necessario propositions, some de possibili propositions are reduced to only one de inesse while others are reduced "to many" (plura). For example, one reduces to many de inesse in case the de possibili contains a conjunction, as in ‘Socrates possibly is and possibly is not’:

It should be pointed out how a divided modal proposition in which there appears some conjunction is reduced to a possible de inesse proposition. Here is the basic rule for this: (Pardo 9) every divided de possibili modal proposition in which a single possibility of the union of the terms is denoted should be reduced (that is, made manifest) with regard to its truth or falsity by means of one proposition de inesse. This is proven because in order to make manifest the single possibility of the union of some terms, it is sufficient to show one union of the terms, thus one de inesse suffices for this.275

However, if a divided modal de possibili proposition denotes several "possible unions,"

it must be reduced through many de inesse. The reason for this is that the many unions of the terms must correspond to the many possibilities of uniting the terms, which will result when we take many de inesse propositions.276

274Ibid.: fol. cxiii1v. "Septimum dubium: utrum ista proposition est vera ‘Socrates possibiliter est quando non est’. Respondeo breviter quod ipsa est falsa quia praedicatum importat rationem impossibilem, puta hoc praedicatum ‘ens quando non est’, quia de quocunque haec est impossibilis ‘hoc est ens quando non est’. Ideo possibilias non vere fertur in hoc quod est ens quando non est."

275Ibid.: fol. cxiii1v. "Ostendendus est modus reductionis modalis divisae de possibili, in [qua] ponitur aliquod copulatum, ad propositionem de inesse possibilium...pro quo sit regula talis fundamentalis: Omnis modalis divisa de possibili in qua denotatur unica possibilitas unionis extremorun reducenda (hoc est, manifestanda) est quoad suam veritatem vel falsitatem per unam propositionem de inesse. Probatur ista proposition quia ad manifestandum uniam possibilitatem unionis aliquorum extremorum sufficit manifestare unam unionem extremorum. Ad hoc autem sufficit una de inesse."

276Ibid. "Si denotarentur plures possibilitates, debet reduci per plures de inesse, cuius ratio est quia pluribus possibilitatibibus uniendi extrema debent correspondere plures uniones extremorum quod fieri dando plures de inesse."
As an example, Pardo returns to the proposition ‘Socrates possibly is and possibly is not’. This is to be reduced to two de inesse propositions ‘Socrates is’ and ‘Socrates is not’ each of which is possible if understood separately (inconiunctim captas). The provision that the de inesse are understood separately (inconiunctim captas) means, as Robert Caubraith tells us, that each de inesse must be possible but they need not be compossible.

Pardo’s next rule tells us how to determine when a divided de possibili proposition denotes one “possibility of the union” of the terms and when one denotes several such possibilities.

You ask how one determines whether a copula denotes many unions or only one. I answer: (Pardo 10) when...the subject supposits for one thing only, then the copula denotes a single union of both that for which the subject supposits and that or those things for which the predicate supposits. When, however, the subject supposits for many things, then ‘is’ denotes many unions, as many, in fact, as there are things for which the subject supposits, and in that case ‘possibly’ expresses the many possibilities of unions denoted by the copula. Therefore, in order to determine the truth of such propositions, one should see if each of these unions is possible. Because if so, the proposition is true; if not, it is false. Furthermore, this results by taking the many de inesse propositions, by which these unions are expressed, separately. And if each of these de inesse propositions is possible, the [de possibili] proposition will be true. If however any is impossible, such a de possibili proposition is false.

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277Tbid. "Verbi gratia, si dicam 'Socrates possibiliter est et possibiliter non est', ibi importantur plurae possibilitates. Ideo debet reduci per plures de inesse inconiunctim captas, videlicet per has duas 'Socrates est', 'Socrates non est', quorum quaelibet est possibilis. Ideo illa ['Socrates possibiliter est et possibiliter non est'] est vera.

278(Caubraith, 1509): fol. cxxiii vb. "Immo omnium tunc possibilitias (licet non illarum compossibilitas) requiritur." ("Therefore, then, the possibility of all [the de inesse propositions] is required, although not the compossibility of them.")

279(Pardo, 1505): fol. cxvib. "Sed quaeres quomodo cognoscetur quod copula denotet pluribus uniones vel unam tantum. Respondeo quando...subjectum supponit pro una re tantum, copula denotat unicam unionem et illius pro quo supponit subjectum et illius vel illorum pro quo vel quibus supponit praedicatrum. Quando autem subjectum supponit pro pluribus rebus, tunc ly 'est' denotat pluribus uniones, tot videlicet quod sunt illa pro quibus subjectum supponit, et tunc ly 'possible' dicit pluribus possibilitates illarum union[um] denotatarum per copulam. Ideo ad veritatem talis propositonis cognoscendum, videndum est si quaelibet illarum unionum sit possibilis. Quia si sic, talis propositio vera est; si non, falsa. Hoc autem fiet dando plurum de inesse seorsum in quibus experimentur illae uniones. Et si quaelibet illarum de inesse sit possibilis, illa propositio erit vera. Si vero aliqua sit impossibilis, talis propositio de possibili est falsa."
Pardo’s illustrates this rule with the proposition ‘God can produce everything producible’, whose "sense" is ‘God possibly is producing everything producible’. He concludes that it is false. The subject refers to only one being, namely God, so the proposition expresses only one union between God and his producing everything producible at once. This is impossible because not every possible thing is composable with every other if produced at the same time. Thus even God apparently cannot produce Socrates sitting and standing at the same time.

But the proposition ‘everything producible can be produced by God’ is true because here the subject supposits not just for one entity (as the subject of ‘God can produce everything producible’), but for many. Thus in accordance with rule (Pardo 10), this proposition expresses many "unions," such as, ‘this producible thing is produced by God’, ‘this producible thing is produced by God’ and so on. Since

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280 Pardo believes that that ‘can’ (potest) plus an infinitive has the same meaning as ‘possibly’ (in the divided sense) plus a finite verb. Thus, ‘George can fish’ is equivalent to ‘George possibly fishes’. See ibid.: fol. cxv b. "In nostro modo loquendi accipimus propositiones in quibus ponitur illud verbum 'potest' loco modalium divisorum de possibili." ("In our manner of speaking we allow propositions, in which this verb 'can' appears, in the place of divided modal de possibili propositions.")

281 Ibid.: fol. cxv b. "Ad propostum applicando 'deus potest producere omnia producibilium', sensus est 'deus possibilitier est producens omnia producibilia' in qua propositione apparat ut non solum subjectum, verum etiam predicatum pro uno sola re supponit, videlicet pro deo. Ideo ly 'est' dicit unionem illorum extremorum adivicem et per consequens ly 'possibilitier' dicit possibilitatem illius unionis. Et per consequens illa est falsa quia habet union de inesse imposibilitatem, scilicet istam 'deus producit omnia producibilia'." ("In applying 'God can produce everything producible' to the proposed [rule], its sense is 'God possibly is producing everything producible' in which proposition it appears as if not only the subject, but also the true predicate supposits for only one thing, namely for God. Therefore 'is' expresses one union of these terms with each other and therefore 'possibly' expresses the possibility of this union. And consequently [the proposition] is false because it has one impossible de inesse, namely this: 'God produces everything producible'.")

282 Ibid.: fol. cxvra-b. "Dubium [est] utrum ista proposition sit concedenda 'deus potest producere omnia producibilium'. Respondo quod ipsa est falsa quod potest declarari quia ly po[test] dicit unicum possibilitatem. Immo denotatur quod sit una possibilitas ad omnia producibilium producenda ita quod sit compossibilitias productionum omnium producibilium pro eodem nunc." ("There is the question whether this proposition should be conceded [as true] 'God can produce everything producible'. I answer that this is false which can be shown because 'can' expresses one possibility. Therefore it states that there is a single possibility of everything producible being produced such that there would be a compossibility of productions of everything producible at the same time.")
all of these are possible when considered as separate possibilities, the original proposition 'everything producible possibly is produced by God' is true.283

4.3.3 Distributed Subject Terms

Pardo's next rule follows up on the last two rules by requiring us to break up a 'divided de possibiliti proposition into as many non-modal (de inesse) propositions as there are individuals (singularia) referred to by a distributed subject.

(Pardo 11) A divided modal de possibiliti proposition must be reduced by means of de inesse propositions expressing the individuals for which such a term is distributed.284

Thus, 'every man possibly climbs in through this window' (where 'this window' refers to a window through which only one man can crawl at a time) is true because each of its non-modal (de inesse) propositions are possible, namely, 'Socrates climbs in through this window', 'George Bush climbs in through this window', and so on for each man who exists or can exist. Hence, Pardo says, the sense of this proposition is "Of whatever (de quocumque)." True to say that that it is or can be a

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283Ibid.: fol. cxvth. "Cum enim dicitur 'omnia producibilia possunt produci a deo', copula denotat plures uniones eo quod subjunctum supponit pro pluribus et quaelibet illarum unionum est possibilis. Ideo illa est vera quia illa reduciur ad plures de inesse seorsum acceptas, videlicet ad has 'hoc producible deus producit' [et 'hoc producibile deus producit', etc.] quam quaelibet est possibilis. Ideo est vera." ('For when one asserts 'everything producible can be produced by God', the copula expresses many unions for which reason the subject supposes for many [things] and each of these unions is possible. Therefore it is true because it is reduced to many de inesse propositions understood separately, namely to these: 'this producible thing God produces' ['and this producible thing God produces, etc.] of which each is possible. Therefore [the original proposition] is true.') For some unknown reason, Pardo only gives one of the non-modal, de inesse propositions here, that is, 'hoc producibile deus producit' although he clearly believes that there are "many."

284Ibid.: fol. cxvth. "Sciendum est quod propositio modalis divisa de possibiliti habet reduci per propositiones de inesse exprimentes singularia pro quibus talis terminus distribuitur."
man, it is true to say that it can climb in through this window." Pardo concludes:

When there is distribution in the subject of a modal proposition, it is acceptable to determine its truth by adding the phrase ‘of whomever (whatever)’ (de quocumque).

For example, this is false (and impossible): ‘everything running can be an ass’ because its meaning is "of whatever (de quocumque) it is true to say that it can be running, it is true to say that it can be an ass.' This is false because a man can be running, but he cannot be an ass.

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285 Here ‘man’ not only supposit for all presently actual men, it is amplified to supposit for all possible men.

286 Ibid. “Per hoc patet quod ista est vera ‘omnis homo potest ingredi per hanc fenestram’ quia sensus eius est verus, videlicet: iste de quocumque verum est dicere quod est vel potest esse hominum, verum est dicere quod potest ingredi per hanc fenestram.” (“From this it is clear that this is true: ‘every man can climb in through this window’ because its sense is true, namely: that of which it is true to say that it is or can be a man, it is true to say that it can climb in through this window.”)

287 Ibid. “Unde quando est distribuuo in modali a parte subjecti, bonum est cognoscere veritatem ponendo illam particulam ‘de quocumque’.”

288 Again, Pardo uses ‘potest esse’ (‘can be’) which he considers equivalent to ‘possibiltanter est’ (‘possibly is’).

289 Ibid.: fol. cxvi. "Patet quod ista est impossibilis ‘omne currens potest esse asinum’, et hoc distribuisando subjectum pro eo quod potest esse cum sensus eius sit de quocumque verum est dicere quod potest esse currens, verum dicere quod potest esse asinum. Et hoc est falsum quia de homine verum est dicere quod potest esse currens et falsum est quod potest esse asinum. Unde ista proposition debet reduci per tot de inesse quot possunt esse currentia. Omnes autem illae singulares in quibus demonstrabuntur alia ab asino sunt impossibiles.” ("It is clear that this is impossible ‘everything running can be an ass’, and this [follows] by distributing the subject for that which can be since the sense of it would be: of whatever it is true to say that it can be running, it is true to say that it can be an ass. And this is false because of a man it is true to say that he can be running and it is false that he can be an ass. Thus, this proposition must be reduced for just as many non-modal [propositions] as there can be running things. And all those singular [propositions] in which anything other than an ass is referred to are impossible.")
4.3.4 Distributed Predicate Terms

Pardo clearly states that his rule (Pardo 10) is also to apply to the predicate term when it is distributed. The proposition ‘Socrates possibly is every man’ is false, Pardo believes, because it can only be true if each of the de inesse propositions containing a singular term suppositing for one of the individuals for which the distributed term supposit is possible. In this case, ‘man’ is distributed over all possible men. Hence, ‘Socrates is possibly every man’ is false because ‘Socrates is William Bennett’ is impossible as are ‘Socrates is Plato’ and ‘Socrates is Dan Quayle’ although ‘Socrates is Socrates’ is certainly possible.290

By allowing such distribution of the predicate term, however, Pardo seems to contradict his analysis of ‘God possibly produces everything producible’.291 Why not take many de inesse propositions of it, each of which (when taken separately) is possible? Are not ‘God produces Socrates running’ and ‘God produces Socrates sitting’ both possible at different times?

Pardo addresses this problem by considering the proposition ‘a continuum possibly is divided into every part’ (continuum possibiliter dividitur in omnem partem), which would be true if its truth depended only on the possibility of de inesse propositions such as ‘a continuum is divided into this part’ and ‘a continuum

290ibid.: fol. cxviia–b. "Sciendum est quod ad veritatem propositionis de possibili affirmativa in qua aliquis terminus distribuitur requiritur verificatio pro quolibet singulari termini distributi. Ideo ica est falsa ‘Socrates possibiliter est omnis homo’. Nam in ea igitur ‘homo’ distribuitur pro omni homine possibili. ... Ideo ad veritatem illius requiritur quod Socrates possibiliter sit Socrates, et quod Socrates possibiliter sit Plato, et sic de aliiis hominibus possilibus." ("One should know that for the truth of an affirmative de possibili [proposition] in which any term is distributed, the truth [of a singular proposition] for each of the individuals over which the term is distributed is required. Therefore, this is false ‘Socrates possibly is every man’. For in it ‘man’ is distributed for every possible man. ... Therefore for its the truth it is required that Socrates possibly is Socrates, and that Socrates possibly is Plato and so for the other possible men.") It is worth noting that Pardo considers true identity statements to be necessary and false ones to be impossible. If he thought otherwise, then he would concede the possibility of ‘Socrates is Plato’.

291See above, p. 113.
is divided into this part'.

Pardo insists, however, that the non-modal, *de inesse* propositions of 'a continuum possibly is divided into every part' include a proposition with a quantified predicate 'a continuum is divided into every part' along with 'a continuum is divided into this part' and 'a continuum is divided into this part', each of which must be possible for 'a continuum possibly is divided into every part' to be true. Since Pardo believes that 'a continuum is divided into every part' is not possible, 'a continuum possibly is divided into every part' is false. The same holds for 'Socrates possibly is every man'. It is reduced to 'Socrates is every man'.

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292Ibid.: fol. cxviiib. "Et si quæras, ad quam de inesse vel ad quas de inesse reductur? Si dicas fortassit quod debet reduci ad plures de inesse experimentes singularia pro quibus talis distribuitur, contra [arguitur]. Si hoc esset verum, sequitur quod ista esset vera 'continuim possibiliter dividitur in omnem partem'. Paet [quoq] ipsa reducit ad plures de inesse, videlicet ad has 'continuim <possibiliter> dividitur in hanc partem', 'continuim <possibiliter> dividitur in hanc partem' quorum quaælibet est possibilis." ('And if you ask, to what non-modal [proposition] or non-modal propositions is is reduced? If you perhaps say that it must be reduced to many non-modal propositions expressing the singular terms for which such a proposition is distributed, the opposite is argued). If this were true, it would follow that this would be true 'a continuum possibiliter is divided into every part'. It is clear that this is reduced to many non-modal [propositions], namely to these 'a continuum is divided into this part', 'a continuum is divided into this part', each of which is possible.) I suggest that the last two occurrences of 'possibiliter' be stricken from the text because Pardo claims that the propositions in which they occur are *de inesse* propositions.

293Ibid. "Respondeo quando est proposition de termino distributo per signum quod est pars extremi, requiritur verificatio pro singularibus pro quibus ille terminus distribuitur per talem signum. Requiritur etiam si sit affirmativa (in qua nulla ponitur negatio), quod de aliquo verificetur aggregatum ex signo et termino per ipsum distributo. Ideo si tale aggregatum ex termino et signo distribuente existente parte extremit sit, propositione de possibili aut de alio modo debet ponit inesse per plures propositiones in quarum una remanebit talis terminus distributus per talem signum. In alis vero experimentur singularia termini distribuit, ut ista 'continuim possibiliter dividitur in omnem partem' sic reducit 'continuim dividitur in omnem partem', 'continuim dividitur in omnem partem', 'continuim dividitur in hanc partem'. ('I answer, when there is a proposition with a term distributed by a sign which is part of an extreme [that is, part of either the subject or predicate] the verification [of a singular proposition] for the singulars over which this term is distributed by such a sign is required. It is also required, if [the proposition] is affirmative (in which there occurs no negation), that the aggregate of the sign and the term distributed by this be verified of something. Therefore if there is such an aggregate of the term and the distributing sign existing in part of an extreme [term], a *de possibili* proposition, or a proposition of any other mode, must be made non-modal (*poni inesse*) through many propositions, in one of which there will remain such a term distributed by such a [distributing] sign. In the other [non-modal propositions] however the singular terms of the distributed term are expressed, just as this 'a continuum possibly is divided in every part' is reduced in this way: 'a continuum is divided in every part', 'a continuum is divided in this part', 'a continuum is divided in this part'.')
and 'Socrates is this man' and 'Socrates is this man'. This approach apparently is taken only in case the distributing sign appears in the predicate, although Pardo is not explicit on this point. Otherwise, 'every man possibly comes through this window' would be false because Pardo himself admits that 'every man comes through this window' is impossible.

4.3.5 "Implicated" Propositions

Pardo's next rule deals with a special class of divided modal propositions which "implicate" or are "entangled with" (implicat) a de inesse proposition. This seems Pardo's way to refer to modal propositions which contain predicates which include relative, temporal, or comparative clauses. Examples of each type are, respectively, 'God possibly is [a] creating [being] which is', 'the Antichrist possibly is when he is not', and 'Socrates possibly knows more than he knows'.

(Pardo 12) In order to determine the truth value of such a proposition implicating a non-modal (de inesse) proposition, two conditions are necessary, namely the possibility of one non-modal (de inesse) and the truth of the other.

In order to determine the truth of 'God possibly is [a] creating [being] which is' (deus possibiliter est creans quod est) it is required first that 'God is creating' be possible and second that 'something is creating' be true. Thus on the assumption that God is not creating anything, the proposition 'God possibly is [a] creating [being] which is' is false. In fact, Pardo says, this divided modal proposition is

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294Ibid. "Similiter ista 'Socrates possibiliter est omnis homo' reduciur sic 'Socrates est omnis homo', 'Socrates est iste homo', 'Socrates est iste homo', et sic de aliis."

295It is not clear why subjects with relative clauses are not discussed.

296(Maierù, 1972) offers some examples of earlier uses of the phrase implicatio at pp. 159, and 550, n. 178.

297Ibid. fol. cxvi-a-b. "Nam ad veritatem talis propositionis propositionem de inesse implicantis, duo sunt necessaria, possibilitas videlicet unius propositionis de inesse, et veritas alterius de inesse."

298Ibid. "Ut ad veritatem istius 'deus possibiliter est creans quod est' duo requiritur, unum, videlicet quod ista sit possibilis 'deus est creans', aliud etiam quod ista sit vera 'aliquod creans est'."
contingent because it is true when God creates and false when He does not.²⁹⁹

Robert Caubraith reports that there was a disagreement among logicians of the time concerning how one constructs the non-modal (de inesse) propositions of de possibili propositions with predicates which are either distributed, or contain what he calls "implicating" copulas. Some logicians artistae, he says, hold that when modal propositions are reduced to their respective de inesse propositions, the total expression following the copula must be kept in its own, specific form (properia forma).³⁰⁰ Caubraith's examples of de possibili propositions containing distributed predicates are (a) 'God possibly is every man' and (b) 'Socrates is not white', in which 'not' distributes 'white'. Caubraith claims that this first position would have to concede these two propositions are true. Examples of those with predicates "containing implicating copulas" are (c) 'the Antichrist possibly is a man who is', which has to be conceded, and (d) 'Socrates possibly knows more than he knows' and (e) 'the Antichrist possibly is a man who is not', both of which must be denied.³⁰¹ In any case, the types of cases to which Caubraith refers with this phrase "propositions with predicates containing added implicating copulas" are those which Pardo called "modal propositions implicating non-modal propositions."

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²⁹⁹Ibid.: fol. cxvii vb. "Ex quo potest quod ista est contingens 'deus possibiliter est creans quod est'. Deo enim creante, ipsa est vera; deo autem non creante, falsa."

³⁰⁰(Caubraith, 1569): fol. cxxvra. "Pro solutione huius argumenti...adverte quod inter artistas est controversia de reductione propositionum de extrinseco tempore ad propositiones de inesse quando ex parte praedicati ponitur distributio [vel]...copula implicans...quorum aliqui talem ponunt conclusionem: reducendo propositionem de extrinseco tempore ad de inesse universalitatem totum quod postponitur copulae, ex parte eius sit reducito in propositione de extrinseco tempore, debet et in illa de inesse servari in properia forma." ("For a solution to this argument, note that among logicians there is a controversy concerning the reduction of propositions of extrinsic time to non-modal propositions when distribution, [or]...an implicating copula...occurs in the predicate, among whom some p.o.s this conclusion: when reducing a proposition of extrinsic time to non-modal [propositions] in general that the whole [expression], which is placed after the copula with regard to which there is a reduction in the proposition from extrinsic time, must also be preserved in the non-modal proposition in its own form.") Albert of Saxony seems to hold the view described in his Peritulsis logica: fol. 18va-b, quoted in (Maierù, 1972): p. 366, n. 159. Ockham may have something similar in mind at (Ockham, 1974b): p. 276, ll. 11-ff. Propositions containing verbs of past or future tense, or other terms (such as 'tomorrow') which refer to the past or future were called propositions "de extrinseco tempore."

³⁰¹Ibid. "Ex qua conclusione sequeretur has esse concedendas: 'deus possibiliter est omne ens', 'Socrates possibiliter est non albus'...et has esse negandas 'Socrates possibiliter plura scit quam scit'... Immo hanc negant 'antichristus possibiliter est homo qui non est', hac concessa 'antichristus possibiliter est homo qui est'.

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Although Caubraith never explicitly states what the *de inesse* propositions are which correspond to each of these, the general formula indicates that they should be determined in the following manner. The *de inesse* of (a) is, on this approach, ‘God is every being’ (with ‘every being’ in its *propria forma*), which is possible (in fact, it was true “before” the creation of the world when God was the only being). The *de inesse* of (b) is ‘Socrates is not white’ which is straightforwardly possible. The *de inesse* of (c) will be the possible ‘the Antichrist is a man who is’.

This first approach denies (d) because its *de inesse* would be the impossible ‘Socrates knows more (right now) than he knows (right now).’ The assumption seems to be that both occurrences of the verb ‘know’ must refer to the same instant of time. The impossible *de inesse* of (h) is ‘the Antichrist is a man who is not’, that is, the Antichrist would be a nonexistent-existing man.

One consequence of this first view, Caubraith notes, is that neither ascent, nor descent, nor any kind of syllogizing may take place “under” the predicate. One has to conclude this; otherwise one could make such inferences as that from ‘Socrates possibly is every man’ to ‘Socrates possibly is Plato’ or to ‘Socrates is every possible man’.

In order to avoid this conclusion, Caubraith tells us that some offer a second approach to such propositions. According to this second approach, one forms the *de inesse* of such propositions by interpreting the implicated copula (*copula implicationis*) as if holding only for one time.

We will turn to examples in a moment, but Caubraith first wishes to amend this view because it also entails that ascent, descent, and syllogisms fail for such propositions. The solution, Caubraith believes, can be found if we note that ‘possibly’ must apply to each thing referred to by the predicate. Thus, if the predicate contains a universal quantifier, just as ‘Socrates possibly is every man’ does, then the divided modal proposition *de possibili* will be interpreted in much the

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302 Ibid. Secundo sequeretur descensum, ascensum, nec syllogismum valere sub praedicato...propositionis de extrinseco tempore.

303 Ibid. "Reducendo propositionem de extrinseco tempore ad de inesse..., si ponatur copula implicationis, singulariter limitandum est tempus per ipsum importatum.
same way as 'every human possibly is in this hall'. That is, all of the instances of 'Socrates possibly is every man' must be possible for it to be true. Thus, 'Socrates is Plato', 'Socrates is George Bush', and so on, all must be possible for 'Socrates possibly is every man' to be true. 304 But we have already seen that the Nominalists believe that propositions such as 'Socrates is George Bush' are impossible. 305

Caubraith offers the following example to illustrate how this emendation is to be applied. The proposition ‘Socrates possibly knows more than he knows’ does not have as its non-modal (de inesse) counterpart ‘Socrates knows more than he knows’, but rather this: ‘Socrates knows more than he knew at this one time’ where "this" refers to the present. 306 The second ‘knows’ in ‘Socrates possibly knows more than he knows’ is the "implicated" copula (copulans implicationis) which must, one might say, be “temporally indexed” to refer to one time only. The sense of ‘Socrates possibly knows more than he knows’ would seem to be that it is possible that Socrates know more at some other time than he does right now at the present moment. We are to understand that Socrates has this possible increase in knowledge at some time other than the present.

Caubraith further holds that ‘Socrates possibly sees every star’ is true.

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304 Ibid. "Quare cum utroque istorum modorum in aliquo conveniendo et in aliquo non, tale ponitur documentum: postquam ly possibiliter nullomodo appellat post se nec ante se. Consequens est quinlibet terminum quantum est ex parte eius mobiliter supponere. Quare ex parte celsulibet talis ad plures de inesse universaliter reduci debet...et singulariter limitetur tempus per copulam implicationis importatum." ("Thus since both of these approaches have their good and bad points, this reason why [both fail] is offered: because 'possibly' does not in any way apppellate what comes before it or what comes after. It follows from this that each term, insofar as it is next to 'possibly' has mobile supposition. Therefore, for each [term], the [proposition] must always be reduced to many non-modal [propositions],...and the time referred to by the copula of an "implication" is limited to a single time.") When Caubraith says that 'possibilitier' does not "appellate" the terms which follow it, he means that 'possibilitier' applies only to the individuals (or "material signifiicates") of the term following it. Thus, in the case of 'omnis homo' it applies to each individual 'homo'. To say that the term following 'possibilitier' is "mobile" amounts to saying that one can ascend and descend "under" that term. On "appellation" in the modern scholastics, see (Ashworth, 1974): pp. 92-97. Soto in (Soto, 1980): fol. 50° agrees with Caubraith that 'ly possibiliter', & ly 'est', vel 'fuit'...non appellant." On mobile and immobile supposition, see (Jacobi, 1980): pp. 162-172.

305 See above, p. 117.

306 Ibid. "Sequitur quod de inesse huius 'Socrates possibilitier plura scit quam scit' non est ista 'Socrates plura scit quam scit', sed ista 'Socrates plura scit quam in hoc tempore sciebat', tempus praessens demonstrando."
because although it is impossible for him to see all of them at once,\textsuperscript{307} it is possible for him to see them all if he spreads out his observations over several times. In other words, there are many \textit{de inesse} propositions to which ‘Socrates possibly sees every star’ is reduced, namely to ‘Socrates sees star A’ and ‘Socrates sees star B’ etc.\textsuperscript{308} Pardo, however, thinks that ‘Socrates possibly sees every star’ is false because the term ‘every star’ does not have supposition. His meaning seems to be that, as we noted, that Socrates cannot at any single moment see all of the stars at once. Thus, its \textit{de inesse} is ‘Socrates is seeing every star’ which expresses the impossible idea that Socrates at the present moment is seeing all the stars at once.\textsuperscript{309} The problem with arguing that ‘Socrates possibly sees every star’ from the premises: ‘Socrates possibly sees this star’ and ‘Socrates possibly sees that star’ and so forth for all the other stars is that not all of the present tense verbs in each of these propositions can refer to the same time. Thus, the argument fails, Pardo claims, because it moves from propositions in the premises referring to multiple times to a proposition referring to a single time in the conclusion.\textsuperscript{310} Juan Celaya makes a similar point, but suggests further that if the term ‘every’ is not viewed as part of the predicate, then ‘Socrates possibly sees every star’ is true and is equivalent to ‘Socrates every star possibly sees’ whose truth is supported by descent to each star: ‘Socrates this star possibly sees’ and ‘Socrates this star possibly sees’,
4.4 De contingenti Propositions

Pardo’s final rules deal with the special problems surrounding divided modal propositions containing the mode "contingently." There are two ways of understanding the term ‘contingent’, Pardo claims. First, there is a broad (generaliter) sense in which ‘contingent’ means the same as ‘possible’ and in this sense necessity implies contingency. Second there is a narrow (specialiter) sense in which it means "possible but not necessary."312

Pardo is here distinguishing the "one-sided" sense of possibility and contingency from the "two-sided" sense.313 In the "one-sided" sense (Pardo’s "broad" sense) ‘possible’ is understood as it is in most modern modal logic texts as the contradictory of ‘impossible’. Letting ‘C’ mean ‘it is contingent that’ and ‘L’ ‘it is necessary that’, the one-sided sense of Cp is identical with $\neg L \neg p$. This latter formula simply says that it is not the case that p is impossible (understanding ‘p is impossible’ to be the same as ‘$\neg p$ is necessary’ or equivalently ‘$L \neg p$’). In this broad sense of ‘contingent’, Pardo is absolutely correct to claim the Lp implies Cp since Lp implies Mp (where ‘M’ stands for ‘it is possible that’ in the usual "one-sided" sense) and Mp and Cp mutually imply one another.

In the "narrow" sense, Pardo defines Cp in this way:

311(Celaya, 1515): sign. N iiiivb. "Ista est falsa ‘Socrates possibiliter videt omne astrum’ quia illud signum universale est pars extremi, et idem ly ‘omne astrum’ non supponit, sed si illud signum non esset pars extremi, illa esset concedenda et deboret veritas eius conscri in istam: ‘Socrates omne astrum possibiliter videt’ in qua procedendum est per descensum." ("This is false ‘Socrates possibly sees every star’ because the universal sign is part of a term, and therefore ‘every star’ does not supposit, but if the [universal] sign were not part of the term, the [proposition] should be conceded as true and it truth must be judged by means of this ‘Socrates every star possibly sees’ in which one should proceed by means of descent.")


313See (Bocheński, 1970): pp. 82-3 for a discussion and quotations from Aristotle concerning the two senses of possibility.
\[ Cp \leftrightarrow (Mp \land \neg Lp) \],
that is, as the "not necessary possible" (possibile non necessarium).

Focusing on the narrow sense of 'contingent' we may, Pardo says, understand this term in three ways, just as we did the other modes.\(^{314}\) First, 'contingent' can be understood categorematically and thus in two ways: first, as a division of beings (differentia entis) which includes beings which both can exist and can fail to exist. Second, 'contingent' is a division of propositions, and a contingent proposition is a proposition which is possible but not necessary.\(^{315}\)

In the final and third way, 'contingent' is understood syncategorematically. In this case 'contingent' is a single syncategorematic term added to the copula "which says that the union cosignified\(^{316}\) in by the copula is contingent."\(^{317}\) Pardo rightly understands that this conception of 'contingent' will not fit into the usual scheme of logical relationships among the other modes as expressed by the modal square. Modal propositions containing the term 'contingent'—called modal propositions de contingenti—are "pregnant" propositions ("modales pregnantes") because they carry several (usually two) modal propositions.

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\(^{314}\)See above, p. 18.

\(^{315}\)Ibid. "Capiendo specialiter solet distinguiri sicut de aliis modis. Uno modo captur cathagorematico, alio modo sincathagorematico. Cathagorematico [captur] dupliciter: uno modo ut est differentia entis et tunc tantum valet sicut ens quod potest esse et potest non esse, quemadmodum dicimus omnem creaturam esse contingens. Alio modo ut est differentia propositionis, et sic contingens est propositionis possibileis non necessaria." ("Understanding ["contingent"] in the specific [narrow] sense, it is customary to divides it [into several different senses] just as we divided the other modes. ["Contingent" is understood] categorematically in two ways: in one as it is a division of being and then it only signifies a being which can be and can fail to be, just as we say that every creature is contingent. In another sense ["contingent" is understood] as a division of the proposition, and so contingent is a possible, but not necessary, proposition.")

\(^{316}\)Syncaegorematic terms "cosignify" in the sense that they have no reference unless understood in conjunction with a categorematic term. Thus, 'every' only refers if taken with a categorematic term such as 'man' in 'every man'. Thus the "union" is "cosignified" by the copula conjoined with the syncategorematic mode.

\(^{317}\)Ibid.: fol. cxxv. "Alio modo captur ly 'contingens' sincathagorematico ut scilicet est unum sincathagoremata additum copulae denotans unionem per copulam consignificatam esse contingentem."
within them.  

Pardo offers two main rules for determining the truth-value of these pregnant modes:

(Pardo 13) The first rule: every proposition de contingenti which is not negated has exposition (exponitur)\(^{319}\) through one conjunction, whose first conjunct is an affirmative de possibili proposition and the second conjunct is a negative de possibili proposition in which the negation sign is placed after ‘possibly’. Or it has its exposition through one conjunction of which the first conjunct is a negated de necessario proposition and the second a negated de impossibili.\(^{320}\)

As an example, Pardo considers the proposition ‘Socrates contingently runs.’ The truth value of this proposition is to be determined by the truth value of either ‘Socrates possibly runs and Socrates possibly does not run’ or ‘Socrates does not necessarily run and Socrates does not impossibly run.’\(^{321}\) Pardo’s claims here are all correct since the equivalencies:

\[ Cp \leftrightarrow (Mp \land M \neg p) \]

and

\[ Cp \leftrightarrow (\neg \neg Mp \land \neg Lp) \]

\(^{318}\)ibid. “Contingens captum sincathegoreumatice facit modalem divisam in qua non inventur equipollentia per praepositionem et postpositionem negationis quemandmodum inventur in alius modalibus. ... Istae enim modales de contingenti sunt modales pregnantes, piiores modales in se includentes.” (“Contingent’ understood syncategorematically generates a divided modal [proposition] in which equipollence is not discovered in terms of the negation appearing before or after [the mode] just as it is in [propositions containing] the other modes. ... For de contingenti modal propositions are pregnant modal propositions, including many modal propositions within them.”)

\(^{319}\)Pardo claims that divided de contingenti propositions are “exonible” propositions: (ibid.) “unde inter propositiones exponibiles sunt [propositiones de contingenti] connumerandae.” An exonible proposition is, Soto reminds us in (Soto, 1980): fol. 97a, one which “because of some obscure term has an explicable sense by means of other, clearer propositions.” (“Definitio propositionis exponibilis...est illa quae ratione alcius termini obscurum habet sensum explicabilem per alias clariores.”)

\(^{320}\)ibid. “Dantur communiter due regulae: Prima regula: omnis proposition de contingenti non negato exponitur per unam copulativam cuius una pars est de possibili affirmativa, alia de possibili negativa, negatione postposita ad ly ‘<im>possibile’. Vel exponitur per unam copulativam cuius una pars est de non necese, altera de non impossibili.”

\(^{321}\)ibid. “Ut ista propositioni ‘Socrates contingenter currit’ exponitur per istam copulativam ‘Socrates possibiliter currit et Socrates possibiliter non currit’. Similiter ista ‘Socrates contingenter non currit’ per eandem copulativam exponitur.”
hold because 'it is impossible that \( p \)' is equivalent to \( \neg M p \) and \( \neg L p \) is equivalent to \( M \rightarrow p \). Further, Pardo is well aware in this passage that

\[
\neg p \iff C \rightarrow p
\]

since he clearly states that 'Socrates contingently runs' and 'Socrates contingently does not run' are equivalent.322

The second rule is

(Pardo 14) every negated de contingenti proposition has exposition (exponitur) through one disjunction of which one disjunct is de necessario and the other de impossibili.323

For example, the truth value of 'Socrates does not contingently run' is determined via the disjunction 'Socrates necessarily runs or Socrates impossibly runs'.324

Although his discussion of 'contingently' thus far is exemplary, Pardo has some difficulty fitting quantifiers into it. The problem arises with regard to the proposition 'some being contingently is God.' According to "Pardo 13," its truth value is to be determined from the truth value of 'a being possibly is God and a being possibly is not God', a conjunction which is true, but does not seem to capture the meaning of the original. Pardo believes, however, that 'some being contingently is God' should be understood as 'some being possibly is God and the same being possibly is not God'. This latter proposition is false, Pardo claims, because the

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322Ibid. "Ideo illae duas equivalent(ur). Una convertitur in aliam, conversione in oppositam qualitatem." ("Therefore, these two [propositions, that is, those quoted in the previous footnote] are equivalent. One converts into the other, by conversion into the opposite quality.)

323Ibid. "Secunda regula: omnis propositio de contingenti negato exponitur per unam disiunctivam cuius una pars est de necessario, altera de impossibili."

324Ibid. "... ut ista 'Socrates non contingenter currit' exponitur per hanc disiunctivam 'Socrates necessario currit vel Socrates impossibiliter currit.'"
second conjunct is false.\textsuperscript{325}

The following is the closest interpretation in modern logic of Pardo's 'some being contingently is God':

\[(\exists x)C(Bx \land Gx).\]

This proposition is to be analyzed as

\[(\exists x)[M(Bx \land Gx) \land M \rightarrow (Bx \land Gx)],\]

where \(Bx\) is '\(x\) is a being' and \(Gx\) is '\(x\) is God'. In any case, Pardo would quite likely want to place modal term within the scope of the quantifier.

Pardo interprets 'no being contingently is God', which he claims is the the contradictory of 'some being contingently is God', as expressing the disjunction 'every being impossibly is God or every same being, which possibly is God, necessarily is God'.\textsuperscript{326} The addition of the phrase 'which possibly is God' to the second disjunct is apparently to make explicit the ampliation of 'being' from presently, actual beings to all possible beings. If we set aside this phrase, then the modern translation of this in formal logic would be

\[(x)[\neg M(Bx \land Gx) \lor L(Bx \land Gx)],\]

which is equivalent to

\textsuperscript{325}Ibid. 'Propositiio de contingenti in qua ad ly 'contingens' praeponitur terminus supponens determinate debet exponi per unam copulativam in cuius secunda parte debet addi relativum idemquiter referens illud pro quo propositio sui antecedens denotatur verificari. Ideo ista propositio 'aliquod ens contingenter est deus' est falsa ex eo quod sic exponi habet: 'aliquod ens possibilitur est deus et idem ens possibilitur non est deus', cuius copulativa secunda pars est falsa.' ('\(A\ de\ contingend\) proposition in which a term with determinate supposition is placed before 'contingent' must have its exposition by means of one conjunction in which a relative pronoun is added to the second conjunct which ascribes that for which the proposition in the first conjunct is said to be verified to the same thing [said to be verified in the second conjunct]. Therefore, this proposition 'some being contingently is God' is false for the reason that it has its exposition as: 'some being possibly is God and the same being possibly is not God', the second conjunct of which is false."

\textsuperscript{326}Ibid.: fol. cxxv\textsuperscript{b}-cxxvi\textsuperscript{a}. 'Sed isia[e] 'nullum ens contingenter est deus', quae prima contradicit, dici potest quod exponi habet per unam disjunctivam compositam ex partibus contradictibuse partibus copulativa per quam exponitur sua contradictoria. Sic ergo debet exponi 'omne ens impossibiliter est deus vel omne idem ens quod possibilitur est deus necessario est deus.' ('But [of] this [proposition] 'no being contingently is God', which contradicts the first [that is, 'some being contingently is God'], it can be said that it can have its exposition through one disjunction composed of disjuncts which contradict the conjuncts by means of which the contradictory proposition had its exposition. So, therefore, it must have it exposition as 'every being impossibly is God or every same being which possibly is God necessarily is God.'"
\[ \neg (\exists x) [M(Bx \land Gx) \land M \neg (Bx \land Gx)] \]

the negation of 'some being possibly is God and the same being possibly is not
God'. Again, the phrase "every same being" strongly suggests that Pardo would
embrace the idea that the modal term is within the scope of the quantifier. In fact
Pardo clearly rejects interpreting 'no being contingently is God' as
\[(x) \neg M(Bx \land Gx) \lor (x)L(Bx \land Gx)\]
when he claims
Thus, this disjunction 'every being impossibly is God or every being necessarily
is God' is not the exposition of this: 'no being contingently is God'.\[^{227}\]

Pardo feels, wrongly it seems, that his analysis is not entirely satisfactory
when one considers the proposition: 'some being not contingently is not God'. For
its exposition would be 'some being impossibly is God or the same being
necessarily is God'.\[^{228}\] This "exposition" is false, Pardo suggests, because if we
assume that only God exists then 'some being not contingently is not God' is

\[^{227}\]Ibid. "Deo illa disjunctiva 'omne ens impossibiliter est deus vel omne ens necessario est deus'
non est exponens illius 'nullum ens contingenter est deus'." The 'exponens' is the proposition which
clarifies the meaning of an exponible proposition. (Soto, 1980): ibid. "Propositio exponens est illa
clairior proposticio, per quam alia exponitur." ("The 'exponing' proposition is the clearer proposition,
by means of which another has its exposition.")

\[^{228}\](Pardo, 1505): ibid. "Sed ulterior instabitu capiendo hanc propositionem 'aliqoud e[n]s non
contingenter non est deus'. Tunc illa habet exponi secundum dicta, hoc pacto 'aliqoud ens
impossibiliter est deus vel idem ens necessario est deus' cum dictum fuerit quod propositio de
contingenti in qua terminus supponens determinate praepuntur ad ly 'contingenter' habet taliter
exponi ut in secunda exponens addatur relativum idempilitatis." ("But further one might argue by
taking this proposition 'some being not contingently is not God'. Then this may have its exposition,
according to what was claimed, as 'some being impossibly is God or the same being necessarily is
God' since the claim was that a de contingenti proposition in which a determinately supposing term
is placed before 'contingently' may have its exposition such that in the second conjunct of the
'exponens' a relative pronoun is added which refers to the same thing [as referred to by the first
conjunct].")
false. In other words, the analysis of

\((\exists x)\neg C \rightarrow (Bx \land Gx)\).

would be

\((\exists x)[\neg M(Bx \land Gx) \lor L(Bx \land Gx)]\).

This latter seems to be true because the second disjunct, ‘x necessarily is a being and God’, would be true asserted of God (and thus the whole disjunction would be true, too) but Pardo seems to view the second disjunct as claiming ‘that which impossibly is a being and God necessarily is a being and God’.

Thus, Pardo feels compelled to propose the following rule to deal with this proposition:

[Pardo 15] The truth of a proposition in which ‘contingently’ is negated may be interpreted by means of the truth or falsity of a proposition in which ‘contingent[ly]’ is affirmed, primarily in case the difficulty of the proposition arises from this mode ‘contingently’.

Thus, the truth value of a negated proposition is determined by the truth value of the corresponding affirmative.

Hence, we turn to the contradictory of ‘some being not contingently is not God’ to determine its truth value. The contradictory is, Pardo tells us, ‘every being contingently is not God’ which has its exposition by means of the conjunction

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329Ibid. "Tunc sequitur quod si poncretur solum deus esse, illa propositio esset falsa 'aliqood ens non contingenter non est deus'. Nam prima exponens est falsa, scilicet etsi 'aliqood ens impossibiliter est deus' et simili, scilicet etsi 'idem ens necessario est deus' cum sensus eius sit 'vel idem ens quod impossibiliter est deus necessario est deus'.' ("Then it follows that if it is assumed that only God exists, this proposition would be false: 'some being impossibly is God'. For the first exponens is false, namely this 'some being impossibly is God' and the second is also, namely this 'the same being necessarily is God' since the sense of it would be 'or the same being which impossibly is God necessarily is God'.") How Pardo formulated this latter "sense" of the second exponens and why he seems to accept it as the proper formulation is a mystery.

330(Pardo, 1505): Ibid. "Veritas propositionis in qua ly 'contingenter' negatur cognosci habet per veritatem vel falsitatem propositionis in qua ly 'contingen[te]' affirmatur, maxime quando difficultas per propositionem ex illo modo 'contingenter' ortur."

331Ibid. "Ideo propositio in qua ly 'contingenter' negatur cognosci habet per propositionem in qua ly 'contingenter' non negatur sicut negatio per affirmationem." ("Thus, a proposition in which 'contingently is negated may be understood through a proposition in which 'contingently' is not negated just as a negation is understood through an affirmation.")
‘every being possibly is God and every being possibly is not God’. Thus, the interpretation of the latter in formal logic would be

\[(x)\neg M(Bx \land Gx) \land (x)\neg (Bx \land Gx).\]

The way Pardo finally wishes to interpret ‘some being not contingently is not God’ is as ‘some being impossibly is God or some being necessarily is God’, or as

\[(\exists x)\neg M(Bx \land Gx) \lor (\exists x)L(Bx \land Gx).\]

This is the correct negation of ‘every being possibly is God and every being possibly is not God’ but why we should interpret it so differently from the earlier propositions is by no means well supported.

We have seen in this chapter that the main method for determining the truth value of divided modal propositions is to "reduce" them to one or many non-modal, de inesse propositions. The divided modal propositions are true just in case the non-modal proposition or propositions to which they are reduced has the modality asserted by the mode in the modal proposition. Thus, ‘George possibly is fishing’ is true just in case its non-modal counterpart ‘George fishes’ is possible. Although it is difficult to generalize given the heated disagreements over the interpretation of divided modal propositions, one may in general state that a divided modal proposition is reduced to "many" non-modal propositions when a general term such as ‘man’ appears in the subject position and certainly if the general term appears with a quantifier such as "all" or "some." Controversy raged over the interpretation of general terms appearing in the predicate position of a divided modal proposition. Jeronimo Pardo held that these are reduced to many non-modal propositions (as many, presumably, as there are combinations of the entities to which the subject and the predicate terms refer) as long as one also includes in this reduction a sentence in which whatever quantifier governs the predicate is left intact. Both Robert Caubraith and Juan Celaya reject this and allow us to take the

\[332\] Ibid. "Idem volens exponere istam ‘aliquod ens non contingenter non est deus’, suam contradictoriam in quo ly ‘contingenter’ non negatur inspicere debet. Ista autem ‘omne ens contingenter non est deus’ convenienter exponitur per hanc copulativam ‘omne ens possibilitier est deus et omne ens possibilitier non est deus’.

\[333\] Above, p. 118.
singular, non-modal propositions of such divided modal propositions without including a statement containing a quantified predicate. These remarks seem to hold good for any divided modal proposition containing any mode except "contingently." Pardo rightly views such de contingenti propositions as being abbreviations for more complex propositions containing the other modes. With regard to propositions containing combinations of modal and tense terms (see section 4.2.3), there seems to be a tendency to interpret these such that the modal term appears within the scope of the temporal term.
Chapter 5

The Modality of Non-modal Propositions

In Chapter 3 we learned that the main approach of the Renaissance Nominalists for determining the truth values of composed modal propositions was to give rules for transforming composed modal propositions into propositions which consist of one of the four modes 'possible', 'necessary', 'impossible', 'contingent' predicated of a non-modal \textit{(de inesse)} proposition. In Chapter 4, we learned that the same procedure was followed with regard to the divided modal propositions. The difference between the two accounts is of course that different sets of rules were required in each case.

Nonetheless, the result in either case is that the procedure produces propositions of the form 'p is possible' or 'this proposition "p" is a possible proposition' and so on for the other modes. In this chapter we turn to the question: how do the Nominalists define this phrase 'possible proposition' and its cousins: 'necessary proposition', 'contingent proposition', 'impossible proposition'? In other words, after we go through all that work separating the \textit{de inesse} proposition (or propositions) from its (their) modality, how does one determine whether the non-modal proposition has that modality or not?

There is another way to characterize the general procedure of the Nominalists up to this point. The Nominalists start with the question "when (or under what conditions) is a \textit{modal} proposition true?" to the question "what is the modality of the non-modal propositions implicitly contained within the modal propositions?" Thus, they move from the question concerning the \textit{truth of modal} propositions to the question of the \textit{modality of non-modal} propositions.

The difference between a modal proposition on one hand and the modality
of a proposition on the other can be easily formulated. A modal proposition is one which contains (in one form or another) at least one of the four modal terms: ‘necessary’, ‘possible’, ‘contingent’, and ‘impossible’. The proposition ‘Socrates possibly runs’ would be an example. The modality of a proposition is the modal character it possesses whether explicitly represented by a modal term or not. Thus, the modality of ‘Socrates runs’ is (presumably) contingency. However, this is not a modal proposition because it contains no modal term.

Jean Buridan quite clearly makes this distinction:

One should briefly note that there is a difference between saying some proposition is possible and that it is "of the possible" (de possibili)\textsuperscript{334} because this proposition ‘God is’ possible (in fact, it is also necessary) but it is not "of the possible" (de possibili) nor is it "of the necessary" (de necessario). On the contrary, it is a non-modal proposition (de inesse). If it were to be "of the possible" or "of the impossible" or "of the necessary," it would have to be a modal proposition.\textsuperscript{335}

The authors we have been concerned with raise the question of the modality of propositions within the context of discussions concerning the nature of the entities signified by propositions. This is because, as Jeronimo Pardo tells us, the modality (as well as the truth and falsity) of propositions is determined by what the proposition signifies, that is, by the "significate" or "complexi significabile" of the proposition:

Because the opinion of the logician on truth and falsity is discussed in this [Pardo’s] first chapter, it is appropriate to state what is a true proposition, what is a false one; what a necessary one, what a contingent; what is a possible proposition and what is an impossible one. In order to point this out, you should know that all logicians strive to determine the truth and falsity, also the necessity and contingency, possibility and impossibility of propositions in terms of that signified by the proposition, which is called the "complexi significabile." Therefore, we should make clear what is a "complexi significabile" or [in other

\textsuperscript{334} A de possibili proposition is one that contains the modal term possibile.

\textsuperscript{335} (Buridan, 1964): fol. xxxiv\textsuperscript{va}. "Notandum est breviter quod differt dicere quod aliquid propo sitio sit possibilis et quod ipsa sit de possibili quia illa proposition est possibilis 'deus est' (immo etiam necessaria) et tamen non est de possibili nec de necessario, sed de inesse. Si enim debeat esse de possibili vel de impossibili vel de necessario, oportet quod sit modalis.”
words] the signification of the proposition.336

In the next section we will consider two main views concerning the nature of the "signification" of propositions held by Nominalists of the 16th century. Concurrent with these views, we find that were three main views concerning the modalities considered by our Nominalists, one of which developed from the first view of the signification of propositions (discussed in section 5.2), and the other two developed following the second, more widely accepted view (discussed in section 5.3). After presenting these views of modalities, I will consider some alternative conceptions of the modalities which also appear in the Nominalist logic texts in section 5.5. I conclude that no universal theory of the modalities explaining the interrelationships among these various notions of modality was ever constructed by our Nominalists. In the last section of this chapter, I will present a quick summary of the procedures discussed in Chapters 3 through 5 by considering some simple examples.

5.1 Two Views of the Signification of Propositions

We will find that the Renaissance Nominalists took seriously two basic answers to the question "what is the signification of a proposition?"337 Both views would agree, however, that the meaning of a proposition is expressed by the "dictum" of that proposition, where a dictum, as we have noted before in chapter 2, is a phrase consisting of a noun plus infinitive verb. Thus, the meaning or signification of the proposition 'Socrates runs' (Socrates currit) on all these views is

336Pardo, 1505: fol. i°. "Et quoniam logici consideratio circa verum et falsum versatur in hoc primo capitulo, conveniens est declarare quid proposittio vera, quid falsa, quid necessaria, quid contingens, quid possibilis, et quid impossibilis. Pro cujus ostensione scindetum est quod omnes nituntur ostendere veritatem et falsitatem, similiter necessitatem et contingentiam, possibilitatem et impossibilitatem propositionum ex parte significationis quod vocatur complexe significabile. Ideo primo illucidandum est quid est complexe significabile seu significatum propositionis."

337They did not look favorably on another possibility defended by Thomists (especially Thomists such as Domingo de Soto who did his logic work after Renaissance Nominalism had for the most part vanished). See (Nuchelmans, 1980): pp. 70-72.
the dictum "Socrates to run" (Socratem currere). Pardo, in the passage just presented, calls that to which a dictum refers to a "complex signification," literally "that signifyable in a complex way."

The main difference between the two views concerns the nature of that to which the dictum refers, that is, the nature of the complex signification. The first view concerning the reference of the dictum we will consider (in order to see what notions of modality it endorsed) was attributed to the 14th century Augustinian Gregory of Rimini. He held (at least as interpreted by 16th century Nominalists) that the dictum of a proposition refers to a special kind of non-physical, non-mental entity which is not to be equated with (or perhaps "reduced to") the entities referred to by the terms of the proposition. Recent scholarship invites us to call these entities "states of affairs."

The second view has its source in the work of Jean Buridan, and states that the dictum of a proposition (at least of a true affirmative proposition) refers to the same thing(s) as a noun plus present participle phrase. Thus, Socrates to run (Socratem currere) is to be rephrased as "Socrates existing running." Exactly what this phrase is making reference to is unclear. The usual explanation, we will see, is that it refers to the individual man Socrates. But, of course, it must do more than that since otherwise "Socrates existing sitting" would have exactly the same reference as "Socrates existing running" and thus the two would seem to mean the same. In other words, one might wonder if this phrase merely points out an individual or an individual in a certain "state of affairs." Buridan's successors (including Pardo) proposed solutions to this problem.

We should mention a third alternative view concerning the reference of the dictum of a proposition propounded by Peter of Ailly. According to this view,

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339 The usual example of something signifyable in a simple or noncomplex way would be Socrates since he can be signifyed by the single term 'Socrates.' See (Nuchelmans, 1973): pp. 135, 194, and 231.


the dictum does not refer to anything. The meaning of the proposition is said to be "syncategorematic." Thus, the proposition has meaning "in some way" (aliqualiter) but does not refer to "any mental or physical entity, or indeed of any non-mental or non-physical entity of the sort suggested by Gregory of Rimini."342

There is a disagreement among modern commentators about this third view as to whether the Renaissance Nominalists accepted it or not. Jennifer Ashworth has claimed that this theory "was the most popular among Parisian logicians" and in fact "seems largely original with them."343 Gabriel Nuchelmans, however, states that

Among the nominalists who wrote after Peter of Ailly there was general agreement with his thesis that a dictum and a proposition are syncategorematic signs. But none of them, as far as I know, shared his opinion that a dictum never stands for a thing.344

Nuchelmans seems closest to the truth here. The Nominalists seem to accept a view that is a combination of aspects of Ailly’s and Buridan’s view. For they held that propositions have two meanings or "significations": a categorematic and syncategorematic meaning. The categorematic meaning is the extramental individual or individuals referred to by the proposition, while the syncategorematic meaning is a function of how the mind conceives of that individual or those individuals. Thus, although many of our Nominalists, such as Juan Dolz, Fernandus Enzinas, Gervase Waim, and George Lokern do claim that propositions and dicta are syncategorematic, they also seem to hold that a dictum can be interpreted following Buridan as a categorical term synonymous with a participial phrase which does refer to individuals. For example, then, the dictum Socrates to run can be interpreted as "Socrates existing running" which ultimately refers to Socrates.345 Thus, the view espoused by our Nominalists seems to be in line with Buridan’s views as understood

343Ibid.: p. 107
by his most avid supporters. We can safely simplify matters by speaking of only two main views of propositional meaning: Gregory of Rimini’s and Jean Buridan’s.

We now turn to the details of these two views concerning the significate of the proposition, as understood by our Nominalists, to see determine their views concerning the modalities of propositions.

5.2 Gregory of Rimini

The first famous opinion concerning the reference of the dictum of a proposition we will consider is that of Gregory of Rimini347 (ca. 1300-58) who maintains that the reference of the dictum (the "complexus significabile") is not identical with the referents of the terms of the proposition.348

What sort of entity or being is this "complexus significabile" which a proposition signifies? As Jeronimo Pardo reports, Gregory of Rimini held that the answer to this question depends on what exactly one means by the term ‘being’ (ens) and its cousins ‘something’ (aliud) and ‘thing’ (res). Gregory, Pardo reminds us, claims that there are three ways one can understand these three terms.

346 Ashworth is of course aware of authors (such as George Lokert and Juan Dolz) who are overlooked by Nuchelmans. However, even the views of Juan Dolz, whom she presents as the leading advocate of Peter of Ailly’s third view (see her 1978 paper, pp. 107-111), seem to be in line with those of other "Buridanists." She apparently overlooks the fact that even Jeronimo Pardo, whom she portrays as the staunchest defender of "Buridan-style semantics" (p. 105), also distinguishes the "formal" signification of a proposition from its "material." This distinction is the foreunner, as Nuchelms tells us, to the "syncategorematic"/"categorematic" distinction found in later authors. See (Nuchelms, 1980):p. 65 and 70.

347 William Crathorn (fl. 1332) and Adam of Wodeham (ca. 1298-1358) also held such a view. For Crathorn see (Nuchelms, 1973):212-219 and for Wodeham see (Gdl, 1977).

348 As reported in (Pardo, 1505): ibid.: "Prima conclusio: complexus significabile seu significatum adequatum propositionis non est aliud existens, ut ista proposition "homo est animal" significat hominem esse animal. Hominem esse animal non est aliud existens. ("The first conclusion: the complexus significabile or that adequate significate of the proposition is not something existing. For example, this proposition 'man is an animal' signifies man to be an animal, [but] man to be an animal is not something existing."")
First, they can stand for signifiable things, whether true or false. Second, these terms stand for significabilia which are true. Finally, these terms may stand for simple entities. Complexe significabilia are "beings" or "things" in the first two senses but not in the third. As Pardo puts it, a complexe significabile is "something," but not a substance, not an accident; not God nor any created entity. Thus, Gregory of Rimini steadfastly adds a new but odd sort of being to the world. Besides substances and their accidents, there are these "states of affairs"

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349 (Pardo, 1505): ibid. "Et si quaeras utrum posit concedi quod complexe significabilia sint aliquid, respondet haece opinio quod 'aliquid', 'ens', et 'res' tripliciter possunt capi. Uno modo large pro omni complexe significabile sine sit venum sive falsum." ("And if you ask whether one can concede that complexe significabilia are something, this opinion answers that 'something', 'being', and 'thing' can be understood in three senses. In one sense [they are understood] broadly for every complexe significabile whether it be true or false.") Gregory of Rimini himself speaks of signifiable "things" or "beings" whether in a complex way (as for example, "things" signified by propositions) or in a simple, non-complex way ("things" signified by single terms such a "man"). (Gregory of Rimini, 1955): fol. 1 Q (I, Prologus, q.1, art.1): "Hoc nomen 'aliquid', sic ut ista alia sibi synonyma 'ens' et 'res' possunt accipi tripliciter, uno modo communis, secundum quod omne significabile, complexe vel incomplexe, et hoc vere et false, dicitur res et aliquid." ("This term 'something', just as its synonyms 'being' and 'thing' can be understood in three senses: in one most general sense, according to which every signifiable [thing], whether [signifiable] in a complex or simple way, and whether truly or falsely [signifiable], is called a thing or something.") Pardo limits his presentation to only those things signifiable in a complex way, apparently because he only wishes to consider the nature of the significate of propositions.

350 (Pardo, 1505): ibid. "Alio modo capitur 'res' magis stricte pro complexe significabili vero." ("In another sense, 'thing' is understood more strictly for a true complexe significabile.") Again, Gregory claims that simply signifiable "beings" and "things" also fall into this category along with complexly signifiables. (Ibid.: fol. 2 A): "Alio modo sumuntur ['ens', 'aliquid', et 'res'] pro omni significabili, complexe vel incomplexe, scd ver, id est, per veram enuntiationem. Quod autem false tantum, dicitur non ens." ("In a second sense, ['being', 'something' and 'thing'] stand for every signifiable [thing], whether [signifiable] in a complex or simple way, but truly [signifiable], that is, [signifiable] through a true utterance. What is, however, only falsely [signifiable] is called a non-being.")

351 (Pardo, 1505): ibid. "Tertio modo capiuntur isti termini 'ens', 'res', 'aliquid' strictissime ut significant aliquam entitatem existentem in rerum natura. Hoc modo enim dividitur in substantialia et accidens, in creatorem et creaturam sita quod nihil est substantia vel accidens, creator vel creatura nisi sit ens tertio modo, et cum complexe significabilia non sunt ens tertio modo, id est, non sunt aliquid existens; non sunt creator neque creatura, substantialia aut accidens." ("In the third sense the terms 'being', 'thing' and 'something' are understood most strictly as they signify some entity existing in reality. In this sense being is divided into substance and accident, [and] into creator and creature such that nothing is a substance or an accident unless it is a being in the third sense, and since complexe significabilia are not a being in the third sense, that is, they are not anything existing; they are not the creator nor are they creatures, [nor are they] substance or accident.") Cf. (Gregory of Rimini, 1955): fol. 1 Q-2 A.
which cannot be reduced to the substances, the accidents, or their combination. Most of our Nominalists rejected the existence of such *complexae significabilia* because they are unneeded additions to the ontology.

Gregory of Rimini’s next project was to define the truth and falsity of propositions in terms of the truth and falsity of their *complexae significabilia*. Although Gregory’s views here are now well-known, I will present them as reported by the Renaissance Nominalist Thomas Bricot because Bricot extrapolates from them a general scheme for defining the modality of these and thus the modalities of propositions. Oddly enough, Bricot finally endorses Buridan’s views concerning the nature of the significate and the modalities of propositions despite giving what to my knowledge is their fullest account of an approach which follows Gregory of Rimini.

Gregory, Thomas Bricot reports, offers three ways in which *complexae significabilia* can be true. Bricot claims that they proceed from the narrowest to the broadest way, the third and final of which captures all the truths which can be imagined (p. 47.4–6). According to the first way in which a *complexae significabile* is true:

(GTI) a *complexae significabile* is true because the proposition of which it is the

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352 (Bricot, 1986): pp. 59-60. On II. 20-23, Bricot states: "Homo est risibilis" sic se habet quod partes eius solum significant hominem et actum ridendi, et tamen tota propositionis significat hominem esse risibilem, quod neque est homo neque actus ridendi, neque aggregatum ex homine et actu ridendi." ("Man is capable of laughing" is such that its parts alone signify man and the act of laughing, and still the total proposition signifies man to be capable of laughing, which is neither man nor the act of laughing, nor the aggregate of man and the act of laughing.)

353 (Ashworth, 1978): p.99. "One can summarize the discussion of Gregory of Rimini found in early sixteenth century authors by saying that although his view was sympathetically presented, no one could find any serious arguments in support of its basic premises. Gregory’s theory was shown to be internally consistent, and it was argued that, given his basic premises, various objections could be countered and difficulties solved. However, the demand that one accept a special kind of entity of whose ontological status no clear account could be given was too much for nominalist (and other) stomachs."

354 (Bricot, 1986): pp. 92.20-93.3. The number after the "." is the number of the line on which the text appears.

355 Pardo only reports one (GTii) of these and accordingly reports only one way in which a [complexae significabile] has its modality. Pardo explicitly discusses (GPii) and (GNii) on ibid., fol. ii\textsuperscript{a}.
complex signficabile is true or would be true if it were formed.  

Thus, the complex signficabile referred to by the dictum 'Socrates to run' would be true because its corresponding proposition 'Socrates runs' is true. This method (GTi), Bricot notes, is clearly no good because of its circularity. Propositions are deemed true, on this view, because their complex signficabilia are true. Thus, if the complex signficabilia are now to be true simply because their propositions are true, we would be locked into a vicious circle (pp. 45.30-46.4).

The second way holds that

(GTi) a complex signficabile is true because it is judged by the first truth, namely God.

This second way runs into trouble with self-referential propositions, Bricot believes, and must be supplemented by a third way (pp. 46.12-.25). According to the third way

(GTii) a complex signficabile is true (if affirmative) because "it is existing in such a way ( ipsum est taliter esse) as it actually is (qualiter est)."  

Ashworth calls this difficult formulation "the simplest." However, (GTiiii) seems ambiguous to me as to whether it claims (1) a complex signficabile is true as long as it exists, or (2) a complex signficabile is true as long as some state of affairs distinct from the complex signficabile exists. Ashworth and Nuchelms seem to interpret (GTiiii) in the first way since they equate the complex signficabile with the "state of affairs." However, the examples of (GTiiii) provided by Bricot, who follows the models given by Gregory of Rimini, seem to support (2). Thus, Bricot says,

man to be an animal is true because man to be an animal is man to be an animal, 

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356 I call this "GTI" for "Gregory-True definition-i."


358 Ibid.: p. 97.

359 The ambiguity surrounds the subject of the 'est' in 'qualiter est'. The subject could either be 'ipsum', that is, the complex signficabile or an implicit subject 'it' referring to a "state of affairs" distinct from the complex signficabile.
and it is the case that man is an animal.\textsuperscript{360}

The claim that the truth of \textit{man to be an animal} requires that "it is the case that man is an animal" indicates that the state of affairs which is "the case" and expressed by ‘man is an animal’ is not identical with \textit{man to be an animal}. If (1) were the correct interpretation, one would have expected Bricot to have only said: "\textit{man to be an animal} is true because \textit{man to be an animal} is." Unfortunately, Bricot preserves the ambiguity throughout his discussion of the modalities of \textit{complexe significabilis}, so investigation of further texts does not seem to resolve the issue. Still, since (1) seems, at least \textit{prima facie}, to be more in line with the usual discriptions of \textit{complexe significabilis}, I will assume that it is the correct interpretation for the remainder of my work. However, future scholarship should be devoted to addressing the problem.

\textbf{5.2.1 Thomas Bricot}

Following the tripartite model for truth and falsity, Bricot doggedly presents three basic ways in which propositions can have a modal character (that is, be possible, necessary, contingent, or impossible). For example, let us consider how a proposition would be possible if we followed the model of (GTi). According to this method

\begin{enumerate}
\item[\textit{G Pi}]\textsuperscript{361} a \textit{complexe significabile} is possible because its proposition, if formed, is possible.
\end{enumerate}

Bricot complains as before, however, that this method is circular (p. 49.3–7).

Bricot follows this model for the other three modes as well.

\begin{enumerate}
\item[\textit{G Ni}] A \textit{complexe significabile} is necessary because its proposition is necessary.
\end{enumerate}

This, too, is not acceptable (\textit{non est conveniens}), Bricot claims, because of its circularity (p. 49.25–27). The last two formulations following this model are:

\begin{enumerate}
\item[\textit{G Ci}] A \textit{complexe significabile} is contingent, if it can be expressed by a contingent proposition, and
\end{enumerate}

\textsuperscript{360}Ibid.: p. 46.28–30. "...ut hominem esse animal est verum, quia hominem esse animal est hominem esse animal, et ita est quod homo est animal." Cf. (Gregory of Rimini, 1955): fol. 2 E.

\textsuperscript{361}For "Gregory-Possible-i".
(GII) A *complexe significabile* is impossible if its corresponding proposition is impossible. All of these are considered circular (p. 49.31–32 and 49.16–17).

Following (GTii), a *complexe significabile* has its modality because God's judgment concerning it has that modality. Thus,

(GPii) a *complexe significabile* is possible because it can *(potest)* be judged by the first truth (namely, God).

Note that the modality here is affixed to God's judging. In the case of a merely true *complexe significabile*, God simply judges it; but in the case of a possible *complexe significabile*, all that is required is that God can judge it (p. 49.7–8).

Bricot brings up some problems with (GPii) having to do with self-reference, which is hardly surprising since the main topic of his *Tractatus Insolubilium* is self-reference. Bricot claims that this procedure outlined in (GPii) could be repeated infinitely. He considers the *complexe significabile: the first truth to judge nothing* and says it is clearly *(patet)* not possible. Although he gives no reason for its clarity, we may reconstruct his line of thought in this way. If the state of affairs the *first truth to judge nothing* were possible, that would mean that God, the first truth, can judge it. That would be equivalent to saying that the first truth can judge this: the *first truth to judge nothing*. But such an ability to judge entails that God can *(potest)* judge something (namely, this *complexe significabile: the first truth to judge nothing*) which He can only judge if He is not judging anything at all. This appears to imply that God can judge and not judge at the same time, and thus we can conclude that God cannot judge the *first truth to judge nothing*, which is equivalent, according to (GPii), to claiming that the state of affairs the *first truth to judge nothing* is not possible.

It follows from the impossibility of the *first truth to judge nothing*, Bricot continues, that this whole state of affairs: the *first truth to judge Himself-to-judge-nothing* *(primam veritatem iudicare se nihil iudicare)* is impossible. Again, Bricot does not explain, but if this whole monstrous *complexe significabile* in a *complexe significabile: were possible*, that would mean according to (GPii) that the first truth can judge the *first truth to judge Himself-to-judge-nothing*, which He can only judge if He is not judging anything at
all. Bricot then says "and this goes on to infinity" *(et sic in infinitum)*. We can see how this could happen. We could pile judgement upon judgement all day. But does Bricot believe that this infinite regress is vicious? Unfortunately, he does not say, but just as self-referential complexe significabila were grounds for adding (GTiiii) to (GTiiii) so such would seem to be grounds for supplementing (GPiiii) with (GPiiii).362

The same method is applied to the other modes:

(GNiiii) a *complexe significabile* is necessary because it is necessarily judged by the first truth, and

(GCiiii) a *complexe significabile* is contingent because it can *(potest)* be judged by the first truth and cannot *(potest non)* fail to be so judged (p. 49.27–28 and 49.33).

However, Impossible complexe significabilia require some special consideration when following the model of (GTiiii) because there are two alternative ways to consider. The first possibility that Bricot suggests is

(GLiiii) a *complexe significabile* is impossible because it is judged by the "first impossibility" (p. 49.17).

Note that the *complexe significabile* is not judged by God, the first truth, but by the "first impossibility." Bricot rejects (GLi) directly for the same reason that one cannot determine the falsity of complexe significabilia by claiming that false complexe significabilia are judged by the "first falsehood." This latter view would amount to postulating the eternal *(ab aeterno)* existence of the most evil spirit *(peccimus daemon)* who could never judge a complexe significabile true.363 Bricot asserts, however, that nothing is eternally false, so this method for determining falsity should be rejected.

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362*ibid.* p. 49.8–10. "Et sic patet quod primam veritatem nihil judicare non est possibile, ut per consequens primam veritatem judicare so nihil judicare est impossibile, et sic in infinitum." ("And so it is clear that the first truth to judge nothing is not possible, and therefore, the first truth to judge Himself-to-judge nothing is impossible, and so on into infinity.")

363*ibid.* p. 47.22–25. "Secundo modo aliquod enuntiabile potest dici falsem quia est judicatum a prima falsitate, ut si fuisse ab aeterno peccimus daemon qui non potuisset verum judicare sicut fuit ab aeterno prima veritas quae est Deus quae nec fallere nec falli potest." ("In the second sense, something signifiable can be called false because it is judged by the first falsehood, as if there had eternally been a most evil Spirit who would not be able to judge a truth, just as the first truth, who is God, has existed eternally [and] who neither makes a mistake nor can make a mistake.") This last remark may indicate that the "First Impossibility" is the same *daemon* as the "First Falsehood" since the First Falsehood cannot judge a truth.
The other alternative for determining the impossibility of *complexum significabile* is

(GIIIb) a *complexum significabile* is impossible because it cannot (*non potest*) be judged by God, the first truth.

This *complexum significabile, man to be an ass*, is impossible, therefore, because *man to be an ass* cannot be judged by the first truth (p. 49.19-.21).

Following (GIIIi), a *complexum significabile* is said to have its modality simply because the *complexum significabile* has that modality. For example:

(GIIIi) a *complexum significabile* is possible because "it is existing in such a way as it possibly is" (*ipsum est taliter esse qualiter possibile est esse*).

Bricot gives two examples illustrating how this formula is to be applied to specific *complexum significabilitia*. First, *no creature to be* is possible because it is possible that no creature exist. Also, *every being to be God* is possible because although not every being can be God, it is possible that it be the case that every being is God (*possibile est iva esse quod omne ens sit Deus*) (p. 49.10-.15). Bricot probably has in mind the case in which God chooses not to create anything. In such a situation, God would have been the only being.

Similar formulations are given to the other three modes. Thus,

(GNIIIi) a *complexum significabile* is necessary because "it is existing in such a way as it cannot (*non potest*) fail to be,"

or alternatively "cannot be otherwise than it is or can be." 364 Next,

(GCIIIi) A *complexum significabile* is contingent because it is existing in such a way that it can (*potest*) be and not be (p. 49.34).

Finally,

(GIII) a *complexum significabile* is impossible because it is existing in such a way as it cannot (*non potest*) be.

*Man to be an ass* is impossible, therefore, because a man to be an ass cannot be (p. 49.23-.24).

Bricot next considers a series of objections to these definitions most dealing with the compatibility of these definitions. First, he considers an argument which concludes that the combination of (GPI) and (GPII) leads to contradictory results. (GPI) holds that the *complexum significabile, every being to be God*, is

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364 Ibid.: p. 49.28-.30.
possible because the proposition ‘every being is God’ is possible. Although Bricot does not elaborate, it was a standard view among Christian scholastics that creation has only a contingent existence. This entails that if God had decided not to create anything (which was entirely possible from their perspective) then He would have been the only being. In such a case, the proposition ‘every being is God’ would be true.

However, (GPii) will not support the possibility of every being to be God because the first truth can judge not every being to be God and thus that not every being to be God is possible. This latter conclusion, the objection claims, is supported by the syllogism:

every being to be God can be judged by the first truth,

but Socrates to be God is a being to be God,

therefore, Socrates to be God can be judged by the first truth.\(^{365}\)

Since this is a valid syllogism with a false conclusion, we can conclude that at least one of the premises is false, Bricot maintains, and since the second premise is true, the first, major premise must be the false one. Since this argument entails that not every being to be God can be judged by the first truth, then not every being to be God is possible (according to the second method), but this contradicts the claim that every being to be God is possible, which in turn must be false (ll. 15-20).

In order to resolve this problem, Bricot makes two assumptions concerning complexe significabilia. The first assumption places severe restrictions on the identification of one complexe significabile with another. Complexae significabilia are not identical or "predicable of one another" unless four conditions are met. Let [S₁ esse P₁] and [S₂ esse P₂] be two complexe significabilia "schemata" whose subjects are S₁ and S₂ respectively and whose predicates are P₁ and P₂. [S₂ esse P₂] is identical with [S₁ esse P₁] only if

1. [S₂ esse P₂] is necessarily predicated of [S₁ esse P₁], and [S₁ esse P₁] is necessarily predicated of [S₂ esse P₂]

\(^{365}\) Ibid.: p. 62.5-15. "Bone sequitur: 'omne ens esse Deum potest iudicari a prima veritate, sed So[c]r[a]tem esse Deum est ens esse Deum, ergo So[c]r[a]tem esse Deum potest iudicari a prima veritate.'

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2. \([S_2 \text{ esse } P_2]\) is \emph{per se} predicated of \([S_1 \text{ esse } P_1]\), and \([S_1 \text{ esse } P_1]\) is \emph{per se} predicated of \([S_2 \text{ esse } P_2]\),

3. \([S_2 \text{ esse } P_2]\) and \([S_1 \text{ esse } P_1]\) are in the "same mode of being,"\textsuperscript{366} and

4. \(S_1\) and \(S_2\) are convertible as are \(P_1\) and \(P_2\). This entails that replacing \(S_1\) in \([S_1 \text{ esse } P_1]\) with \(S_2\) and \(S_2\) in \([S_2 \text{ esse } P_2]\) with \(S_1\) preserves their truth value. The same holds for \(P_1\) and \(P_2\).

Bricot explicates the second condition by considering whether this \emph{complexe significabile}, \emph{man is white}, is truly predicated of \emph{man is an animal}. He concludes that it is not because white is not predicated \emph{per se} of animal. Thus, we may conclude that \([S_2 \text{ esse } P_2]\) is \emph{per se} predicated of \([S_1 \text{ esse } P_1]\) only if \(P_2\) is \emph{per se} predicated of \(P_1\) (pp. 64.21 to p. 65.1).

The second assumption for resolving the objections is that there are two ways to view syncategorematic terms (such as the logical connectives and quantifiers) which appear in \emph{complexe significabilia}. One may understand syncategorematic terms "propositionally" (\emph{propositionabilitier}), that is, they are not to be taken as part of the \emph{complexe significabilia} near which they appear. Thus, in ‘\emph{Socrates to run or Socrates not to run} is contingent’, the term ‘or’ is to be interpreted as linking two \emph{complexe significabilia}, as in ‘this \emph{complexe significabile}: \emph{Socrates to run} or this: \emph{Socrates not to run} is contingent’. A second way to understand syncategorematic terms in these contexts is "complexly significably" (\emph{complexe significabilitier}). In this second case, one understands the syncategorematic term as part of the \emph{complexe significabile} itself, as in ‘\emph{Socrates to run or Socrates not to run} is contingent’ where the disjunctive \emph{complexe significabile}, \emph{Socrates to run or Socrates to run}, is said to be contingent. This disjunctive \emph{complexe significabile} is not contingent, Bricot maintains, since it is necessary (p.64.2-3).

With these two assumptions in hand, Bricot suggests several ways to respond to the earlier objections. Bricot claims that ‘\emph{every being to be God cannot be judged by the first truth}’ is false whether ‘every’ is taken as part of the \emph{complexe

\textsuperscript{366}This apparently means that if one possibly exists, so does the other, or if one necessarily exists, so does the other, and so on for the other modalities.
significabile or not. If it is part of the complexe significabile, then every being to be God can be judged by the first cause. If it is not, then what is asserted is that every such complexe significabile: a being to be God can be judged by the first truth (p. 65.19-.24).

With regard to the syllogism quoted to support the opposite claim that the first truth cannot judge every being to be God, Bricot accepts the fact that the syllogism is valid and the conclusion is false, however, the first premise (every being to be God can be judged by the first truth) is not the false one as the opponent suggests. On the contrary, the first is true and the second (Socrates to be God is a being to be God) false because of the first assumption concerning complexe significabilia mentioned above. For ‘Socrates to be God is a being to be God’ predicates a complexe significabile of another of which is not necessarily or per se predicated (pp. 64.29-65.1 and 65.25-.28).

Furthermore, Bricot continues, one cannot claim that the propositions ‘every being to be God is possible’ and ‘not every being to be God is possible’ are contradictory if the ‘not’ in the latter is taken as part of the complexe significabile, as in not every being to be God. For the first truth can judge both to be separate possibilities. However, if the ‘not’ is not part of the complexe significabile, then the result is simply a false proposition ‘every being to be God is not possible’ because God can judge that every being be God (by refraining from creating any other beings besides Himself) (p. 65.29-.33).

The second objection to Bricot’s analysis of possible complexe significabilia attacks (GPiii). We have seen that Bricot believes that ‘every being to be God is possible.’ However, the objection argues, since every being to be God is every being to be God, but not every being is God nor can be God, then every being to be God is existing in such a way that it cannot be. (GPiii) demands that we conclude that every being to be God is not possible (pp. 62.22-.27).

In response, Bricot claims that the inference from ‘every being to be God is every being to be God’ and ‘not every being is God nor can be God’ to ‘every being to be God is existing in such way as it cannot be’ is not valid, although the premises are indeed true. He concedes that not every being can be God, however it can be the case that every being be God (p. 66.10-.12).
The objection offers a second argument to support its view, however. *Not every being to be God* is to be such as it can be, therefore, it is false to suggest that *every being to be God* is existing in such a way as it can be. The premise is supported by the argument that since *not every being to be God* is *some being not to be God* and some being (namely, Socrates) cannot be God, then *not every being to be God* is existing in such way as it can be (pp. 62.27-63.1).

As before, Bricot responds by claiming that the proposition *‘not every being to be God’ is existing in such a way as it can be’ is ambiguous. If ‘not’ is part of the *complexe significabile*, then the proposition is true, but what is inferred from it is incorrect. *Every being to be God* and *Not every being to be God* can both exist in the same way; it can be the case that two contradictories can signify, namely successively (*successive*)—not at the same time nor in the same circumstances. If, on the other hand, ‘not’ is not part of the *complexe significabile* (and is therefore understood "propositionally"), then *‘every being to be God is not existing in such a way as it can be’ is simply false*, Bricot says (p. 66.13-.16).

Bricot next considers an objection to the three methods for determining when a *complexe significabile* is necessary. The *complexe significabile, every being to be*, is necessary, the first objection states, but none of the three methods listed by Bricot entails that it is. Method (GNi) states that *every being to be* is necessary if the proposition *‘every being is’* is necessary. But for the same reason, *Socrates to be* is necessary, if it too can be expressed (at least partially, it seems) by *‘every being is’* (p. 63.17-.23). Bricot responds to this objection by stating that *‘every being is’* directly or specifically expresses *every being to be*, but it does not specifically express *Socrates to be* (p. 66.30-.32).

Method (GNii) does not entail that *every being to be* is necessary, the objection continues, because the first truth does not necessarily judge *Socrates to be*. Consequently, God does not necessarily judge *every being to be* because if God necessarily judged *every being to be* he would necessarily judge *Socrates to be* (p. 63.23-.26). The answer to this objection, Bricot responds, is to deny the inference from *‘the first truth necessarily judges every being to be’* to *‘the first truth necessarily judges Socrates to be.’* Bricot simply denies that we may apply a rule of logic such as universal instantiation in such a context (p. 67.1-.4). These latter two
*complexe significabilia* are not identical, however, because 'Socrates' cannot be converted with 'being'.

(GNiii) does not entail the necessity of *every being to be* because *every being to be* is not existing in such a way as it necessarily is. If it did, this syllogism would be sound:

*every being to be* is existing in such a way as it necessarily is.

*Socrates to be is some being to be*

Therefore, *Socrates to be* is existing in such a way as it necessarily is. But since the conclusion is false and the second, minor premise is true, the first, major premise must be false (p.63.27-.33). Bricot answers that in fact the second premise is false since it violates the fourth condition required for the identification of *complexe significabilia*. For 'Socrates' cannot be converted with 'some being' (p. 67.5-7).

There are two objections to the methods for determining the contingency of *complexe significabilia*, Bricot reports. The first attacks (GCii) by misinterpreting it. If two truths, the objection complains, are said to be true because of the same truth, then if one is necessarily true, so is the other. The two *complexe significabilia* *Socrates to run* and *God to be* are called true, however, because they are so judged by the first truth (p. 64.1-.8). So, if *God to be* is necessary, so is *Socrates to run*. Bricot responds quite correctly that the differences of modality apparent in these two *complexe significabilia* result from the modal character of God's judgement. For God necessarily judges *God to be* while He only contingently judges *Socrates to run* (p. 67.9-.15).

The second objection states that if we accept any of the three methods (GCi)-(GCiii), then we are forced to conclude that *Socrates to run* is both contingent and necessary, which is impossible. The argument is that we can derive *'Socrates to run or Socrates not to run' is contingent'* from *'Socrates to run is contingent'* by an application of the sentential logic rule of "or-introduction," according to which *p* implies *p v q*. But, the objection continues, *Socrates to run or Socrates not to run is contingent*. Is this true?

367 Or, as Bricot puts the point: "Patet consequentia a parte disiunctae ad totam disiunctam." ("The implication from a disjunctive part to the whole disjunction is obvious.")
run is necessary, therefore the same complexe significabile is both necessary and contingent (p. 64.1-15).

Bricot responds by pointing out that 'Socrates to run or Socrates not to run is contingent' is ambiguous. If the 'or' is not taken as part of the complexe significabile, then the sentence is quite true since it states that either this Socrates to run or this Socrates not to run is contingent. However, one cannot not infer that these two complexe significabilia are both contingent and necessary. If the 'or' is part of the complexe significabile then the whole proposition is false. In addition, the argument is still not valid since the contingency of a disjunct does not imply the contingency of the whole disjunction (p. 67.16-26).

Bricot considers three objections to the methods for determining the impossibility of complexe significabilia. The first objection attacks (GII) by claiming that a man to be an ass can be expressed by the possible proposition 'a man is an ass'. Bricot's response is that a man to be an ass can be expressed by a possible proposition, but not by a proposition which now is possible. Bricot seems to be distinguishing between a proposition which possibly can be spoken, thought, or written (since for example I can easily write 'a man is an ass') and a proposition which is possibly true. So, it is possible to write 'a man is an ass' but not for it to be true.

The second objection attacks (GIIib). Men can judge (mistakenly, of course) a man to be an ass. Therefore the first truth, it seems, is able to judge it, too. But, that implies that a man to be an ass is possible, not impossible (p. 63.7-.11). Bricot replies that even though a man can (mistakenly) judge a man to be an ass, God cannot (evidently because God never makes mistakes) (p. 66.21-.24).

The third objection attacks (GIIii). According to it, a man to be an ass in no way is (nulla modo est), therefore one cannot say of it that "a man to be an ass is existing in such a way as it cannot be." If a man to be an ass existed in some way, the objection continues, then it would be impossible to be (impossibile esse esset) and it would exist in such a way that it could not be (sic quod non posset esse esset) which implies a contradiction (p. 63.11-.16).

Bricot's response is that a man to be an ass exists in the first of the three senses of 'being' listed earlier. That means it can be signified whether truly or
falsely. It is not impossible, he concludes, for *a man to be an ass* to exist in that mode (p. 66.25-.28).

Despite all these interesting attempts to defend Gregory’s point of view, Bricot still claims, as we noted earlier, that one can adequately explicate the modality of propositions without postulating the existence of Gregory’s *complexe significabilia*.

### 5.2.2 Gervase Waim

One German logician named Gervase Waim unequivocally rejects Gregory’s belief that *complexe significabilia* exist as some strange sort of non-physical, non-mental entities. These are simply “figments,” he says.\(^{368}\) Yet he appears to borrow his conception of the modalities from Gregory of Rimini, specifically from the model of (GTii):

> God is the true knowledge (*vera scientia*) of every truth. In the same way, He is necessarily knowledge of necessary truths. But of contingent truths, He is contingently knowledge. Howsoever is the mode of judgment or assent in God, so [is] the mode of existence of reality. For example, if a proposition is true, God assents to it. If false, He does not assent; He dissents. If the proposition is necessary, He necessarily assents. If it is contingent, He contingently assents.

This proposition can and must be proven by appeal to God’s perfection. For so great is the perfection of God’s thought that however reality is, God conceives it to be so in the most distinct possible way, and however reality can be, God judges that is can be so with the greatness distinctness and certainty.\(^{369}\)

However, we should note that Waim is being very careful about how is

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\(^{368}\) (*Waim 1519*): sign. a vi\(^{a}\), Plura dixisset de complexe significabitibus sed quia omnia credo figmenta, dicta sufficient. (“I have said many things about *complexe significabilia* but because I believe that they are all figments, I have said enough [about them].”)\(^{369}\) *Ibid.*: sign. a ii vb, “Deus omnium verorum est vera scientia. Verorum tamen necessariorum necessario est scientia. Contingentium autem verorum contingenter est scientia. Taliter quod modus indicandi seu assentiendi in deo est, omnis sicut modus se habendi rei, puta si proposition sit vera, deus assentit ei. Si falsa, non assentit sed dissentit. Si necessaria, necessario assentit. Si contingens, contingenter assentit. Haec propositioni non aliter quam ex perfectione dei probati potest et debet. Tanta est enim perfectio cognoscendi in deo quod qualitercumque res se habet, deus distinctissime cognoscit ipsam se habere et qualiter potest se habere, deus iudicat distinctissime et certissime ipsam se posse taliter habere.”
expresses his view here. For he says that the modal character of God's assent is a necessary condition for a proposition having that modal character, but he does not claim that it is a sufficient condition. In fact, God's assent is in turn dependent on the "notion" (notitia) of a creature which He has. God, however, not only "has" a notion of each possible creature, but He is the notion of each possible creature. 370 Thus, God's power to assent or dissent from a given proposition is determined by His power of conceiving the notions which make it up. Since this notions are "part" of an immutable Being, however, He cannot change them or their modal character anymore than He can change Himself. So, Waim ends up claiming that God cannot conceive more than He actually conceives and that God is unable to bring into existence or destroy the intuited notion of any being. 371 Finally, Waim goes so far as to claim that God necessarily and not freely is the intuited concept of every possible being. 372 Thus, Waim accepts the idea that God's concepts are necessary and beyond His power and will to change.

370 Ibid.: sign. a ii. a. "Deus cuiuslibet rei possibilis est notitia. ... Probatur tamen satis fortiter quia ex praecedente deus aliquod possibile aliud a se cognoscit, et non est maior ratio de uno quam de alio. Inquit omne possibile cognoscit. Consequentia est clara, et antecedens probatur: non enim est maior ratio de possibilis quod est quam de possibilis quod non est. Deus enim ut aliud a se cognoscat non indiget existentia aut praesentia rei quam cognoscit. Notitia enim dei nullo modo dependet ab aliqua creatura inesse notitiar ex eo quod talis notitia non est aliud quam ipsum des creaturam taliter sibi representans." ("God is the notion of every possible thing. ... This is perhaps sufficiently proven because from an earlier confusion [it follows that] God conceives everything possible other than Himself and there is no more reason [for God to conceive] of one thing than of another. Therefore, he conceives every possible [thing]. The inference is clear, and the premise is proven; for there is no more reason [for God to conceive] of a possible [thing] which exists than of a possible [thing] which is not. For God as He conceives something other than Himself does not need the existence or presence of the thing He conceives. For none of God's notions depends on some creature being in the notion because such a notion is nothing else than God Himself representing the creature in such a way to Himself.")

371 Ibid. "Ex istis sequitur primo quod deus non plura intuitive potest cognoscere quam actu cognoscat. Sequitur etiam quod deus nullius rei potest incipere aut desinere esse noticia [i]ntuitiva."

372 Ibid.: sign. i va-b. "Sequitur insuper ex duabus praecedentibus quod deus necessario et non libere cuiuslibet rei possibilis est notitia intuitiva."
5.3 Jean Buridan

The second main view concerning the *complexe significabile* known to Renaissance Nominalists held that a *complexe significabile* is not distinct from whatever the terms of its proposition signified. Thus, as Jeronimo Pardo explains it, this view (just as Gregory's) states that 'man is an animal' signifies *man to be an animal*, but in addition *man to be an animal* is nothing other than a man and an animal, that is, nothing other than which is signified by the terms 'man' and 'animal'. 373 Although, as one can well imagine, there are many problems with this view (as Pardo admits), it seems to be the most popular among logicians of the early 16th century.

From the time that John Buridan (c. 1295-after 1358) first defended this view, its supporters had to explain the modality of propositions (along with their truth and falsity). Pardo himself suggests that one objection to Buridan's conception of the *complexe significabile* is that it "ruins" the usual way for defining what is a true proposition, what is a false, a possible, an impossible, a necessary, and what is a contingent proposition.374

The modalities of *de inesse* propositions were defined in the following way, Pardo reports:

(BP1)375 a possible proposition is "that proposition which whatever is signified by

373(Pardo, 1505): fol. ii"va. "Alius est modus dicendi qui licet venus, multas tamen oppugnationes patitur ut contra veritatem plerunque contingere solet, pro quo ponitur talis conclusio: complexe significabile seu significatum propositionis non distinguitur a significatioibus terminorum, ut ista propositione 'homo est animal' significat hominem esse animal, tunc dicit quod hominem esse animal non distinguatur ab homine et animali seu ab illis quae significantur per istos terminos 'homo' et 'animal'." ("There is another manner of speaking, which, although true, suffers many attacks, as often are brought against the truth, concerning which this conclusion is set forth: a *complexe significabile* or that signified by a proposition is not distinct from the significations of the terms. [This view holds that] this proposition: 'man is an animal' signifies *man to be an animal*, [and] then it asserts that *man to be an animal* is not distinct from man or animal or from those things signified by these terms 'man' and 'animal'.")

374Ibid.: fol. vi"r.

375For 'Buridan-possible-i'.
it possibly is the case.  

(BNi) A necessary proposition is a proposition "by which it is necessary to be just as is signified by this [proposition]."\(^{377}\)

(BII) An impossible proposition is that proposition "by which it is impossible to be just as is signified to by it."\(^{378}\)

(BCI) a contingent proposition is "a proposition which whatever it signifies, it is contingent that it be the case."\(^{379}\)

A problem arises when one combines these definitions of the modalities of de inesse propositions with Buridan’s belief that the signification of a proposition is the individual or individuals referred to by the terms. For example, Pardo asks us to consider the proposition ‘the Antichrist is’. Although possible, Buridan’s notion of its signification invalidates the definition of "possible proposition" (BPI) given above. For "if it were possible, it would be possible to be just as is signified by this [proposition]." Pardo says, but this is false: ‘[a] possible (being) is the Antichrist to be’ because the predicate does not supposit since it is not true of anything to say ‘this is the Antichrist to be’ or ‘[this is] the existing Antichrist.’\(^{380}\)

Thus, the difficulty with Buridan’s understanding of the complexe significabile is that it requires the actual, present existence of individuals in order to say of these that they are merely possible. Conversely, anything nonactual becomes entirely

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\(^{376}\)Ibid.: fol. \(\text{v}^{9}\). "Proposito possibilis est illa quae qualiter per ipsam significatur possibile est ita esse." Cf. (Buridan, 1964): fol. \(\text{x}^{10}\). "Erit igitur proposiitio possibilis, quia qualitercumque significat esse, possibile est ita esse."

\(^{377}\)Ibid.: fol. \(\text{v}^{9}\). "Nam proposiitio necessaria sic diffinitur: est per quam necesse est esse sicut per ipsam significatur." Cf. (Buridan, 1964): fol. \(\text{x}^{10}\). "Et eciam affirmativa dicereur necessaria quia qualitercumque significat esse, necesse est ita esse."

\(^{378}\)Ibid. "Proposito impossibilis est quae impossibile est ita esse sicut per eam significatur."

\(^{379}\)Ibid. "Proposito contingens est propositio quae qualiter significat, contingens est ita esse."

\(^{380}\)Ibid. "Sed iste modus non potest salvare istam diffinitionem, igitur non est sufficiens. Minor probatur: nam si ista diffinitio esset bona, sequeretur quod ista non esset possibilis ‘antichristus est’. Patet quia si esset possibilis, possibile esset ita esse sicut per eam significatur, sed consequens est falsum quia ista est falsa ‘possibile est antichristum esse’ cum predicatum non supponit, cum de nullo verum sit dicere ‘hoc est antichristum esse’ seu ‘antichristus existens’. "
impossible, on the view. Thus, the view seems to be committed to a strict actualism, the view that everything that exists is actual and that no "mere" (nonactual) possibilities exist.

Pardo supports this criticism with the proposition ‘A chimera is not’. This proposition will not be possible either because it signifies a chimera to be. But this ‘[a] possible [being] is a chimera not to be’ is false since the complexe significabile a chimera not to be supposits for a nonexisting chimera, which is nothing.\footnote{Ibid. “Item capio istam propositionem ‘chymera non est’ et admittam quod ista propositio ‘chymera non est’ significat chymeram non esse. Tunc arguo non est possibilis. Antecedens quia per ipsum signifcatur chymeram non esse sed non est possibile chymera non esse quia est una affirmativa cuius praedicatur pro nullo supposim quia de nullo verum est dicere quod sit chymeram non esse seu chimera non existentis.” (“Next I consider this proposition ‘a chimera is not’ and we would admit that this proposition ‘a chimera is not’ signifies a chimera not to be. Then I argue it is not possible. The premise is clear because a chimera not to be is signified by it, but it is not the case that a possible [being] is a chimera not to be because this [the proposition ‘a possible state of affairs is a chimera not to be’] is an affirmative [proposition] whose predicate stands for nothing because [only] of nothing is it true to say that it is a chimera not to be or a non-existing chimera.”) }

A similar difficulty plagues the definition of "necessary proposition." The necessary proposition ‘Peter is not Paul’ will not be necessary according to Buridan’s view because the res signified by this proposition, namely Peter not to be Paul, is only contingent. The complexe significabile: Peter not to be Paul is only contingent because on Buridan’s view, it is equivalent to "Peter-not-existing-Paul," which is the same, presumably, as Peter in circumstances where there is no Paul.\footnote{Ibid.: fol. vrb. “Sed iste modus non salvat istam diffinitionem, igitur. Minor patet. Tunc ista non esset necessaria ‘petrus non est paulus’ quia non est neceesse esse sicut per eam significatur quia res per eam significata contingens est, scilicet petrum non esse paulum. Nam quia petrum non esse paulum est petrus non existens paulus, quod est res contingens, non necessaria [est].” (“But this way will not save this definition, therefore [Buridan’s understanding of the complexe significabile makes it impossible to give a definition of ‘necessary proposition’]. The minor is clear. [For] then this would not be necessary ‘Peter is not Paul’ because that signified by this is not necessary since the thing signified by this, namely, Peter not to be Paul, is contingent. Indeed, because Peter not to be Paul is Peter-not-being-Paul, which is a contingent entity, it is not necessary.”) }

This line of reasoning is confirmed by the propositions ‘a chimera is not’ and ‘either you run or you do not run’. ‘A chimera is not’ is a necessary proposition (since chimerae are impossible beings) but Buridan’s view implies that it is not necessary because ‘[a] necessary [being] is a chimera is not’ is false since a chimera is not does not supposit. Another example Pardo gives is ‘either you run or you do
not run’, which signifies you to run or you not to run. On Buridan’s view, you to run or you not to run is a contingent being, namely, you.\textsuperscript{383}

Similar problems appear in the definitions of ‘impossible proposition’ and ‘contingent proposition’. The impossible proposition ‘God is not God’ signifies God not to be God, which is the necessary being God. Thus, Buridan’s view implies that ‘God is not God’ is necessary.\textsuperscript{384} Finally, the contingent proposition ‘God creates’ signifies God to create, which is God, the necessary being. So, this view implies that ‘God creates’ is necessary. However, this latter claim contradicts the orthodox view that God created the world contingently.\textsuperscript{385}

5.3.1 Peter of Mantua

Pardo found two main attempts to defend Buridan’s view among his predecessors. First, Pardo lists Peter of Mantua’s rather cumbersome answers to the question, what are possible, impossible, contingent, and necessary propositions:

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\textsuperscript{383}Ibid. "Et confirmatur. 'Chymera non est' non esset necessaria quia ista est falsa 'necess est chymeron non esse' quia est una affirmativa cuius praedicatum pro nullo supponit. Item capio istam disiunctivam 'tu curris vel tu non curris'. Non est necessa ia esse sicut per eam significatur, ergo non est necessaria. Antecedens patet quia per eam significatur te currere vel te non currere, sed quacumque re demonstrata de qua verum est dicere quod est te currere vel te non currere, id est tu currens vel tu non currers, illa est contingens, ergo contingens est ista esse sicut per ipsam significatur." ("And this is confirmed. 'A chimera is not' would not be necessary because this is false 'a necessary [being] is a chimera not to be' because it is an affirmative [proposition] whose predicate stands for nothing. Further, I take this disjunction 'you run or you do not run'. It is not necessary that it is [the case] as is signified by this. Therefore, this is not necessary. The premise is clear because you to run or not to run is signified by it, but whatever entity one refers to, about which it is true to say that it is you to run or not to run, that is, 'you running or you not running', is contingent. Therefore, what is signified by this is contingent.")

\textsuperscript{384}Ibid. "Hanc diffinitionem non salvat quia tunc ista non esset impossibilis 'Deus non est Deus'. Patet per eam non significatur nisi Deus, et Deus non est aliquid impossible, immo necessarium."

\textsuperscript{385}Ibid. "Nam ista est contingens 'Deus creat' et tamen non est contingens ita esse sicut per eam significatur. Ipsa enim significat Deum creare, et Deum creare non est res contingens, immo necessaria secundum istum modum dicendi, igitur." ("[Buridan’s conception of the signification of propositions] does not save the definition of 'impossible proposition' because then this 'God is not God' would not be impossible. This is clear by it nothing is signified except God, and God is not something impossible, but rather necessary.")
A true possible proposition is a univocal, indicative, perfect expression (oratio) through which (or through [a sentence] convertible with it signifying that such [is the case]) the intellect adequately [signifying] can be made true, or in any case it could [be made true] after any contradiction of the terms is removed [from it].

An impossible proposition is an univocal, indicative, perfect expression through which the intellect adequately [signifying] cannot be made true (nor through any sentence convertible with it so signifying) nor could it [be made true] after any contradiction in terms has be removed [from it].

A contingent proposition is an indicative, perfect, univocal expression through which the intellect adequately [signifying] can be made true and also false (or through a sentence convertible with it signifying that such [is the case]), after any contradiction is removed [from it].

A necessary proposition is an indicative, perfect, univocal expression through which the intellect (signifying adequately that such [is the case]) cannot be made false (nor can [a sentence] convertible with it), after any contradiction in terms is

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386Peter of Mantua does not include the word 'true' (vera) here (at least in the edition of his work I have seen).

387Ibid.: fol. v². "Proposito possibilis vera est oratio indicativa perfecta univoca per quam intellectus adeaequate aut per secum convertibilem sic signifiantem potest reddi verus, aut saltum possit, deducta terminorum repugnania." Cf. (Peter of Mantua, 1483): sign. f². "Proposito possibilis est oratio indicativa perfecta univoca per quam intellectus adeaequate aut per secum convertibilem sic signifiantem potest reddi verus autem saltum posset deducta terminorum repugnania."

388Ibid. "Proposito impossibilis est oratio indicativa perfecta univoca per quam sic signifiantem adeaequate intellectus non potest reddi verus nec per secum convertibilem nec posset etiam deducta terminorum repugnania." Cf. (Peter of Mantua, 1483): ibid. "Proposito impossibilis est oratio indicativa perfecta univoca per quam sic signifiantem adeaequate intellectus non potest reddi verus nec per secum convertibilem nec posset etiam deducta terminorum repugnania."

389Ibid. "Proposito contingens est oratio indicativa perfecta univoca per quam sic significantem adeaequate intellectus potest reddi verus et etiam falsus vel per secum convertibilem posset deducta terminorum repugnania." (Paul of Venice, 1499): fol. 168² adds 'vel'. Cf. (Peter of Mantua, 1483): ibid. "Proposito contingens est oratio indicativa perfecta univoca per quam sic significantem adeaequate intellectus potest reddi verus et etiam reddi falsus vel per secum convertibilem posset deducta terminorum repugnania."
removed from it.390

Pardo believes that Peter's solution begs the question because it fails to avoid the objections made against Buridan's view. If we ask, Pardo points out, how the intellect is "made true (rectus)," the answer we get from Peter is that one conceives "such to be just as it is" which is merely a recapitulation of Buridan's original definition and thus subject to the same objections.391

5.3.2 Andreas de Novo Castro

The second attempt to save Buridan's view which Pardo presents was that of Andreas de Novo Castro whose main work, the Primum scriptum Sententiarum was written around 1360.392 Andreas himself makes use of one example we have already considered: 'Peter is not Paul'. He believes this proposition is necessary and then tries to explain why it would not be contingent given that it signifies Peter not to be Paul, which refers to a contingent being, namely Peter insofar as he is not Paul.

Andreas, Pardo reports, held that we only apprehend a so-called "necessary intelligible" by means of such propositions as 'Peter is not Paul', in a "figure or form of speaking." In reality, there are no necessary complexe significabilia which correspond to the necessary relations we find among our concepts. Our intellect believes that there are such necessary complexe significabilia in reality because it is "carried away" by its own intelligibile objects. A similar mistake occurs in the case of universals. The intellect has common

390 *ibid.* "Necessaria autem propositio est oratio indicativa perfecta univoca per quam sic significantem adeque non potest intellectus reddi falsus nec per secum convertibilem posset deducta terminorum repugnantia." Cf. (Peter of Mantua, 1483): ibid. "Necessaria autem propositio est oratio perfecta univoca per quam sic significantem adeque non potest intellectus reddi falsus nec per secum convertibilem posset deducta terminorum repugnantia."

391 Ibid. "Sit iste modus petit principium quia si inquiratur cur intellectus redditur rectus iam respondendum est quia concipit ita esse sicut est, et tunc remanentes difficultates pratractae insolutae, ut paret intuenti."

concepts by which it *appears* to apprehend some real intelligible universal, but there are really no such universals. Thus, Andreas first rejects Gregory of Rimini’s opinion that we must postulate the existence of a necessary *complexe significabile* (insofar as *complexe significabilia* are some kind of entity above and beyond the referents of the terms of a proposition) and hopes to replace it with the idea that modalities, just as universals, are simply ways in which the intellect apprehends the only things which truly exist: individual substances and their accidents.

Pardo, before rejecting it, takes some trouble to elaborate Andreas’ view. Andreas, he says, explains how Gregory made the mistake of postulating the existence of *complexe significabilia* above and beyond existing individuals by drawing a comparison between universals and modalities. In the case of universals, one might mistakenly believe that they exist because although we form "individual, specific, and general concepts" after viewing singular entities, we still might imagine that there really are such entities "outside the mind" (*extra animam*) which correspond to these kinds of concepts. We might even go so far as to wonder what

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393 (Pardo, 1505): fol. v°a. “Respondet alius doctor [In margine: Andreas de novo castro] quod per propositiones illas, quae sunt necessariae de quibus probatum est quod non significatur per eas nisi res contingens, apprehenditur quoddam quasi intelligibile necessarium in proportione et figura vel forma loquenti quia intellectus fortior super obiecta intelligibilia quasi sibi correspondent etae intelligibili necessarium significabile complexum. Sed non est ita secundum veritatem et proprietatem rei, sicut intellectus apprehendendo universaliter videtur per conceptum communem apprehendere aliquid universale intelligibile extra animam et tamen non est ita in re.” (Another doctor answers [In the margin: Andreas de novo castro] that one apprehends by those propositions, which are necessary [and] of which it is shown that nothing except a contingent thing is signified by them, some sort of necessary intelligible in an analogical way and in a figure or form of speaking because the intellect is carried above the intelligible objects as if such an intelligible, necessary *complexe significabile* corresponded to them. But there is no such [intelligible, necessary *complexe significabile*] according to the truth and the nature of reality, as if the intellect by apprehending universally seems to apprehend by a common concept some universal intelligible outside the mind, but still there is no such [universal intelligible] in reality.”) Cf. (Andreas de Novo Castro, 1504): fol. viii°b-ix°a.
these universals are or even "where" they are.\textsuperscript{394} The same mistake occurs in the case of the modalities. We form various "apprehensions" (\textit{apprehensiones}) of "existing and possible" entities, such that some of our apprehensions are simple (\textit{incomplex}) while others are complex, and of the complex apprehensions some are affirmative, some negative, some true, some false, some contingent and some necessary, some possible and some impossible. Because of the mental processes which form all these different concepts, again some people imagine that there really exist different types of \textit{complexae significabilia} corresponding to these different concepts.\textsuperscript{395} Nonetheless, Andreas de Novo Castro insisted, Pardo believes, that these different modalities are simply different ways of thinking about the world (which includes only individual entities). "For," he says, "we think about things in various ways, and things are said to vary as if (\textit{quasi}) there were diversity in being."\textsuperscript{396}

Pardo proposes three arguments against Andreas' view that modalities only exist in the mind. First, because Andreas claims that necessary and impossible

\textsuperscript{394}Ibid.: fol. \textit{v}a. "Unde declarat doctor iste subtiliter causam erroris quam habet primus modus dicendi quia sicut respectu rerum singularum formamus conceptus individuales et specificos et generales, ideo ex hoc aliqui sunt imaginati huiusmodi viari et conceptum correspondere extra animam proportionabiliter...et inquisiverunt quid sunt et ubi sunt..." ("Thus this doctor subtly explains the source of the error in the first mode of speaking [that is, Gregory of Rimini's view] has because just as with regard to singular [entities] we form individual, specific, and general concepts, therefore from this some things outside of the mind are imagined to correspond to such a variety of concepts in an analogous fashion...and they wonder what these are and where they are...")

\textsuperscript{395}Ibid.: fol. \textit{v}a-b. "...ita in proposito quia de rebus existentibus et possibilibus apprehensiones varias formamus (quadam incomplexas, et quadam complexas, et harum quadam affirmativas et quadam negativas et quadam veras et quadam falsas, quadam contingentes et quadam necessarias, quadam possibles et quadam impossibles), ex hoc [aliquis] imaginatis sunt quod huiusmodi diversitatis apprehensionum correspondent proportionabiliter differentia intelligibilium objective terminantium." ("...so in the proposed view [this doctor explains the source of errors concerning the signification of propositions] because we form various apprehensions about existing and possible things [some simple [apprehensions] and some complex, and of the complex [apprehensions], some affirmative and some negative, and some true and some false, some contingent and some necessary, some possible and some impossible], from this [some things] are imagined [to exist] because the division of intelligibles, objectively determining [the apprehensions], corresponds analogously to such a diversity of apprehensions.")

\textsuperscript{396}Ibid.: fol. \textit{v}b. "Sed non ita est secundum veritatem et rei proprietatem, sed tantum secundum similitudinem et modum intelligendi. Intelligimus enim varie, et res dicuntur variar quasi esset talis diversitas in re."
propositions are only such "according to a figure or way of speaking" (secundum figuram et modum loquendi), then we can never say that these propositions are necessary or impossible according to truth (secundum veritatem). But this does not sufficiently assign modality to propositions.

His next arguments lend support to this first, brief argument. Pardo's second argument maintains the differences we note among necessary, contingent, and impossible propositions should not be thought of as only in our concepts because our "intellect is moved by reality" (intellectus enim movetur a re). Thus, he concludes, if the reality conceived of by means of one of these types of propositions is no different from that conceived of by another type, then it is not clear why one proposition is possible and another impossible.

Finally, Pardo asks us to consider the proposition 'Socrates possibly is white.' He asks: independently of any operation of the mind (seclusa omni operatione intellectus), is it necessary or not? If is not, then we may wonder where it gets its necessity if it were necessary. If on the other hand 'Socrates possibly is white' is necessary, then it is so because there is some necessity in reality (in re) signified by this sentence because of which the entity apprehended according to that

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397 Ibid. "Sed adhuc iste doctor non videtur satisfacere quia, ut dicit, per tales propositiones necessarias aut etiam impossibiles solum apprehenditur aliquod intelligibile quasi necessarium et non quod ita sit in re, sed tantum secundum quandum figuram et modum loquendi. Infero ergo etiam tales propositiones secundum rei veritatem non debent dici necessariae vel impossibiles, sed tantum secundum figuram et modum loquendi. ... Et iva non sufficienter assignat rationem necessitatis, contingentiae, possibilis, vel impossibilis propositionum." ('But still this doctor does not seem to do enough because, as he says, by necessary and also impossible propositions one only apprehends some quasi necessary intelligible, and not that this is actually the case but only according to some figure and mode of speaking. Therefore, I also infer that such propositions must not be called necessary or impossible with regard to true reality, but only according to a figure or mode of speaking. ... And thus [this view] does not sufficiently give the reason for the necessity, contingency, possibility, or impossibility of propositions.')

398 Ibid. "Item sic arguo. Aliter concipitur res aliqua per propositionem necessariam, aliter per propositionem contingentem, et aliter per propositionem impossibilem. Et illa alienas non tantum in conceptu est consideranda. Intellectus enim movetur a re. Si ergo res non aliter se habet ut concipiatur per unam propositionem et per aliam, non videtur unde una proposition dicatur possibilis et alia impossibilis." ('Moreover I argue in this way. Each entity is conceived one way by a necessary proposition, another way by a contingent proposition, and another way by an impossible proposition. And these differences should not be considered [as being] in our concepts alone. For the intellect is moved by reality. If therefore a thing is no different in so far as it is considered by one proposition [or] by another, one does not see why one proposition is called possible and the other impossible')
necessity is said to be necessary.\footnote{399}{Ibid. "Et confirmatur quia seclusa omni operatione intellectus, quero an necesse sit ita esse taliter qualiter significabatur per istam: ‘Socrates possebit et albus’ aut non. Si dicatur quod non, quaeatur unde sumit illa propositio suam necessitate[m] quando est. Si dicatur quod sic, ergo aliqua necessitas est in re significata propter quam res apprehensa secundum talem necessitatem dicitur necessaria." ("And [the conclusion] is confirmed because after setting aside every function of the intellect, I ask whether it is necessary that what is signified by this ‘Socrates possibly is white’ be the case or not. If one says that it is not, I ask from what does this proposition derive its necessity when it is. If one says that it is [necessary], therefore there is some necessity in the reality signified because of which the apprehended thing according to such necessity is said to be necessary.")}

5.3.3 Jeronimo Pardo

Pardo next goes on to give his own opinion and to explain how modalities can exist as part of the world, and yet propositions still only make reference to individual entities, as Buridan insisted. In other words, Pardo next attempts to explain his response to the original objections made against Buridan’s conception of the \textit{complexe significabile} without making modal differences mere mental differences.

The most important aspect of Pardo’s response is the distinction between absolute and relative modalities.

There are two kinds of necessity: namely [necessity] which is called absolute or unconditional (\textit{simpliciter}) [necessity], and second, relative necessity. In other words, something is called necessary in two ways, that is, absolutely or relatively. One should speak of the contingent in the same way, that it is twofold: absolute and relative. In the same fashion, impossibility is spoken of in two ways, absolute and relative impossibility.\footnote{400}{Ibid.: fol. v\textsuperscript{vib}. “Duplex est necessitas, scilicet absoluta et simpliciter dicta. Alia est necessitas relativa. Seu aliquid dicitur necessarium dupliciter, scilicet absolute et relative. Similiter de contingenti dicendum est quod est duplex: absoluta et relativa, et pariforma impossibilis dicenda est duplex: absoluta et relativa.”}

Pardo tells us: "that is called necessary of absolute necessity which cannot (\textit{non posset}) fail to exist in reality."\footnote{401}{Ibid.: fol. vi\textsuperscript{a}. “Illud enim dicitur necessarium necessitate absoluta quod non posset non existere in rerum natura.”} Thus, the absolutely necessary being seems to be the same as the only \textit{res necessaria}, namely God. Thus, Pardo claims that 'God necessarily is a being' is true if the term 'necessarily' refers to necessity \textit{simpliciter}, which he seems to equate with absolute necessity.
However, 'man' in the proposition 'man is not an ass' is related necessarily (albeit in a negative way) to 'ass'. The relationship between the two is not one of absolute necessity, but of relative necessity. Indeed, Pardo goes so far as to say that man is "something necessary," that is, in the sense of relative necessity. 402

Although Pardo's terminology clearly is derived from Aristotle, his distinction between absolute and relative modalities is somewhat different from Aristotle's. Aristotle's distinction seems to be one between different types of propositions while Pardo applies his distinction to entities referred to by terms. 403 Thus, when Aristotle speaks of relative necessity, his favorite example is that of the conclusion of a syllogism, which is necessary relative to the premises. Several modern commentators suggest that we understand this relative necessity in terms of the conditional. 404 So, 

$q$ is necessary relative to $p$ if and only if $L(p \rightarrow q)$,

where 'L' expresses "absolutely necessary." As is clear from the examples Pardo offers us above (and below), he believes that absolute and relative modalities apply to individual entities. Thus, the only example of an absolutely necessary entity is God whereas many absolutely contingent entities, such as human beings, are necessary relative to other entities (rational animals, for example).

Essential to Pardo's view is the belief that these modal relations are just as much part of the extramental world as individuals:

For example, after every operation of the intellect is set aside, man and ass are different things (res diversae). This is obvious for each of these. If therefore they are different things, they have some division between themselves, because of which diversity the intellect can think of man not to be an ass. Therefore, the

402(Pardo, 1505): fol. viiA. "Nam homo non solum negative et vere referetur ad asinum, sed etiam relative necessario ita quod homo est quid necessarium necessitate relativa in ordine ad asinum negative. Homo enim necessario non est asinum, licet non sit necessarium necessitate absoluta." ("Indeed man not only negatively and truly is ascribed to ass, but also relatively necessarily such that man is something necessary with relative necessity in relation to ass negatively.")

403This follows that usual interpretation of Aristotle. Some recent commentators, however, have suggested that Aristotle applied the distinction between absolute and relative modalities to individual entities and not propositions. See (Frede, 1970): p. 64.

division in reality (in re) is prior to that in the intellect.\textsuperscript{405}

Thus, Pardo concludes:

man and ass have a relative necessity in reality (in re), from which necessity a
proposition is called ‘necessary’.\textsuperscript{406}

It is interesting to note that Pardo wonders next whether a moral
philosopher might object to his approach because it seems to entail that benevolence
and malice separate from any act of will would exist in the reality willed or denied
(in re volita vel nolita). Pardo denies this possibility, however. He claims that
while a proposition is said to have whatever modality it has because something
(namely its \textit{complexe significabile}) distinct from (or "extrinsic to") it has that
modality, the benevolence or maliciousness of an act of will is intrinsic to the act of
will. Or as he puts it: "an act of willing or denying is called good or evil by means
of an ‘intrinsic description’ and not through an ‘extrinsic description’."\textsuperscript{407}

Finally, Pardo attempts to answer the original objections posed against
Buridan’s method of defining ‘possible proposition’. With regard to the objection
involving ‘the Antichrist is’,\textsuperscript{408} Pardo maintains that this proposition is possible
because “it signifies such as is possible to be” (\textit{significat taliter qualiter possibile est
esse}). Pardo explains:

For it signifies the Antichrist affirmatively in relation to existence, and the

\textsuperscript{405}(Pardo, 1505): fol. v\textsuperscript{vb}. "Exemplum: circumscripta omni operatione intellectus, homo et asinus sunt res diversae. Hoc cullibet est manifestum. Si ergo sunt res diversae, habent quandam divisionem inter se propter quam diversitatem intellectus potest cognoscere \textit{hominem non esse asinum}. Est ergo prius in \textit{re} divisio quam in intellectu."

\textsuperscript{406}ibid.: fol. vi\textsuperscript{ra}. "Homo igitur et asinus habent necessitatem relativam in \textit{re}, a qua necessitate propositio habet quod dicatur necessaria."

\textsuperscript{407}ibid. "Sed moralis philosophus fortasse obiceret quod etiam bonitas et malicia ecluso actu volendi reperiretur in \textit{re} volita vel nolita, sed dico quod non est concedendum, licet in aliis sit concedendum. Actus enim volendi vel non volendi per denominationem intrinseca dicatur bonus vel malus et non per denominationem extrinseca." ("But perhaps a moral philosopher might object that
even benevolence and malice, after the act of will is set aside, would be found in the thing willed or
denied, but I say that this should not be conceded, although in the others it should. For an act of
willing or denying is called good or bad by means of an extrinsic description and not by an extrinsic
description.") Pardo borrows this distinction between \textit{denominatio intrinseca} and \textit{denominatio
extrinseca} from Andreas de Novo Castro. See (Andreas de Novo Castro, 1504): fol. viii\textsuperscript{ib}. (I,
Prologus, q.3)

\textsuperscript{408}See above, p. 155.
Antichrist possibly is. In fact, the Antichrist in a relative and affirmative manner is possibly related (referitur) to existence. This relative possibility is imported by 'possibly' because it is said that the Antichrist possibly is existing.\textsuperscript{409}

Pardo concedes that 'the Antichrist is' signifies \textit{the Antichrist to be} and that the sentence ['a] possible [being] is \textit{the Antichrist to be} is false because the predicate term 'the Antichrist to be' has no reference.\textsuperscript{410} However, he denies that these concessions entail that the proposition 'the Antichrist is' itself fails to signify "such as it is possible to be."\textsuperscript{411} Both of the propositions it is not possible for \textit{the Antichrist to be}, and this proposition 'the Antichrist is' signifies such as it possible to be are true, Pardo insists, and one could claim that \textit{the antichrist to be} is possible because of its relative possibility, and it that case all that is meant by saying 'the antichrist to be' is possible' is that the Antichrist possibly exists.\textsuperscript{412}

In effect, then, Pardo claims that 'the Antichrist is' has two significations. First, it signifies the complexe significabile (in Buridan's sense) \textit{the Antichrist to be}, and second, it signifies a possible relation between the Antichrist and existence. Pardo also implies that the first is the "categorematic" signification of 'the Antichrist
is', while the second is its "syncategorematic" signification.\footnote{Ibid. He simply includes the cryptic phrase "Syncathegoreumata enim (ut in secundo capitulo dicetur) significant aliquid vel aliqua aliquiliter qualiter non significatur per cathegoreumata" before making the distinctions documented in the last three footnotes. Concerning the syncategorematic signification of propositions in Pardo, see (Nuchelms, 1980): pp. 49-50.}

\begin{center}
affirmatively
and
possibly
\end{center}

\begin{figure}
\centering
\includegraphics[width=0.5\textwidth]{figure5-1}
\caption{The Antichrist is'}
\end{figure}

Figure 5-1 illustrates Pardo's view of the relevant signification of 'the Antichrist is' along with its problems. In this figure, the arched line represents the relation holding between the Antichrist and "existence." The relation in this case relates "affirmatively" and "possibly."

One problem with Pardo's approach here is the idea that something can be related to "existence." It is hardly clear that one could make sense of this idea, and Pardo makes no attempt to do so. A second problem concerns the nature of the \textit{relata} of these relations. Do the entities related by these relations have present, actual existence? In the case of 'the Antichrist is' the Antichrist is assumed not to exist at the time this proposition exists. Pardo's answer to this question seems to be, as we will see in his discussion of the next problematic proposition, that it is the \textit{possible} Antichrist which is related "affirmatively and possibly" to "existence."

Unfortunately, this answer may push Pardo into an infinite regress. For if we wonder how we are to understand this idea of a "possible Antichrist," Pardo certainly could not retreat to his usual method of postulating another relation holding between the Antichrist and "existence" such that the Antichrist is "affirmatively and possibly" related to "existence." In such a case, we would then note that the Antichrist does not actually exist in this case either and that he could not be a \textit{relatum} in any relation. This conclusion would force us to say again that
Figure 5-2: An Infinite Regress?

we do not mean the actual Antichrist but only the possible one, which leaves us wondering what we mean by the phrase "possible Antichrist." This regress is represented in figure 5-2. Pardo could answer that the Antichrist is absolutely possible. However, this would contradict his stated analysis in terms of relative possibility. In fact, one would wonder, then, why the absolutely possible Antichrist cannot serve as the referent of the Antichrist to be.

Answering the second objection\textsuperscript{414} posed against Buridan's definition of 'possible proposition', the case of 'chimera is not', Pardo claims that this proposition does not signify chimera not to be because "chimera not to be is not possible and not even intelligible."\textsuperscript{415} He insists, however, that the proposition

\textsuperscript{414}See above, page 156.

\textsuperscript{415}Ibid. "Ad aliam rationem impugnatum possibilistatem propositionis, dico quod non est admittendum secundum istum modum diciendi quod ista propositione 'chymera non est' significat chymeram non esse quia chymeram non esse non est possibile neque intelligibile."
‘chimera is not’ is possible because it "signifies in such a way (taliter) as qualiter is possible to be."\textsuperscript{416}

Pardo attempted support of this last point relies on a rather cute trick. The term ‘chimera’ is taken by Pardo to signify that one possible being \(x\) is related "in a unitive way" to another possible being \(y\) which is, however, incompossible with \(x\).\textsuperscript{417} This fits with the common understanding of a chimera as an animal with an impossible (because incompossible) collection of essences. Chimeras were mythical beasts made up of parts from all sorts of animals (head of a lion, torso of a girl, and the tail of a dragon according to one report). Chimeras are impossible, however, because they were thought to have the essences of all the creatures which made them up, but these essences were also mutually exclusive. To have the essence of a lion entails that one is neither human nor a dragon.\textsuperscript{418}

\[
\begin{align*}
\text{negatively} \\
\text{and} \\
\text{possibly}
\end{align*}
\]

\[
\begin{tikzpicture}
\draw (0,0) node {"unitively"};
\draw (1,0) node {"existence"};
\draw (0,0) -- (1,0);
\draw (-1,0) node \(x\);
\draw (1,0) node \(y\);
\end{tikzpicture}
\]

where \(x\) and \(y\) are possible but incompossible beings.

\begin{figure}
\centering
\begin{tikzpicture}
\node at (0,0) {"unitively"};
\node at (1,0) {"existence"};
\draw (0,0) -- (1,0);
\draw (-1,0) node \(x\);
\draw (1,0) node \(y\);
\end{tikzpicture}
\caption{‘A chimera is not’}
\end{figure}

Pardo offers another perplexing proposition to illustrate his general strategy here: ‘Socrates who is an ass is not Socrates’. This is possible and true, Pardo claims:

\begin{flushright}
\textsuperscript{416}Ibid. "Dicam tamen quod ipsa est possibilis quia significat taliter qualiter possibile est esse."
\textsuperscript{417}Ibid. "Per istum enim terminum 'chimera' significatur quaelibet res possibilis relative unitive in ordine ad quamlibet aliam rem possibilem ei incompossibilem."
\end{flushright}
For Socrates, affirmatively and falsely related to ass, truly and negatively is related to himself. So, ['Socrates who is an ass is not Socrates'] is true. Therefore, it signifies in such a way (taliter) as (qualiter) truly is. For it signifies Socrates, relatively and affirmatively related to ass, negatively obtains (se habere) to himself, and in such a way (taliter) he does not because he truly does not.419

Pardo holds that 'chimera' is similar to the phrase 'Socrates who is an ass'. Just as 'Socrates who is an ass' represents a relation between two possible entities, namely, Socrates and an ass, which are not composable, so does 'chimera', except we are apparently unaware of the specific possible entities so related.420 Pardo's view concerning the signification of 'a chimera is not' is represented in figure 5-3.

\[
\text{disjunctively} \\
\text{and} \\
\text{necessarily}
\]

\[\text{affirmatively} \quad \text{negatively}\]

Socrates running Socrates running

Figure 5-4: 'Socrates runs or Socrates does not run'

Pardo's response to the attacks against Buridan's definition of 'necessary proposition' follows the same pattern.421 The proposition 'Peter is not Paul' is necessary because Peter is necessary 'by a relative necessity existing in a negative way to Paul.' Thus, Pardo concludes, 'whatever (aliqualiter) is signified by this

419(Pardo, 1505): fol. vi". "Accipio hanc propositionem 'Socrates qui est asinus non est Socrates'. Illa possibilis est et vera. Nam Socrates, affirmative et false relatus ad asinum, vere negative referetur ad seipsum. Ideo vera est. Igitur significat taliter qualiter vere est. Significat enim Socratem relative affirmative ad asinum relatum, negative se habere ad seipsum et taliter non est quia vere non est."

420Ibid. 'Quid enim intelligo quando dico 'Socrates qui est asinus' intelligitur cum dico 'chimera'. Per istum enim terminum 'chimera' significatur quaelibet res possible relative unitive in ordine ad quaelibet aliam rem possibilem et incompossibilem.'

421For a description of the objection, see above, p. 156.
proposition, such (taliter) also is necessary."\textsuperscript{422}

The response to the arguments that ‘a chimera is not’ is not necessary is obvious, Pardo claims.\textsuperscript{423} Pardo in effect leaves the proof to the reader, a favorite ploy for authors of logic texts. As we have seen previously, ‘a chimera is not’ signifies that two "arbitrary" possible beings are related (presumably affirmatively) to one another although they are not compossible, and this whole complex of the two incompossible possibles and their relation is related negatively to "existence." This interpretation avoids the problem engendered when the complexe significable: a chymera not to be fails to supposit.

Pardo defends the necessity of ‘Socrates runs or Socrates does not run’ by claiming that it signifies that "Socrates running, related disjunctively to itself, related affirmatively and also negatively."\textsuperscript{424} This difficult formulation seems to mean that Socrates, related affirmatively to running, is related disjunctively to himself, related negatively to running. This disjunctive relation is necessary, and the proposition ‘Socrates runs’ is necessary with a relative necessity.\textsuperscript{425} Figure 5-4 illustrates this situation.

The proposition ‘God is not’ is impossible, Pardo claims, because it

\textsuperscript{422}Ibid. "Et ad primam rationem de illa propositione ‘petrus non est paulus’ patet ex dictis quod petrus est necessarium necessitate relativa negative se habens ad paulum. Ideo aliqualiter significatur per eam, et taliter necesse est esse."

\textsuperscript{423}Ibid. "Ad aliam de necessitate illius ‘chymera non est’ patet solutio." For a statement of the objection, see above, p. 156.

\textsuperscript{424}Pardo changes the example here. The original proposition was ‘you run or do not run.’

\textsuperscript{425}Ibid.: fol. viib. "Ad aliam de ista ‘Socrates currit vel Socrates non currit’, dico quod est necessaria quia significat taliter qualiter necesse est esse. Unde dictur quod Socrates currit, relatus disjunctive ad seipsum relatum affirmativa et etiam negative, habet necessitatem relativa quae concomitantur illum modum se habendi disjunctive affirmativa, et in conceditur quod Socrates currit est necessarius necessitate relativa a qua necessitate illa propositio habet quod necessaria nominetur. ("To the other [objection] concerning ‘Socrates runs or Socrates does not run’, I say that it is necessary because it signifies that which is necessarily the case. Thus one says that Socrates running, related disjunctively to himself related affirmatively and also negatively, has a relative necessity which this mode of relating in a disjunctive and affirmative manner accompanies, and thus it is conceded that Socrates running is necessary with a relative necessity from which this proposition has what is denoted ‘necessary’.")
signifies that God is related to himself in a negative and impossible way.\footnote{\textsuperscript{426}}

The proposition ‘God creates’ is contingent, Pardo maintains, because "God, related affirmatively to Himself [insofar as he is] related to the creature connoted by the term ‘creating’, is said to be relatively contingent."\footnote{\textsuperscript{427}} In other words, Pardo seems to recast ‘God creates’ as ‘God is creating’ and that ‘creating’ makes reference to ("connotes") to God’s creation.\footnote{\textsuperscript{428}} Pardus interpretation is illustrated in figure 5-5.

\begin{figure}[h]
\centering
\includegraphics[width=0.5\textwidth]{figure55.png}
\caption{‘God creates’}
\end{figure}

The "subordinate" relation here between God and His creature is a departure from Pardo’s earlier practice. Previously, the relations Pardo makes reference to all seemed to be predication relations (understood broadly to include

\footnote{\textsuperscript{426}}Ibid. "De illa autem propositione ‘deus non est’ quae in argumento proponitur, dico quod ipsa significat deum qui <deus> est impossibilis impossibilitate relativa ut relatus negative ad seipsum." I tentatively suggest that the ‘deus’ which appears in the text be removed. This passage should thus be translated "Concerning this proposition 'God is not' which is offered in the [earlier] argument, I say that it signifies the God who is impossible with a relative impossibility as if God is related negatively to himself." The "earlier argument" is presented above on p. 157.

\footnote{\textsuperscript{427}}Ibid. "Dico enim quod ipse deus, relatus affirmative ad seipsum relatum ad creaturam quae connotatur per ly creans, dicitur contingens relative." The original objection is presented on 157.

\footnote{\textsuperscript{428}}perhaps taken as whole since Pardo uses the singular ‘creaturam’. It is possible, too, that we are to think of any arbitrary individual. Nothing in Pardo’s text helps us decide between the two possibilities.
identity). In the case at hand, the relation is more than simply predication. The idea that God *creates* His creature must also be included. Thus, Pardo has not simply added a relation of a particular type (predication) to his ontology, but apparently any relation that we express in ordinary language corresponds to a real relation *in re*.

Pardo goes on to concede that the *complexe significable, God to create*, is necessary because it makes reference to the necessary being God. "God creating" refers to the necessary being, too, and it too is necessary. Yet, it is also contingent, relatively to the creatures created.\(^\text{429}\)

Pardo finally suggests that the standard "Buridan" definition of 'contingent proposition' must be modified. The definition Buridan proposed was (in Pardo's formulation) that a contingent proposition is one "which, howsoever it signifies, it is contingent that such is [the case]." The contingent proposition 'every being is God' presents problem for this definition, however, because whatever is signified by it either necessarily is the case or impossibly the case. Either it signifies that God is God, that is, that God is affirmatively and necessarily related to himself, or it signifies that God is one of God's creatures, say, George Bush, that is, that God is affirmatively and impossibly related to George Bush.\(^\text{430}\)

Pardo's solution to this problem is to distinguish two reasons or causes (*causae*) as to why a proposition can be called contingent.\(^\text{431}\) The first reason

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\(^{429}\)Ibid. "Ideo concederem quod *deum creare* est necessarium. Hoc est, ipse 'deus creans' est necessarius et etiam est contingens contingentia relativa."

\(^{430}\)Ibid. "Verumtamen est difficilus qualiter debeat diffiniri propositio contingens. Nam ista est contingens 'omne ens est deus' et tamen clarum est quod quicquid per eam significetur, taliter qualiter per eam significatur necessario aut impossibiliter se habet, quod ostenditur: nam vel significatur deus ut relative et affirmativate se habens ad seipsum, et sic deus est necessarius necessitate relative, aut significatur deus ut relative se habens ad creaturum et affirmativate et tunc est impossibilis impossibilitate relative. Non ergo a suo significato illa propositio suam contingentiam habet." ("Nevertheless there is the problem as to how a contingent proposition is to be defined. Indeed this is contingent: 'every being is God' and still it is clear that whatever is signified by this, whatsoever is signified by it necessarily or impossibly is [the case], which is shown [here]: in fact either it signifies God as existing relatively and affirmatively to Himself, and so God is necessary in the sense of relative necessity, or it signifies God as existing relatively to creatures and [also] affirmatively, and then [the proposition] is impossible through relative impossibility. It is not the case, therefore, that this proposition has its contingency from that which it signifies.")

\(^{431}\)Ibid. "Respondeo: aliqua propositio duplici de causa potest contingens nominari."
follows the standard pattern which we are by now quite familiar with: ‘Socrates is white’ is contingent because if Socrates is truly or falsely related to white, this relation is contingent.\textsuperscript{432}

The second reason why a proposition is called contingent is that it "is able (potest) to signify such as is [the case] in reality and is able not to signify such as is [the case] in reality." Thus, Pardo holds, "every being is God" is contingent because it is able to signify such as is the case in reality assuming that only God exists. Also, it is able not to signify such as is the case in reality assuming that there are other beings which are not identical with God (as now).\textsuperscript{433} In this case a contingent proposition is one which is able to signify such as is the case and is able not to signify such as is the case. This definition, Pardo maintains, fits (convenit) every contingent proposition.\textsuperscript{434}

The difference between the two types of contingency is a difference in the position of the term potest.\textsuperscript{435} In the first type, potest has only the signified state of affairs within its scope. If we allow ‘M’ to stand for potest, then we can understand the first type in terms of the following schema:

\[ M \]

\textsuperscript{432}Ibid. "Prima quando contingit taliter esse qualiter per eam significatur ut ista ‘Socrates est albus’ et credo quod illa contingentia non sit nisi veritas vel falsitas relativa. Et superaddit quod non necessario neque impossibiliter insit ut quod ipse Socrates relatus vere ad album vel false (non tamen necessario neque impossibiliter) dictur contingens contingentia relativa." ("First, when it happens that such is [the case] as is signified by [the proposition], as this ‘Socrates is white’ (I also believe that this contingency is not contingent unless [its] truth or falsity is relative), and one adds that [the predicate] does not necessarily or impossible belong [to the subject] such that this Socrates, truly or falsely related to white (‘... however necessarily or impossible), is called contingent in the sense of relative contingency.") The reason why this contingent relation cannot be necessary or impossible is a result of the definition of this "two-sided" contingency. “Two-sided” contingency is simply defined as that which is neither necessary or impossible.

\textsuperscript{433}Secundo modo aliqua propositio dicitur contingens quia potest significare taliter qualiter est in re et potest non significare taliter qualiter <non> est in re, ut ista propositio ‘omne ens est deus’ est contingens quia in casu potest significare taliter qualiter est in re significazione accepta ex acceptione terminorum ut positio quod solus deus sit, et in casu potest non significare taliter qualiter est in re ut nunc significat.” That the second occurrence of “non” is a misprint is obvious from the example given.

\textsuperscript{434}Ibid. "Quamobrem propositio contingens sic diffiniri habet: propositio contingens est propositio quae potest significare taliter qualiter est et potest non significare taliter qualiter est. Et haec diffinitio omni propositioni contingenti convenit.”

\textsuperscript{435}Potest can be translated as ‘can’ or ‘is able’.
'p' is contingent = df 'p' signifies that Mp and 'p' signifies that M→p.

In the second type of contingency, potest takes the whole signification relation into its scope.

'p' is contingent = df M('p' signifies that p) and M→('p' signifies that p).

5.3.4 Antonio Coronel

The logician Antonio Coronel is the only logician of whom I am aware who directly criticizes Pardo's view concerning the modalities. He argues that this view will not support the claim that the proposition 'a chimera is a chimera' is possible. According to Pardo's view, this should signify the chimera is related to itself. However, this is only possible if chimera were to signify something, which would only be possible if one believed that terms can signify impossabilia. Pardo, Coronel maintains, denies that there is such a form of signification. Therefore, 'a chimera is a chimera' would have to be impossible.436

However, we have already seen how Pardo deals with impossabilia.437

Pardo would simply maintain that the term 'chimera' represents a indeterminate possible being in relation to another indeterminate possible being which is not composable with the first. Thus, Pardo can "reduce" impossabilia to a relation between possabilia. Coronel's objection, then, seems to have simply missed the point.

Coronel does not offer any interesting replacement for Pardo's conception of the modalities although he suggests that we return to Buridan's "taliter-qualiter" type of definition of true and false, and presumably necessary, contingent, possible,

436(Conrol, 1517): sign. a vth. "Nullo modo potest salvaere possibilitas huius 'chimera est chimera', igitur. Patet antececedens: nam illa non significat rem impossibilem nec respective, igitur. Patet antececedens: nam si sic maxime esset significando chimera in ordine ad seipsam, sed illa propositio est falsa cum per te [Pardo?] by 'significat' non ampliat ad quinque differentias temporem, igitur. ('There is no way to preserve the possibility of this 'a chimera is a chimera' [following Pardo's view,] therefore [it should be rejected]. The premise is clear: in fact if [it is true], it would most likely be [true] by signifying the chimera in relation to itself, but this proposition is false since according to you [Pardo?] the term 'signify' is not amplified to the five divisions of time, therefore, [the premise is true].') The fifth "division" of time is impossibility.

437See p. 169.
and impossible propositions.\footnote{Ibid.: sign. a v.}

5.4 Summary of Views

We have found three basic views concerning the nature of modality in the work of these Nominalist logicians. The first was derived from the work of Gregory of Rimini and developed by Thomas Bricot. This view stated that the modality of a proposition and its \textit{complexe significabile} derives from the modality of God’s judgement or assent. We noticed that the view is ambiguous because it is not clear whether God’s assent or judgement is the ultimate source of modality or whether that source is some realm of possibles which determine the nature of God’s assent. Gervase Waim appeared to support this latter conception.

The two other conceptions we found both agree that the basic formula for determining the modality of a proposition was:

A proposition \( p \) has the modal character \( K \) if and only if \( p \) signifies in such a way (\textit{taliter} as \textit{qualiter}) has \( K \).

This formula was subject to at least two interpretations. The first, suggested in the works of Buridan, but clearly defended by Andreas de Nova Castro, understands this formula to attach the modal character to the way the proposition signifies. Since signification was thought to be a relation between an extramental reality and the thoughts of (at least) human minds, these philosophers believe that modality is a simply function of the way our minds represent reality to us. Like universals, however, these modal concepts do not correspond to anything in extramental reality.

The third and final view was that of Jeronimo Pardo. He believes that our modal concepts have correlate entities in the extramental reality. Thus, he postulated the existence of modal relations as the source of our modal concepts.

\footnote{Ibid.: sign. a v.}
5.5 Modality and Power

Nominalist logicians of the Renaissance were well aware of several distinctions among the modalities handed down from their medieval forebears. We have already noticed Robert Caubraith making use of the distinction between necessity per se and per accidens\textsuperscript{439} and Jeronimo Pardo’s use of a perhaps modified distinction between absolute and relative modalities.\textsuperscript{440}

However, other distinctions made by our logicians seem to indicate that there is yet another conception of modality which is quite independent of the types encountered so far and are based on the notion of power and ability (potentia). Unfortunately, no attempt was made by these Nominalists to integrate this conception within the frameworks of the notions of modality listed in section 5.4.

Pardo distinguishes three types of possibility and impossibility "in terms of the subject matter":

sometimes 'possible' stands for anything that does not imply a contradiction. [This type] is called the "logical possible". Sometimes ['possible' stands] for that of which it is possible that it be brought about by the power (\textit{virtute}) of a created agent. Aristotle would call this "possible," and I call it the "physical possible." Further, sometimes ['possible' stands] for a "theological possible," [that] which is possible to come about following the ordained law.\textsuperscript{441}

We may formulate these results as follows:

\begin{itemize}
  \item $p$ is logically possible if and only if $\neg(p \implies (q \land \neg q))$.
  \item $p$ is physically possible if and only if $(\exists x)(x$ is a natural agent $\land x$ has the power to bring about $p)$.
  \item $p$ is theologically possible if and only if God has the ordained power to bring about $p$.
\end{itemize}

Theological possibility presupposes the the well-known medieval

\textsuperscript{439}See p. 95.

\textsuperscript{440}See p. 163.

\textsuperscript{441}(Pardo, 1505): fol. cxii\textsuperscript{a}. Unde de possibilitate et impossibilitate loquor secundum terminos materiae subjectae, alicuius accipiendo 'possibile' pro omni illo quod non implicat contradictiensem quod vocatur 'possibile logicum,' alicuius vero pro illo quod possibile est fieri viriute agentis creati seu quo Aristoteles diceret 'possibile,' et ildv voco 'possibile phisicum,' alicuius vero pro 'possibilis theologico,' quod possibile est fieri secundum legem ordinatum.
distinction between God's absolute and ordained powers. God's absolute power is (usually) limited only by the law of noncontradiction.⁴⁴² Thus, what is possible for God to do absolutely and what is logically possible coincide. God's ordained powers are those powers God exercises within the confines of His revealed law. Thus, Pardo believes that 'Socrates can (potest) be saved without grace' is false because it "imports an impossible character (rationem impossibilem),"⁴⁴³ that is, the predicate 'saved without grace' is impossible. However, being saved without grace is impossible only with regard to God's freely ordained laws concerning salvation.⁴⁴⁴ God has the (absolute) power to save without grace if He wished and had chosen from the unlimited absolute possibilities to create a world in which persons are saved without grace. This would not be an ordained power, however, but an absolute power because its exercise would contradict the ordained laws (revealed in the Scriptures) which govern who will be saved and who will be damned. In any case, we may characterize Pardo's three types of possibility in terms of the powers (potentiae) of various agents. Something is logically possible if and only if God has the absolute power to bring it about. Something is theologically possible if and only if God has the ordained power to bring it about. Finally, something is physically possible if and only if a created, physical agent⁴⁴⁵ has the power to do it.

These realms of possibility are not mutually exclusive, of course. In fact, logical possibility contains theological possibility, which in turn contains physical possibility since God, it would seem, has the power to do anything a created being can.

Pardo evidently also wishes to define three types of impossibility

⁴⁴²Peter Damian is of course an exception because he held that God may have the power to do contradictory things.

⁴⁴³See 4.3.1, p. 111.

⁴⁴⁴Ibid. "Patet hanc est falsam 'Socrates potest salvari sine gratia' quia hoc importat rationem impossibilem secundum legem ordinata."

⁴⁴⁵This class of agents probably includes nonrational "agents" such as stones and fire along with human agents.
following the same pattern. Although he does not explicitly give these definitions, it is easy enough to construct them:

\[ p \text{ is logically impossible if and only if } p \text{ implies } (q \land \neg q). \]

\[ p \text{ is physically impossible if and only if } \neg (\exists x)(x \text{ is a natural agent } \land x \text{ has the power to bring about } p). \]

\[ p \text{ is theologically impossible if and only if } \neg (\text{God has the ordained power to bring about } p). \]

Pardo also holds that there is a type of necessity which can be called "physical necessity" which is closely related to physical possibility and impossibility. He refers to physical necessity at the beginning of a long discussion on the proposition ‘the soul of the Antichrist necessarily will be’. This seems to be true, he argues, if we assume that the Antichrist’s soul will be produced at some time because when it is produced it will be eternal and incorruptible. Thus, it would be physically necessary because "by the power (virtue) of no created agent could it be ended."\textsuperscript{446}

Thus, Pardo defines physical necessity as:

\[ p \text{ is physically necessary if and only if } \neg (\exists x)(x \text{ is a natural agent } \land x \text{ has the power to bring about } \neg p). \]

It is very tempting to construct a definition of logical necessity and theological necessity on the basis of the earlier definitions:

\[ p \text{ is logically necessary if and only if } \neg p \text{ implies } (q \land \neg q). \]

\[ p \text{ is theologically necessary if and only if } \neg (\text{God has the ordained power to bring about } \neg p). \]

However, Pardo never refers to a logical or theological necessity. He does seem to contrast a necessity "simpliciter" with physical necessity, but never defines this. Although he claims that ‘God necessarily is a being’ is true and the term

\textsuperscript{446}(Pardo, 1505): fol. cviivb-va. “Tertium dubium: an haec propositio sit concedenda ‘anima antichristi necessario erit ens’ posito quod anima antichristi aliquando produceatur. Et cum erit producta, erit eterna et incorruptibilis, et dicereur necessario esse necessitate physica ita quod virtute nullius agentis creati poterit desinere esse.” (“The third question [is]: whether this proposition should be conceded: 'the soul of the Antichrist necessarily will be a being', assuming that the soul of the Antichrist at some time is created. And after it will be produced, it will be eternal and incorruptible, and it would be said to exist necessarily in terms of physical necessity, such that by the power of no created agent could it be ended.”)
"necessarily" refers to a necessity simpliciter, it is not clear if we should equate necessity simpliciter with logical necessity.

Robert Caubraith also makes a distinction between physical and logical necessity in a rather different fashion than does Pardo. The subject of his discussion in which the distinction appears is, again, whether the proposition ‘the soul of the Antichrist necessarily will be’ is true. As with Pardo, Caubraith tells us that it seems to be true because once it is produced, the soul (because it is immortal) cannot be destroyed by any natural power.  

Caubraith responds by pointing out that our decision to call ‘the soul of the Antichrist necessarily will be’ true or false depends on whether ‘necessarily’ expresses logical or physical necessity. This latter, he remarks, can also be called a necessity "of the future."

If [we take ‘necessarily’] in the first way, then this proposition is false, from which both of these follow: ‘the soul of the antichrist necessarily is’ and ‘the soul of the antichrist necessarily was’. When we use ‘necessarily’ in this way, all these copulas are implied (convertuntur) by it: ‘necessarily is’, ‘necessarily was’, and ‘necessarily will be’. If [we take ‘necessarily’] in the second way (some

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447Ibid.: fol. cviii

448(Caubraith, 1509): fol. cxxxvi. "Quarto principaliter arguitur: haec propositio est vera ‘anima antichristi necessario erit’ et tamen sua de inesse non est necessaria, ergo regula nulla. Minor patet: haec est sua de inesse ‘haec anima erit’ quam constat esse contingentem. Et major probatur: anima antichristi in aliquo tempore necessario erit, ergo anima antichristi necessario erit. Consequentia videtur tenere, et antecedens probatur: anima antichristi in isto tempore necessario erit (tempus in quo erit producta demonstrando) cum in illo tempore illa anima non poterit destitui per potentiam, saltem naturalem. Omnis enim anima a parte post [productam ??] est perpetua." (Fourth, it is primarily argued: this proposition is true ‘the soul of the Antichrist necessarily will be’ but still its de inessae is not necessary, therefore the rule [Caubraith refers to his version of Pardo 1 which we considered in Chapter 3] is no rule. The minor premise is clear: this is its de inesse ‘this soul will be’ which happens to be contingent. And the major premise is proven: the soul of Antichrist at some time necessarily will be, therefore the soul of the Antichrist necessarily will be. This implication seems to hold, and the premise is proven: the soul of the Antichrist at this time necessarily will be (referring to a time at which the soul will be brought into existence) since at that time this soul could not be ended by a power, at least [not by] a natural one. For every soul considered after [its production] is perpetual.")
respond, the proposition must be conceded.449

Certainly Caubraith’s earlier text indicated that physical necessity should be defined as Pardo suggested. However, Caubraith apparently wishes to add to the notion of physical necessity the idea that whatever is physically necessary will be necessary in the future, but may not have been necessary in the past nor may be presently necessary.

Finally, Caubraith also resurrects the distinction between natural and supernatural necessity which appears in the works of Peter of Ailly and Paul of Venice.450 Caubraith tells us that there are two senses of ‘necessarily’ falling under per se necessity: one of which refers to natural necessity and the other to supernatural necessity. A supernaturally necessary proposition expresses a state of affairs which cannot be made otherwise by any power, whether natural or otherwise. A naturally necessary proposition expresses a state of affairs that cannot be changed by a natural power, but can be changed by a supernatural power. Caubraith tells us that "examples are clear" and thus offers none.451 Still, it is easily seen that supernatural necessity would include all of Pardo’s logical and theological necessity, or as much of them as do not overlap physical necessity.

As interesting as these types of modality are, they are not easily reconciled with the any of the three views of modality summarized in the last section. If we follow Gregory of Rimini’s view, there are two alternatives452 open


451(Caubraith, 1509): fol. cxxxviii. “In prima aceptione [id est pro necessario per se] rursus capituri [‘necessaria’] dupliciter. Uno modo pro necessario tamen necessitate naturali quam supernaturaliter. Et est propositio taliter se habens quod per nullam potentiam alter potest esse quam per eam significatur. Alio modo pro necessario quod per nullam potentiam naturalem, sed solum supernaturalem potest alter esse quam per eam significatur. Exempla sunt clara.”

452See above. p. 176.
to us, neither of which fits well with the conceptions of modality based on *potentiae*. If we agree that God’s assent or judgement is the source of modality, one is left with the question: does God’s assent logically precede his powers or do his powers precede his assent? Or are they the same? Such questions may have reasonable answers, but they were not explored by our Nominalists. If on the other hand we follow Gervais Waim’s perspective, according to which God’s assent was restricted by His Ideas (the "possibles") over which His assent apparently has no control, then we are faced with the question: is it in God’s power to change His ideas and thus the whole modal character of the world (worlds?), or is that power restricted by the nature of His Ideas? Here we have one of the most intractable conflicts in medieval thinking on the modalities: is possibility based on God’s thought or His (thoughtless?) power and Will? Our Nominalists, Waim included, do not take up this question.

If however we follow Buridan and Andrea de Nova Castro in thinking that modalities are merely concepts in minds (human and otherwise), would this entail that human and divine powers are simply concepts in minds, too? If so, Buridan and his followers who generally seem to be rugged direct realists begin to look more like some type of idealist at least with regard to human and divine powers and abilities.

Jeronimo Pardo’s modal relations among individuals may be reconcilable with powers if we suppose that the main relation underlying the modal relations is based on the notion of power. Thus, perhaps ‘x is related in a (physically) possible way to y’ could be equated with ‘x is related to y in such a way that some created being z has the power to bring that relationship about.’ Pardo of course never concocts such a formulation, so it remains a matter of pure speculation whether he would accept such an idea. There is some weak support for such acceptance on Pardo’s part in that he believes the verb ‘potest’, which means ‘can’ or ‘is able’, can replace ‘possible est’ ("it is possible that") in divided modal propositions.453

453Ibid.: fol. cxvb. "In nostro modo loquendi accipimus propositiones in quibus ponitur illud verbus 'potest' loco modalium divisarii de possibili licet ex vi locutionum non faciant talem sensum."
5.6 Recapitulation

In this last section I would like to recapitulate the basic procedure for determining the truth and falsity of modal propositions as offered by the Renaissance Nominalists. I will consider four relatively easy examples so that we do not mimic our Nominalists by becoming lost in the details of overly complicated examples. Thus, I will look at four examples: (1) the composed proposition ‘George to be human is possible’, (2) the divided de possibili proposition ‘George possibly is human’, (3) the composed proposition ‘every human is an animal is necessary’ and (4) the divided ‘every human necessarily is an animal’. I will mainly follow Jeronimo Pardo’s views here since they are the most complete.

(1) The composed modal proposition ‘George to be human is possible’ just in case (a) the proposition ‘George is human’, for which the dictum George to be human materially supposits, now exists,\(^{454}\) and (b) ‘George is human’ is a possible proposition. The proposition ‘George is human’ is the the de inesis of the original modal proposition. In turn, ‘George is human’ is possible just in case that which this proposition signifies is possible. For Pardo, the significate of this proposition is the "union" of George and a human being. If it is possible that George be in such a relation with a human being (that is, himself), then ‘the proposition ‘George is human’ is possible and ‘George possibly is human’ will be true.

(2) In the case of the divided modal proposition ‘George possibly is human’, this is true just in case its de inesis is possible, namely, ‘George is human’. Here it is not required that the proposition ‘George is human’ actually exist. What is required it seems is only that the significate of ‘George is human’ be possible. However, since ‘possibly” "ampliates" reference of the terms to what is, was, will be, or can (potest) be, this is possible just in case there is a possible union between the possible individual George and some possible individual human being (in this case, himself).

\(^{454}\)Since there are three types of propositiones in this tradition, that is, (i) spoken, (ii) written, and (iii) mental propositions, then condition (a) requires that ‘George is human’ must at the present moment either (i) be spoken by someone, (ii) be written down by someone, or (iii) be thought of by someone.
(3) The composed modal proposition "every human to be an animal is necessary" is true just in case (a) the proposition "every human is an animal" now exists and (b) "every human is an animal" is necessary. A problem arises here with regard to condition (b) as to how we determine whether "every human is an animal" is necessary. Since there is no "descent" under this term "human" in the case of composed modal propositions, we are not to consider each existing human to see of they are indeed necessarily animals. If we did, we would discover that "George is an animal" would not be necessary, since it is only a contingent state of affairs that George is an animal. It is possible that George had never existed at all. Nonetheless, Pardo believes that "every human to be an animal is necessary" is true even though he claims "Socrates to be an animal is necessary" is false.455

Pardo never clearly explains, however, how "every human is an animal" is necessary. A partial solution to this problem can be extracted from a remark by Pardo that the things (res) signified by the de inesse of composed modal propositions all have relative modalities.456 Thus, Pardo may be thinking that somehow there is a necessary union between "every human" and "animal." This would only be a partial solution since if Pardo took this suggestion seriously,457 then he would no longer adhere to the spirit of Buridan's notion of the signficate of propositions. Buridan, a sturdy Nominalist, thought that the signficate of propositions were individuals. But "every human" cannot be construed as simply a way of referring to individuals because we are not allowed to "descend" to them. Pardo, however, gives us no clue as to what sort of res this "every human" might be.

455See above, p. 78.

456(Pardo, 1505): fol. cvi‡b. "Res enim ad extra dicitur possibilis vel impossibilis possibilitate vel impossibilitate relativa." ("For the extramental entity is called possible or impossible in terms of relative possibility or impossibility.") Here Pardo is speaking of the res ad extra referred to by the dicitum of a composed modal proposition. Pardo never explicitly extends this remark to the modalities of necessity and contingency, but there seems to be no reason against such an extension.

457Pardo elsewhere indicates that he would take this suggestion seriously. At ibid: fol. ix‡b he says: "Respondeo quod necesse est ut esse sicut per eam ['omne ens est'] significatur significatione totali, sed nego quod ista proposition 'omne ens est' significatione totali significet Socratem esse. Sed significat significatione totali omne ens esse." ("I answer that it is necessary that such is the case just as is signified by this ['every being is'] with its total signification, but I deny that this proposition 'every being is' signifies Socrates to be with its total signification. Rather, it signifies every being to be with the total signification.")
(4) The divided modal proposition 'every human necessarily is an animal' is true just in case for every x which is or can be human,458 x is an animal' is necessary. Here "many" de inesse propositions are required to determine the truth value of the original proposition, as many de inesse as their are possible humans. So, to determine its truth value, all of these would have to be necessary: 'Socrates is an animal', 'George is an animal', 'Dan Quayle is an animal', and so on. None of these is necessary according to Pardo, because the terms in a divided modal proposition must refer to entities which are necessary in the absolute sense.459 Socrates may be necessary relative to an animal, but he must also be a necessary being absolutely. Only God is a necessary being in this sense; therefore, 'every human necessarily is an animal' is false in the divided sense.

We began this chapter by considering the two views known to Renaissance Nominalists concerning the significance of propositions: that of Gregory of Rimini and another defended by Jean Buridan. Thomas Bricot, we found, constructed and tested a theory of the modality for Rimini's notion of the significance of propositions, called the complexe significabile, although Bricot in fact later rejects this approach. Jeronimo Pardo reported two attempts to develop a notion of the modalities based on Buridan's view that the significance of a proposition is the individuals referred to by the terms of the proposition: that of Peter of Mantua and Andreas de Nova Castro. The view of Andreas de Nova Castro (the only one of the two Pardo seems to take seriously) postulated that the modalities, like universals, are only part of our way of conceiving the world and are thus not part of the extramental world itself. Pardo rejects this notion and suggested that modal relations between individuals truly are part of the world (as well relations such as "being true relative to," etc.). Inexplicably, however, we found that our authors were perfectly willing to defend a second account of the modalities based on the "power" or "potency" (potentia) of agents without explaining how this view should be reconciled with the notions of modality developed from their meditations on the

458 The phrase 'can be' shows that the subject is amplified to standing for even possible humans.
459 See above, p. 92.
theory of the significate of propositions. Thus, we must conclude that although they produce several interesting notions of the modalities, the Renaissance Nominalists offer us no universal notion of the modalities.
Bibliography

The following abbreviations are used in this bibliography:

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19 = Universitätsbibliothek, Munich
BAR = Biblioteca Universitari, Barcelona
BAV = Biblioteca Apostolica Vaticana
BL = British Library
BNM = Biblioteca National, Madrid
FB = French Books before 1601, microfilm series, Watertown, Mass.: General Microfilm Company
HUN = Huntington Library, San Marino, California
HRC = Harry R. Ransom Humanities Research Center, University of Texas at Austin
IB = Italian Books before 1601, microfilm series, Watertown, Mass.: General Microfilm Company
SAL = Biblioteca Universitari de Salamanca
UPP = Universitetsbiblioteket Uppsala
VFL = Vatican Film Library, Manuscripta, microfilm series, Saint Louis, Mo.: Saint Louis University

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