THOMAS BRADWARDINE'S
TREATISE ON 'incipit' AND 'desinit'
Edition and Introduction

Lauge Olaf Nielsen

TABLE OF CONTENTS

Introduction ................................................................................................................. 2

I. Manuscripts and Editorial Principles ................................................................. 2

II. Authorship and Date ............................................................................................ 2

III. The Aristotelian Background ........................................................................... 6

IV. The Scholastic Tradition Prior to Bradwardine ................................................. 8
   1. The Main Elements in the Medieval Tradition .............................................. 8
   2.a. William of Sherwood ................................................................................. 11
   2.b. Walter Burley ............................................................................................... 15
   3. Peter of Spain ................................................................................................. 17

V. Thomas Bradwardine ......................................................................................... 22
   1. The Structure of Bradwardine's Treatise ....................................................... 22
   2. The Basic Doctrines in Bradwardine's Treatise ............................................. 24
   3. Bradwardine and Ockham in Discussion ..................................................... 30
      a.a. Ockham's Teaching according to SL I,75 ........................................... 30
      a.b. Bradwardine's Presentation of Ockham's Teaching in SL I,75 .......... 31
      b.a. Bradwardine's Criticism of Ockham's Teaching in SL I,75 ............... 32
      b.b. Bradwardine's Proper Doctrine ............................................................. 33
      c.a. Ockham's Teaching according to SL II,19 ........................................... 35
   4. The Place of Bradwardine's Treatise in the Medieval Tradition of 'incipit' and 'desinit' ................................................................. 41

VI. Bibliography ....................................................................................................... 44
   1. Medieval Authors ......................................................................................... 44
   2. Modern Historians ....................................................................................... 44

Thome Bradwardini Angli De incipit et desinit ...................................................... 47
I. Manuscripts and Editorial Principles

The treatise edited below has been transmitted in four manuscripts, viz.,
A = Biblioteca Apostolica Vaticana, cod. vat. lat. 3066, fols. 50v-52r;
B = Bruxelles, Bibliothèque Royale Albert 1er, cod. 14324-43, fols. 15v-18r;
C = Biblioteca Apostolica Vaticana, cod. vat. lat. 2154, fols. 24r-29v;
D = Vienna, Dominikanerkloster, cod. 187 (153), fols. 215v-218v (Hill Monastic Manuscript Library; Monastic Manuscript Project. No. 16.808). 1

As can be learned from inspecting the critical apparatus appended to the edited text no definite relationships can be shown to exist between the different versions of the text presented by the four MSS. Most variant readings are particular in the sense that they make appearance in only one MS. Cases where two MSS agree against the remaining two do occur but they are comparatively infrequent and reveal no recognizable pattern. For this reason the reading represented by the majority of witnesses has normally been adopted in the edited text. Exceptions to this general principle have been taken only in cases where adoption of the 'lectio difficilior' seemed imperative.

As necessitated by the lack of definable groupings among the four MSS known at present the apparatus has been made as exhaustive as possible. All variant readings have been indicated in the apparatus except the following trivial ones: 'iste'/'ille'; 'sive'/'seu'; 'igitur'/'ergo', as well as obviously insignificant variations in word order. Though this means including a large number of non-sensical readings, in particular from C, alternative strategies would inevitably imply grave risks of arbitrariness.

II. Authorship and Date

Seen on the basis of the alternative posed by the MSS the authorship of the present treatise must have been a moot question in the Middle Ages.

1. As I have not inspected any of the MSS themselves I refrain from presenting full descriptions. For A and C the reader may consult Weisheipl (1969), p.182, and Maier (1961), pp.90ff. At this juncture I should like to express my gratitude to Professor H. Hubien, Liège, for drawing attention to the existence of B. Furthermore, I owe a debt of gratitude to Professor Jan Pinborg who, besides making D known to me, encouraged work on the present edition and made many valuable suggestions. Finally, I am indebted to Adam Bülow-Jacobsen, d.phil., for producing high-quality prints from the microfilm reproducing A.
Whereas A and C point out the well-known Thomas Bradwardine as its author, 
B and D consider the less celebrated Thomas Maulfeld to have been responsi-
bale for this work. However, this discrepancy does not preclude us from 
deciding the question of authorship with a very high degree of likelihood. 
If there are particularly strong reasons for ascribing the present treatise 
to one of the two authors proposed, settling the question of authorship 
in favour of the other would imply serious difficulties.

In favour of Thomas Bradwardine's authorship argues the fact that A, 
which is by far the best of the four MSS, explicitly ascribes the treatise 
to him. The second and more weighty argument comes to light when we fix 
our attention on the mode of composition of this treatise. The author has 
clearly attempted to construct his exposition along axiomatic lines or 
"more geometrico". Now it is a well-known fact that predilection for the 
axiomatic manner of exposition is a highly characteristic feature of all 
those works of which Bradwardine is the incontestable author. Thus both 
the De Continuo and the De Proportionibus as well as his theological main 
work, the De Causa Dei, are moulded according to the "Euclidian" method 
of exposition. In the third place the possibility exists of establishing 
a doctrinal concordance between the present treatise and Bradwardine's 
other writings. In the De Continuo Bradwardine touches on the question 
whether one should assign internal or external limits to the ceasing of a 
so-called permanent thing. Here he strongly advocates the point of view 
that decision of this question should be in favour of an external limit:

... et alicuius rei permanentis, ut hominis, non est aliquod ulterior 
infinium intrinsecum sui esse.\(^2\)

As is clear already from the second supposition this point of view is con-
sidered to be of fundamental importance in the present treatise:

Secunda suppositio est hic quod non est dare ultimum instans rei 
permanentis in esse.

Against Bradwardine's authorship of the present treatise an objection 
might be raised. The author of this work is of the opinion that one can-
not possess determinately true knowledge of future states of affairs and, 
consequently, that future happenings possess a truth-value as yet not set-
tled. On the other hand, so the objection proceeds, from Bradwardine's 
De Futuris Contingentibus as well as from his De Causa Dei we know that 
one of Bradwardine's main objectives\(^3\) was to establish a causative concep-

\(^2\) Thomas Bradwardine (1957), p. 58\(^*\) (396).

\(^3\) Cf. Leff (1957), pp.103ff.; Oberman (1957), pp.105ff.
tion of the divine prescience and, on this basis, a view of future contingents diametrically opposed to the opinion sustained in the present treatise. To this objection two answers are possible. The first consists in pointing out that in the *De Causa Dei* Bradwardine informs us that he experienced his "conversion" which opened his eyes to the true nature of God's gracious omnipotence, while he was still in the faculty of arts. By assigning a date to the present treatise within the period prior to the "conversion" one could, accordingly, circumvent the objection. However, this solution is by no means the only possible one. The author of the present treatise stresses the fact that in his treatment of the subject chosen he has decided to disregard God as first cause, thereby implying that in this treatise he is prepared to accept the commonly accepted teachings on the nature of future contingents. This is all the more reasonable inasmuch as the author bases his argument not on the true nature of future events but on man's natural inability to have certain knowledge of the future, which is of course an incontestable fact irrespective of one's view of God's prescience.

Coming to the problem of Thomas Maulfeld's possible authorship of this treatise it is first of all important to realize that our possibility of providing a solution is seriously hampered by our very limited knowledge of Maulfeld's career and authentic production. However, we know of at least one work whose attribution to Maulfeld is beyond doubt, and which deals with the verbs 'to begin' and 'to cease', and this is his so-called *Confusiones*. In this work Maulfeld espouses a doctrine on 'desinit' which does not tally well with his having written the present treatise.

In expounding propositions containing the verb 'to cease' Maulfeld writes as follows:

> Similiter hoc dictio 'desinit' dicitur exponi uno modo per unam (seil. propositionem) affirmativam de presenti et negativam de futuro, ut in hac propositione 'Sortes desinit esse' hoc est 'Sortes nunc est et immediate post hoc Sortes non erit'. Alio modo exponitur per unam negativam de presenti et affirmativam de preterito ut 'desinit esse motus' id est 'nunc non est motus et immediate ante hoc fuit motus'.

5. For Thomas Maulfeld see Maieru (1972), pp.31-32 et passim.
6. Professor L.M. de Rijk, Leiden, is preparing an edition of this work.
7. Thomas Maulfeld: *Confusiones*, fols.143v-144r.
Comparing this exposition with the view set forth in Bradwardine's *De Continuo* and in the present treatise we may say that in his *Confusiones* Maulfeld defends the view that the ceasing of permanent objects is limited internally, and that this view is strictly opposed to the one sustained in the present treatise and in the *De Continuo*. Below we shall get an opportunity of showing that this opposition is general in the sense that we are here confronted with two different kinds of approach to the problem of how to expound 'incipit' and 'desinit'.

Having established Thomas Bradwardine as the by far most likely candidate for the authorship of the treatise edited below we may endeavour to fix its date of composition.

Already by the middle of the thirteenth century the two terms 'incipit' and 'desinit' had been classified as syncategorematic words, and as such they formed part of the university teaching in logic under the arts faculty. For this reason it is probable that Bradwardine would have found the most natural opportunity of composing a treatise like the present one during his period of regency in the arts faculty. As far as Bradwardine's biography is known today he was 'magister regens in artibus' in the period from 1322 to 1325.8 Furthermore, an early dating of this treatise gains considerably in strength if we turn our attention to the clues provided by the treatise itself. In this treatise Bradwardine carries on a controversy against William Ockham's interpretation of the 'suppositio predicati' in propositions containing the verbs 'to begin' and 'to cease'. In his logical main work, the *Summa Logicae*,9 Ockham deals with 'incipit' and 'desinit' on two occasions, *viz.*, in chapter 75 of the first part and chapter 19 of the second. Accepting with the editors of the complete edition of the *SL* that the entire work was completed already in 132310 we would be justified in limiting the period of composition of the present treatise to 1323-1325.

However, even this period may be further reduced! It is an indisputable fact that Bradwardine's polemics against Ockham's views are directed exclusively against Ockham's first treatment of 'incipit' and 'desinit' (*SL I, 75*). As Ockham's two chapters on these two terms are far from being

9. Hereinafter referred to by way of *SL*.
identical— they are in fact inconsistent— it appears preponderantly like- 
ly that the reason for Bradwardine's concentrating on SL I,75 is to be 
found in the circumstance that he was not yet acquainted with Ockham's 
treatment in SL II,19. Our interpretation of the discussion between Ock-
ham and Bradwardine\textsuperscript{11} will make apparent that in SL II,19 Ockham has modi-
fied and changed his teaching on exactly those points where he had been 
attacked by Bradwardine in the present treatise. Inasmuch as Ockham's ex-
position in SL II,19 can be shown to be a step-by-step reaction to Brad-
wardine's criticism, and as Ockham himself in the opening section of SL 
II,19 indicates the existence of a controversy regarding the exposition 
of 'incipit' and 'desinit' it is by no means far-fetched to conclude that 
it was Bradwardine's treatise which forced Ockham to alter his convictions. 
The generally accepted assumption that the single parts of the SL became 
available successively\textsuperscript{12} would seem to tally particularly well with this 
interpretation of the relationship between Ockham and Bradwardine. Pos-
sibly it might also explain the curious fact that the SL contains two 
mutually incompatible interpretations of 'incipit' and 'desinit'.

With regard to the dating of the present treatise this interpretation 
of Bradwardine's opposition to SL I,75 and Ockham's response to this crit-
icism in SL II,19 carries the implication that Bradwardine composed his 
treatise in the period lying between the time of publication of the first 
and the second parts of the SL. In other words, it is arguable that Brad-
wardine wrote this treatise as early as 1323.

As the 'igitur' appearing in the 'incipit' of the treatise indicates, 
Bradwardine's treatment of 'to begin' and 'to cease' may possibly have 
formed part of a more comprehensive work or series of lectures on syncate-
gorematic words.

III. The Aristotelian Background

Even though already the early scholastics had introduced the two terms 
'incipit' and 'desinit' into their treatments of principally equivocal 
terms\textsuperscript{13} the peculiarly scholastic tradition of 'incipit' and 'desinit' did 
not see the light of day until around the middle of the thirteenth century. 
At this point the Aristotelian discussion contained in particular in the sixth 
and eighth books of the \textit{Physics} was made the basis of the interpretation of

\textsuperscript{11} See below, section V.3.
\textsuperscript{12} William Ockham (1974), pp.7+ ff.
\textsuperscript{13} Cf. Kretzmann (1976a), pp.105 ff.
these two words. Consequently, if we are to form an impression of the basis of the medieval tradition we must turn to these Aristotelian texts. However, we cannot, in this context, undertake anything like a full interpretation of Aristotle's deliberations on the nature of time. Primarily because Aristotle's proper doctrine is extremely complicated - and possibly not quite consistent - and secondarily since contemporary discussions have shown the true meaning of the sixth and eighth books of the *Physics* to be a matter of contention among specialists. Accordingly we shall restrict ourselves to emphasizing only the basic features in Aristotle's discussion and those distinctions which were considered to be of fundamental importance by the medieval schoolmen.

According to Aristotle time is a continuous entity in the same way as magnitude and motion are (232 b 21 ff.). That time is continuous is to Aristotle the same as saying that any segment of time is infinitely divisible and, consequently, that it is in principle impossible to arrive at a last and indivisible or smallest time-unity. If you cannot reach a last time-unity by a process of repeated divisions of a given segment of time then, correspondingly, it is a grave misconception to consider time as constituted by so-called time-atoms. However, it is quite obvious that we believe events to take place at certain points in time. In doing this we are making cuts in the continuous flow of time in order to designate certain instants as more important or notable than the infinitely large number of other instants which could just as well be designated within any ever so small period of time. According to Aristotle we are perfectly justified in designating points in time since any change that is measured against time happens instantaneously (235 b 6 ff.). By way of example we may say that the runner finishes his race in exactly that instant in which he passes the finishing-line. In spite of the fact that no indivisible time-unity exists and that time is not composed of such time-atoms, it is nonetheless possible to designate extensionless instants in the flow of time. The reason why this does not imply a contradiction is, according to Aristotle, that it is a characteristic feature of continuous entities that an actualized dividing-point is common to both segments into which it divides the continuous entity (231 a 20 ff.). This is to say that an actualized dividing-point in the continuous flow of time is finishing-point of one segment as well as starting-point of the other segment (222

---

If matters were any different one would be forced to maintain that two instants could be in direct contact, and that the period of time limited by the two instants was not further divisible (231 a 29 ff.; 236 a 15 ff.).

However, at this juncture we are confronted with a problem. If it is true that an actualized dividing-point is common to both segments then the law of contradiction seems to be endangered. Taking one of Aristotle’s own examples we may focus on the point in which Socrates begins to exist. By designating this point we have divided time into two segments, one in which Socrates does not exist, and one in which Socrates exists. But then somebody poses the question: Does Socrates exist in this dividing-point or doesn't he? On the basis of time’s continuity we would be correct in answering in the negative as well as in the affirmative since the dividing-point belongs truly to both segments into which is has divided the continuous entity. Logically speaking, however, this situation is basically intolerable since it would mean giving up the law of contradiction (235 b 13 ff.).

Aristotle’s further discussion in the fifth chapter of book six as well as in the eighth chapter of book eight of the Physics is devoted not least to the solution of how in different cases this sort of violation of the law of contradiction is to be avoided. The main point in Aristotle’s general solution is to demonstrate that from a logical point of view one is justified in attributing the dividing-point to just one of the segments (e.g., 263 b 12 ff.). In this context we shall not deal with these attempts at a solution but, instead, turn to the medieval scholastics in order to see which results they thought themselves justified in extracting from Aristotle’s exposition and on which they based their own treatment of the problem.

IV. The Scholastic Tradition Prior to Bradwardine

IV.1 The Main Elements in the Medieval Tradition

In his treatment of beginning and ceasing Aristotle made use, so the scholastics believed, of two distinctions of fundamental importance. The first concerns the kinds of entities whose beginning and ceasing are dealt with. Thus it is important to distinguish between 'res permanentes' and

15. Below we shall observe that not all medieval scholastics were prepared to accept this.
'res successive'. A permanent thing is, according to the definition commonly provided by the scholastics, an object whose parts exist simultaneously, as for instance a human body. A successive thing is defined as an entity whose parts exist only successively, as for instance local motion. The second distinction of basic relevance to the solution of the problem of beginning and ceasing is that existing between the first and the last instant of being. As one may affirm as well as deny the existence of either a first or a last instant of some object's being, and as it is imperative to attribute the dividing-point to just one of the two segments it is evident that if a first instant of being is denied with regard to some object then, according to the scholastics' reading of Aristotle, a last instant of non-being should be affirmed, and \textit{vice versa}. On the other hand, if a last instant of being is denied with regard to some object then one must affirm a first instant of non-being for this object, and \textit{vice versa}. In other words, if one attributes the dividing-point to the preceding segment of time one is prevented from attributing it to the succeeding segment since logical considerations stipulate the necessity of attributing such a point to only one segment. In the same way attributing the dividing-point to the succeeding segment of time means renouncing on an attribution of this point to the preceding segment.

A common, though by no means universal, combination of these distinctions is the following. For the beginning of a permanent thing one must, according to most scholastics' reading of Aristotle (235 b 13 ff.; 264 a 2 ff.), affirm a first instant of being and thereby deny a last instant of non-being. As to the ceasing of a permanent thing there was considerable disagreement among the scholastics but more often than not it was assumed that Aristotle denied a last instant of being and affirmed a first instant of non-being (cf. 263 b 9 ff.). We may visualize this relationship by means of one of J.E. Murdoch's highly illuminating graphs: 17

\begin{center}
\begin{tikzpicture}
\node at (0,0) {Socrates' being};
\node at (-2,0) {non-being};
\node at (2,0) {non-being};
\node at (0,0) {being};
\end{tikzpicture}
\end{center}

Affirming a first instant of being and denying a last instant of non-being was often called making a '\textit{positio de presenti et remotio de preterito}'. When affirming a first instant of non-being and denying a last instant of being one was making a '\textit{remotio de presenti et positio de preterito}'.

17. Murdoch (1979), p. 121; also used in Murdoch (Anal. Char.).
As regards the beginning of successive things the scholastics felt justified in assuming that Aristotle denied a first instant of being and therefore affirmed a last instant of non-being (cf. 236 a 26 ff.). Equally well founded in Aristotle's teaching (cf. 236 a 3 ff.) was the persuasion that in regard to the ceasing of a successive entity a last instant of being should be denied, whereas a first instant of non-being should be affirmed. Schematically this can be represented like this: 18

\[\begin{array}{c|c|c}
\text{non-being} & \text{being} & \text{non-being} \\
Socrates' running
\end{array}\]

In denying a first instant of being and affirming a last instant of non-being one was making a 'remotio de presenti et positio de futuro'.

In order to exhaust the possibilities of combining the two basic distinctions we may mention that someone who in the case of some object's ceasing wished to affirm a last instant of being and deny a first instant of non-being would of course be making a 'positio de presenti et remotio de futuro'.

In medieval logic the terms 'incipit' and 'desinit' were considered to be syncategorematic or exponible words inasmuch as scholastic logicians believed that propositions which contain either of the two verbs carry an implicit negation and possess different significations according to the kinds of objects to which their subject term refers. Accordingly, a logician subscribing to the interpretation of Aristotle's definitions summarized above would maintain that a sentence such as 'Socrates begins to be' is to be expounded by way of the proposition 'Socrates is now and Socrates was not previously'. This kind of copulative sentence corresponds to the 'positio de presenti et remotio de preterito' and was, not surprisingly, called an 'affirmativa de presenti et negativa de preterito'. A proposition such as 'Socrates ceases to be' should be analysed into the sentence 'Socrates is not now and Socrates was previously'; this corresponds to the 'remotio de presenti et positio de preterito' and was termed a 'negativa de presenti et affirmativa de preterito'. Coming to successive entities our average medieval logician would analyse a proposition such as 'Plato begins to run' into the copulative sentence 'Plato is not running now and Plato will be running after this' corresponding to a 'remotio de presenti et positio de futuro' and for this reason called a 'negativa de

---
18 According to Murdoch (1979), p. 120; also used in Murdoch (Anal.Char.).
presenti et affirmativa de futuro'. Propositions including the verb 'to cease' and having subject terms denoting successive entities would have to be expounded along the same lines as propositions dealing with the ceasing of permanent objects.

Someone who wished to affirm a last instant of being and deny a first instant of non-being would expound a proposition such as 'Socrates ceases to be' into the sentence 'Socrates is now and Socrates will not be after this' corresponding to a 'positio de presenti et remotio de futuro'; this has as its logical counterpart the terminological expression 'affirmativa de presenti et negativa de futuro'.

Having now supplied a sketch of the Aristotelian background to, as well as the basic elements in, the medieval discussions of the verbs 'to begin' and 'to cease' we may turn to some of Bradwardine's predecessors. In dealing with these scholastics of the thirteenth and very early fourteenth centuries we shall focus in particular on the various grounds they give for assigning either internal or external limits to the different kinds of objects' beginning and ceasing. On this basis we shall be able to identify that branch of the medieval 'incipit' and 'desinit' tradition to which Bradwardine's treatise belongs, as well as pointing out the characteristic features of this work.

IV.2.a William of Sherwood

In chapter sixteen of his 'Treatise on Synecadrematic Words' William of Sherwood deals with the terms 'to begin' and 'to cease'. In the first two paragraphs William argues the necessity of treating these two terms as synecadrematic in spite of the grammatical fact that they are verbs. In the third paragraph William submits his exposition proper of the two terms. Basing himself on Aristotle he draws the common distinction between permanent and successive states or things, and his definitions of these two kinds of objects are completely identical to the ones outlined above. As his starting-point William takes the, according to him, commonly made claim that as applied to permanent objects 'to begin' and 'to cease' should be expounded by a positing of the present and a removing of, respectively, the past and the future. Against this view, which assigns internal limits to both ends of a permanent state, William raises an objection. This objection has the form of a dilemma: if Socran-
tes begins to be healthy and ceases to be ill we would, on the basis of this exposition of 'incipit' and 'desinit', be forced to affirm either that the instant of beginning and the instant of ceasing are one and the same and, consequently, that Socrates is both healthy and ill at this point, or we shall have to admit that these two instants are different. The consequence of this last alternative is that Socrates will be neither healthy nor ill in the period of time lying between these two instants. Obviously the presupposition of the dilemma is that 'being healthy' and 'being ill' are both permanent states.

As is made apparent in his subsequent treatment William is convinced of the rationality of this argument. First of all William holds that the argument is correct in pointing out that the proposed expositions of 'incipit' and 'desinit' are flawed inasmuch as they do not allow of change from one permanent state into another permanent state. Furthermore, William's acceptance of the argument implies that he is in concord with that conception of time on which the argument is based. The reason why the suggested expositions do not allow of two permanent states being immediately successive is partly that two points or instants cannot be immediately contiguous \(^{20}\), and partly that a dividing-point or an instant cannot be common to two segments. Seen on the background of Aristotle's view that the continuous character of time demands the community of a dividing instant, and that logical considerations alone call for the attribution of an actualized instant to only one segment it must be said that William has given priority to the logical demand in such a way as to rob continuous time of its defining characteristic.\(^{21}\)

In his further analysis William stresses that every change is either into a successive or into a permanent state. First William focuses on the case where something changes into a permanent state. In this sort of cases one must, according to William, claim a first instant of being so that we may say that Socrates is really healthy when he begins to be healthy. To the state which precedes the permanent state and which, accordingly,

\(^{20}\) Cf. the last sentence of paragraph seven in chapter sixteen; William of Sherwood (1941), p. 77; (1968), p. 115.

\(^{21}\) It would be tempting to suggest that William's conception of the continuity of time has been more or less similar to the one claiming that a continuous entity contains and consists of a potentially infinite number of points or, in the case of time, instants. Only on this basis does William's denial of the community of the dividing-point and his refusal to accept two immediately contiguous instants make sense. For the medieval conceptions of the 'continuum' see Maier (1949) and (1964) as well as Murdoch (1964) and (1974).
ceases to be one should, on the other hand, attribute a first instant of non-being. Applied to Socrates who regains his health this means that Socrates' being ill must be limited externally. Schematically we may visualize this relationship as follows:

\[
\begin{array}{c|c}
\text{Ceasing} & \text{Beginning} \\
\text{Socrates' being ill} & \text{Socrates' being healthy} \\
\hline
\text{first instant of non-being} & \text{first instant of being}
\end{array}
\]

William fails to specify whether he considers 'being ill' to be a permanent or a successive state but, as we shall see below, he believes his exposition of this relationship to be valid on both alternatives.

Next William proceeds to analyze the case where change is into a successive state. In this case it is impossible to assign a first instant of being to the state or object which starts to be. Accordingly, a last instant of being must be claimed for the preceding state which, of course, ceases to be:

\[
\begin{array}{c|c}
\text{Ceasing} & \text{Beginning} \\
\text{Socrates' rest} & \text{Socrates' moving} \\
\hline
\text{last instant of being} & \text{last instant of non-being}
\end{array}
\]

Finally, William tries to give a more general elaboration of this analysis which focuses exclusively on the reciprocal exclusiveness existing between first instants of being and last instants of being.

If change is into a permanent state then, according to William, 'to begin' has to be expounded by means of positing the present or by assigning a first instant of being. Consequently, the state from which change is taking place must be limited externally, and this is to say that we must expound the ceasing matching this beginning by a denial of the present and an affirmation of the past. William explicates that this analysis of 'desinit' holds good no matter whether it is associated with permanent or successive objects. Schematically this can be represented like this:

\[
\begin{array}{c|c}
\text{Ceasing} & \text{Beginning} \\
\text{Successive states} & \text{Permanent states} \\
\hline
\text{first instant of non-being} & \text{first instant of being}
\end{array}
\]
If change is into a successive state then the exposition of 'incipit' and 'desinit' should be quite different. In this case we must accept that the object which starts to be should be limited externally and that 'incipit' should be expounded by a negation of the present. As the dividing-point cannot be common to both segments and as two instants cannot be immediately contiguous this relationship carries the implication that the ceasing corresponding to this beginning should be limited internally or by an affirmation of the present. Obviously this exposition of 'desinit' is valid for permanent as well as successive objects or states.  

<table>
<thead>
<tr>
<th>Ceasing</th>
<th>Beginning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Successive states</td>
<td>Successive states</td>
</tr>
<tr>
<td>Permanent states</td>
<td></td>
</tr>
<tr>
<td></td>
<td>last instant of being</td>
</tr>
<tr>
<td></td>
<td>last instant of non-being</td>
</tr>
</tbody>
</table>

William is fully aware of the fact that in some cases it may not be possible to sustain the existence of a last instant of being. From Aristotle (234 a 24 - b 9; 239 a 10 - b 4) he knows that rest is just such an exception. In cases of this nature William is willing to allow that both 'incipit' and 'desinit' be expounded by means of removing the present. How we are to avoid the logical difficulties arising from this solution William does not specify.

Thus it is clear that William of Sherwood achieves his expositions of 'incipit' and 'desinit' on the basis of analyses focusing on the different kinds of transition, *vis.*, from permanent or successive states into permanent ones and from successive or permanent states into successive ones. The indisputable presuppositions of these analyses are his view that a point or instant dividing continuous time cannot be common to two  

22 Several logicians expounded 'incipit' and 'desinit' with a view to allowing for transitions from permanent to successive objects. To these scholastics it was imperative to deviate from Aristotle and adopt the obviously more convenient alternative of assigning internal limits to the ceasing of permanent things. See, e.g., Ps.-Petrus Hispanus (as quoted by Kretzmann (1976a), p. 112); Thomas Mulfeld (quoted above, section II); and John of Holland (see Wilson (1956), pp. 33ff.). However, in the thirteenth century providing the ceasing of successive objects with internal limits is quite unique with William of Sherwood. Below we shall observe how William Ockham attributes internal limits to the beginning as well as the ceasing of successive objects, but his reasons for doing this are strictly opposed to William of Sherwood's motives.  

23 From Aristotle's point of view William might just as well have mentioned 'motion' as such an exception, but of course this would have been the same as admitting that his general rule was inapplicable to successive states or objects.
adjacent segments, as well as his conviction that the expositions of 'incipit' and 'desinit' should be able to deal with cases of transition. The result of these analyses is evidently that it is impossible to give a single and universally valid exposition of either 'incipit' or 'desinit' for any kind of object. Now one has to expound a 'desinit' occurring with permanent things by means of a positing of the present and a removing of the future, now by means of a denial of the present and an affirmation of the past. In this way the expositions of 'incipit' and 'desinit' as occurring in particular propositions are totally dependent on physical reality inasmuch as the nature and sequence of the elements involved in a particular transition determine which kind of exposition is to be used.

IV.2.b Walter Burley

Walter Burley's treatise 'De Primo et Ultimo Instanti' is not a logical-grammatical examination of 'incipit' and 'desinit' but an investigation into the problems of assigning limits to the beginning and ceasing of different types of entities. The reason for introducing the work into this context is to be found in the fact that this early work of Burley's

24. That positing a first instant of being excludes the possibility of assigning a last instant of non-being for one and the same object's beginning is maintained by all scholastics and is, in fact, just another way of saying that from a logical point of view a dividing-point should be attributed to just one segment. However, that William applies this principle to the actual transition from one state into another and different state is a direct consequence of his refusal to allow of the dividing-point being common to both segments of time. Thus we may say that all scholastics would agree that affirming a first instant of Socrates' being white is equivalent to denying a last instant of Socrates' not being white. William extends the validity of this principle by claiming that affirming a first instant of Socrates' being white is tantamount to denying a last instant of Socrates being black. Somebody like Peter of Spain would emphatically deny the validity of this extension. Cf. below, section IV.3.

25. I cannot agree with N.Kretzmann (1976a), p.114, when he claims that no medieval logician perceived the inconsistency existing between the commonly provided expositions of 'incipit' and 'desinit' (cf. above, section IV.1) and change from, e.g., one successive state into another. I believe that all medieval logicians saw this inconsistency, and that two kinds of reaction were possible. The first is epitomized by William of Sherwood who designs his treatment with the express aim of avoiding this inconsistency. The second attitude is that of, e.g., Peter of Spain, William Ockham and Thomas Bradwardine who are all persuaded that this inconsistency is only apparent in the sense that it is based on a faulty understanding of Aristotle's teaching on time.

26. I have used the edition published by H. and C. Shapiro; as this is not critical and for this reason should be used with caution I have on several points consulted the MSS at my disposal.

27. It was written in the period prior to the so-called 'Tractatus Primus' which was composed in the period 1220-1327. See Weisheipl (1968), pp.176, note 61; 181 ff.; 184; and Juarez (1978), pp. 25 ff.
has quite a number of essential features in common with William of Sherwood's exposition of 'incipit' and 'desinit'. Accordingly Burley's work may serve both to show that William of Sherwood's basic approach to the problem of beginning and ceasing was by no means unique, and to emphasize those features which are characteristic of this branch of the medieval 'incipit' and 'desinit' tradition.

Burley draws the distinction between permanent and successive entities; a unique feature of his version of this distinction is the fact that a large number of subdivisions are introduced into the category of permanent objects. In the third part of his treatise Burley draws up four rules establishing the first instant of being and the last instant of non-being as well as the last instant of being and the first instant of non-being as mutually exclusive. Like William of Sherwood Burley bases these rules on the conviction that a point dividing time into two segments cannot be common to both segments. Thus in opposition to Aristotle but in agreement with William of Sherwood Burley gives pre-eminence to logical considerations to such a degree that he lets the logical necessity of attributing a dividing-point to only one segment become an attribute of time itself.

In contradistinction to William of Sherwood Burley does not allow of assigning internal limits to successive objects, and in this respect he is a true follower of Aristotle. On the other hand he shares William's conscientious concern that the various kinds of states 'fit together' when they have been assigned their different sorts of limit. For this reason Burley is ready to accept that a last instant of being should be allotted to certain species of permanent objects since this guarantees the congruity between the two members in a transition from a permanent state to a successive state or object. Furthermore, as he accepts the existence of changes directly from one permanent object to another permanent object Burley is forced to make allowance for such exceptions. This he does by stressing that in cases of this kind one should deny either that the subsequent permanent thing possesses a first instant of being or that the preceding permanent thing is endowed with a last instant of being. In this manner Burley ends up with a result basically identical to that of William of Sherwood, viz., that there are no universally valid rules for assigning limits to a given object. And the reason for this state of affairs is to be found in the circumstance that the nature and sequence of the elements.

29. Cf. below, section IV.3.
constituting a given physical change are determinant in relation to the problem of making limit decisions.

At a later point in time Burley became aware of the fundamental weaknesses of his early theory since in his logical main work, the *De Puritate Artis Logicae*, he has completely revised his views. Now he shares Aristotle's doctrine that a point dividing a continuous entity is common to both segments, and his views on which kinds of limit should be assigned to the different sorts of objects are equally altered. He has given up his cumbersome subdivisions within the category of permanent things as well as his former belief in giving a last instant of being to permanent things in their ceasing.

A revision as strong as this calls for an explanation. It is hardly likely that the sole reason can be found in the circumstance that in the *De Puritate Artis Logicae* Burley treats first and last instants from the point of view of logic, whereas in the *De Primo et Ultimo Instanti* he dealt with limit decision problems in purely physical terms. This radical change of opinion is much more readily explained by assuming that in the period lying between the composition of the two works Burley had come into contact with the second main trend in the medieval 'incipit' and 'desinit' tradition, and that he had been persuaded of its superiority over William of Sherwood's approach. In order to become acquainted with the beginning of this second branch of the medieval tradition we must turn to its first representative known at present, Peter of Spain.

IV.3 Peter of Spain

In his *Tractatus Synecagorematum* Peter of Spain deals extensively with the expositions of the two words 'to begin' and 'to cease'. After having explained why these verbs should be treated as synecagorematic Peter stresses that given any kind of object the assigning of a first instant of its being excludes the assigning of a last instant of its non-

31. The section on 'incipit' and 'desinit' in the *De Puritate Artis Logicae* still reveals the influence of William of Sherwood insofar as the five sophisms concluding the treatment of beginning and ceasing are identical to those treated by William of Sherwood, whereas only two could have been lifted from Peter of Spain's tract on synecagorematic words.
32. As I have not had access to the 1489 printed edition of this work I have used N. Kretzmann's translation of the section dealing with 'to begin' and 'to cease' (Appendix A in Kretzmann (1976a), pp. 122–138).
being, and vice versa, just as designating a last instant of its being prevents one from affirming a first instant of its non-being, and vice versa. According to Peter the reason for this is to be found in the circumstance that logical considerations necessitate attributing the dividing instant to just one segment in spite of the fact that beginning and ceasing occur in the same indivisible instant, which is to say that a dividing-point is common to both segments into which it divides time.

Having explained why it is that Socrates begins to be and ceases not to be in exactly the same instant Peter draws the by now familiar distinction between permanent and successive objects. However, Peter introduces a subdivision into permanent things. Thus he distinguishes between permanent things which achieve being instantaneously and permanent objects which come into being over a period of time. Becoming man is an example of the first kind of permanent things whereas getting a tan is an instance of the second. This distinction Peter has quite clearly derived from Aristotle's teaching in the Physica (264 a 1 ff.), and further on he explicates just how he wishes this distinction to be understood. Becoming white, for instance, may be viewed in two ways: either as a process of change occurring over a period of time or as the end result of such a process. On the basis of the first view 'becoming white' should be limited in the same way as successive objects, whereas the second understanding brings about the necessity of treating 'becoming white' as a truly permanent state.

To the beginning of truly permanent objects Peter assigns internal limits and to their ceasing he allocs external limits. On the other hand, successive things are to be limited externally both in their beginning and in their ceasing. For the expositions of 'incipit' and 'desinit' as occurring in propositions these determinations have the following consequences: when joined to a subject term denoting a permanent object the verb 'incipit' should be expounded by an 'affirmativa de presenti et negativa de preterito' (rule 1), whereas this verb should be expounded by a 'negativa de presenti et affirmativa de futuro' when occurring together with a subject term designating a successive thing (rule 2). The exposition of 'desinit' is common to both types of proposition, i.e., those that deal with permanent things and those that deal with successive things; and a proposition containing the verb 'desinit' should always be expounded by a 'negativa de presenti et affirmativa de preterito' (rule 3). 33

33. Examples illustrating these rules can be found above, section IV.1, Cf. John Quidort (1955), p. 281.
Next Peter proceeds to explain how 'incipit' and 'desinit' convey a notion of different times because of their signification, and why this circumstance does not affect the grammatical tense of these verbs. Peter concludes his interpretation of 'to begin' and 'to cease' by showing how it is possible on the basis of his exposition to solve sophisms involving these two 'syncategoremata'. In this context Peter lays down some rules for determining the 'suppositio subjecti' and the 'suppositio predicati' in propositions containing the verbs 'to begin' and 'to cease'. However, neither these rules nor his solutions to the sophisms bring anything principally new and we may therefore forgo treatment at this juncture.  

By comparing the principal part of Peter of Spain's exposition of 'incipit' and 'desinit' with the one submitted by William of Sherwood (or the younger Walter Burley) it becomes immediately apparent that their approaches are significantly divergent. First of all Peter is of the opinion that an instant dividing the continuous flow of time is common to both segments into which it divides time. Secondly, Peter is convinced that his expositions of 'incipit' and 'desinit' are universally valid and allow of no exceptions. To him there is no last instant of being for the ceasing of a permanent thing whether the permanent object in question is followed by a permanent or a successive entity, and, consequently, when occurring with a subject term signifying a permanent object 'desinit' should always be expounded in the way indicated. Thirdly, and in complete concord with the preceding, Peter does not at all ask the question of how the different permanent and successive states or entities precede and succeed each other.

On the basis of the nature of this striking difference we might, for the sake of convenience, call Peter of Spain's way of dealing with the problem of 'incipit' and 'desinit' for the 'one-state-approach', whereas William of Sherwood's treatment is characteristic of what we might call the 'two-states-approach'.

Why did Peter adopt the 'one-state-approach'? It can hardly have been a result of negligence. It is not reasonable to suppose that Peter failed to perceive the incommensurability existing between his assignments of internal and external limits to, respectively, permanent and successive entities. If Peter had considered that the expositions of 'incipit' and 'desinit' should be able to describe transitions from one successive state into another successive state (e.g., a change from walking to running) or

---

34. We shall return to these rules for determining the supposition of the subject and the predicate terms in section V.3.aa.
transitions from a permanent into a successive state (e.g., a change from solid metal to still more fluid metal), then he would no doubt have discovered the obvious flaw. Accordingly, Peter must have had very specific reasons for adopting universally valid expositions of 'incipit' and 'desinit'. In fact, the reason for Peter's basic stand is almost certainly to be found in his understanding of the Aristotelian definition of time as a continuous entity. To William of Sherwood as well as the younger Walter Burley it is contradictory to admit that an instant belongs to both segments into which it divides time. This is not an understanding of Aristotle which Peter would endorse since, according to his viewpoint, it confuses logical necessity with the essence of time. To Peter it is evident that affirming time to be continuous is tantamount to saying that an instant dividing time into two segments belongs equally to both segments. As we have seen, Peter lays great stress on the community of the dividing-point in the beginning of his exposition of 'incipit' and 'desinit'. The logical necessity of attributing a dividing instant to just one segment does not influence the nature of time itself. For this reason the continuous character of time is the fundamental fact to which logical considerations must of necessity remain secondary in importance.

If this is a valid reconstruction of Peter of Spain's basic view then Peter's adoption of the 'one-state-approach' becomes not only understandable but also mandatory. On the basis of Peter's conception of time's continuity as the basic fact the assigning of even external limits does not preclude a dividing point from truly belonging to that segment which it limits externally. The further and highly significant implication of this is that the fact of a dividing instant being common or of time being continuous ensures that all kinds of time-segments 'fit together' no matter how they are limited. Even in cases where logical considerations demand that two adjoining segments of time be both limited externally there can be no denying that the two adjacent segments form part of the undisrupted flow of time.

To the logician making limit decisions and expounding 'incipit' and 'desinit' this state of affairs is a matter of no small consequence. As the assignment of limits does not influence the sequence of time-segments and is, in fact, without bearing on the possibility of different segments to form part of the one continuous stream of time, and as it is the logician's task to make limit decisions, it is perfectly evident that the lo-
gician is obliged to restrict his deliberations to just one time-segment at a time. Peter's actual treatment of the logical problem of expounding 'to begin' and 'to cease' bears witness to the fact that he has fully perceived this implication.

As seen from Peter of Spain's point of view William of Sherwood's and the younger Walter Burley's conscientious attempts at ensuring the compatibility of time-segments by providing them with limits suitable to the actual succession of states must be rejected as an unfortunate result of a complete misunderstanding of time's continuity. Furthermore, as we have seen, William of Sherwood and the young Walter Burley transformed the rule stipulating the mutual exclusivity existing between, on the one hand, a given object's first instant of being and its last instant of non-being and, on the other, its first instant of non-being and its last instant of being into a general rule determining which kinds of time-segments can precede and succeed each other. To Peter of Spain this transformation is a no less grave misconception inasmuch as it would mean attributing a property to time which in the last resort would destroy its continuity. Ironically enough this is tantamount to saying that this transformation would cancel that characteristic of time which, in the first place, necessitates the logicians' making limit decisions and expounding 'incipit' and 'desinit' propositions.

Does Peter of Spain's basic evaluation of the task of expounding 'incipit' and 'desinit' imply that he considers it to be a matter of convenience whether one assigns internal or external limits to the beginning and ceasing of a given object? The answer to this is quite clearly NO. To Peter there are particularly good reasons for providing the different kinds of objects with different kinds of limits, and by holding this persuasion Peter probably believed himself to be in perfect agreement with Aristotle. As regards successive objects it is abundantly evident that internal limits should be assigned neither to their beginning nor to their ceasing. The reason for assigning external limits is of course that the

35. Of course there was no universally accepted interpretation of Aristotle's doctrine on time in the Middle Ages, and William of Sherwood as well as the younger Walter Burley would have been able to produce a number of arguments aiming to show that Aristotle was on their side. Cf. above, note 21.
36. Below in section V.3.ca, we shall get an opportunity of showing how William Ockham fully shares Peter of Spain's 'one-state-approach' but nevertheless is convinced that a genuinely Aristotelian conception of time renders limit decision problems a matter of pure convention.
definition of successive entities requires that they exist during a period of time or, as Aristotle says, because there is not motion in an instant (239 a 10 - b 4). It is equally reasonable, according to Peter - as well as to Aristotle (cf., e.g., 235 b 14 ff.) - to assign a first instant of being to the beginning of a permanent object inasmuch as assigning an external limit would imply the absurdity that Socrates does not yet exist when he begins to exist. Though neither Aristotle nor Peter says this much one would probably be correct in assuming that endowing the ceasing of permanent objects with a first instant of non-being is the obvious choice inasmuch as the ceasing of a permanent object is itself a successive process. 37 As should be evident deliberations of this kind are in perfect concord with Peter’s 'one-state-approach'.

V. Thomas Bradwardine

V.1 The Structure of Bradwardine’s Treatise

In the introductory section of his treatise (1.1) Bradwardine lays down two basic suppositions and draws the fundamental distinction between permanent and successive things or states. He then proceeds to deal with the exposition of 'incipit', and this section consists of three conclusions and their corollaries. The first conclusion (2.1) deals with 'incipit' as occurring in propositions whose subject terms refer to permanent objects, and this conclusion has two corollaries appended to it (2.1.1 - 2.1.2). The following two conclusions (2.2 - 2.3) deal with 'incipit' as occurring in propositions about successive objects. To each of the two conclusions a corollary is appended, but whereas the corollary of the second conclusion (2.2.1) is quite brief the corollary of the third conclusion (2.3.1) takes up the larger part of the whole treatise. This latter corollary consists of two main parts, the first of which (2.3.1.1) deals with 'res permanentes' and the second and by far the longer (2.3.1.2) regards 'res successive'. This second part of the corollary of the third conclusion is again subdivided into two parts of which the prior (2.3.1.2.1) treats of propositions about local motion whereas the posterior (2.3.1.2.2) concerns propositions about the remaining kinds of motion or change. The section here called '2.3.1.2.1' consists of five conclusions (2.3.1.2.1.1 - 2.3.1.2.1.5) of which only the second has a corollary appended to it (2.3.1.2.1.2.1). Furthermore, this section has a paragraph (2.3.1.2.1.6) treating of the

supposition of terms occurring in 'incipit' sentences, and this section is directed explicitly against the views of William Ockham. Having concluded this disproportionally long corollary Bradwardine proceeds to deal with 'desinit' as occurring in propositions about permanent objects (3.1) as well as successive entities (3.2). Next he discusses cases in which 'incipit' and 'desinit' appear in propositions whose subject terms refer to objects that possess being in only one instant (4.1). By way of conclusion (5.1) Bradwardine lays down a set of rules determining the kind of supposition with which the subject term as well as the predicate term signify in propositions containing the verbs 'to begin' and 'to cease'.

There can be no doubt that Bradwardine purposed to write his treatise on beginning and ceasing along axiomatic lines or 'more geometrico'. In this respect the present treatise is similar in particular to the De Continuo which is modelled according to the scheme 'definitiones - suppositiones - conclusiones'. That Bradwardine in the present treatise has chosen to substitute 'distinctio' for 'definitio' makes no difference of significance.

However, one must realize that Bradwardine has not been entirely successful in his attempt at imitating Euclid. Thus it is not at all clear why Bradwardine has made the determination of first and last instants of permanent objects into a 'suppositio' when the equivalent determination regarding successive things is introduced as the second conclusion. Bradwardine may possibly have considered the distinction between first and last instants in the case of successive objects as provable in the sense that this distinction follows directly from the nature of successive objects. But in that case we should have expected to find a definition of continuous entities included among the suppositions. Furthermore, Bradwardine has forgotten to introduce 'instantaneous' entities into the introductory section. Perhaps Bradwardine's hesitations about the actual existence of such entities have prompted this omission.

The most confusing feature in the structure of Bradwardine's treatise is no doubt that he places a paragraph dealing with permanent things (2.3.1.1) in the corollary of the third conclusion (2.3), which, just as the far larger part of the corollary (2.3.1.2) deals exclusively with propositions about successive entities: In actual fact there are two reasons why Bradwardine is not justified in giving this paragraph its present position. Firstly, this paragraph does not presuppose any of the three pre-
ceding conclusions but follows directly from the second supposition. Seco-
ondly, the thesis sustained in this paragraph is implied by the definition
of 'desinit' and accordingly it should have been postponed to the section
dealing with this part of the subject.

Disregarding these formal flaws one must, however, say that by his
quasi-axiomatic method of exposition Bradwardine has made it comparatively
easy for the reader to follow his line of reasoning.

V.2 The Basic Doctrines in Bradwardine's Treatise

Bradwardine's basic expositions of 'incipit' and 'desinit' as well
as his distribution of first and last instants are set out in the introduc-
tory section (1.1) and in the two first conclusions (2.1 - 2.2). These
are completely identical to those submitted by Peter of Spain and for this
reason need not detain our attention.

In the third conclusion (2.3) Bradwardine tries to substantiate the
view that it is impossible to maintain that motion begins to be since
everything that moves must have been in motion previously, 38 or, as Brad-
wardine says, since 'omnis motus est'. Bradwardine's reason for espousing
this view is, in the first place, the observation that every motion must of
necessity exist over a period of time. In the second place this view is
based on the fact that in continuous entities it is impossible for two
points to be immediately contiguous. As we know the exposition of 'inci-
pit' as occurring with terms signifying successive objects is by way of a
'negativa de presenti et affirmativa de futuro'. If, in accordance with
this exposition, we take the instant where motion does not yet exist we
cannot designate a succeeding first instant in which motion has just a-
chieved being since this first instant should be immediately adjacent to
the instant in which motion does not yet exist. The impossibility of design-
nating such an adjoining instant is not just a matter of practical infeasi-
bility, for the very existence of such an immediately contiguous point or
instant is precluded by the continuous character of time. Thus we are
forced to designate an instant posterior to this, in the strict sense, i-
imaginary instant but in this case it is no longer true that motion begins
to be, since at this instant it will be the case that motion has been.

A direct consequence of this line of argument is clearly that all
statements about successive entities can be verified only retrospectively.

38. Cf. Aristotle, 236 b 34.
Though this is not made explicit in the present conclusion the rationality of this consequence is underscored in its corollary.

It is well worth calling attention to the circumstance that in this conclusion as in the larger part of his treatise Bradwardine makes his point in a purely logical or metalinguistical language. He does not use the object language and this is true in spite of the fact that he twice claims to be speaking 'physice'.

In his third conclusion Bradwardine has proved that 'incipit' propositions about successive objects are 'impossibles' inasmuch as present motion always implies previous motion. Now it would be quite natural to assume that this result would induce Bradwardine into sustaining the view that we should refrain from talking about the beginning of successive entities. But in fact it does not. Bradwardine does not believe that his third conclusion proves that propositions about the beginning of motion should be excluded from everyday language. What the third conclusion shows is that we should be careful not to be deceived by the superficial simplicity of such propositions. In order to complete his analysis and determine the full import of such statements Bradwardine turns to the problem of how the expositions of 'incipit' imply making affirmations about future states of affairs as well.

Firstly Bradwardine sets out to prove that the exposition of 'incipit' as occurring with terms signifying permanent objects implies making affirmative statements about the future (2.3.1.1.). As is well-known, a proposition such as 'Sortes incipit esse' should be expounded by the 'exponentes' 'Sortes nunc est' and 'Sortes prius non fuit'. Inasmuch as one may validly infer either both or just one of the 'exponentes' from the 'exponible' we may infer the proposition 'Sortes nunc est' from the statement 'Sortes incipit esse'. Since a permanent object does not possess a last instant of being we may, according to Bradwardine, safely draw the further consequence 'Sortes nunc est ergo Sortes erit'.

In opposition to this the objection is made that this inference would imply that there is determinate or certain knowledge of future contingents, and that such a point of view conflicts with that of Aristotle (18 a 33 ff.). Bradwardine counters by drawing a distinction between different kinds of future contingents. In the first place there are future contingents whose truth are consequent on true propositions in the present tense. A future

contingent of this kind Bradwardine calls a 'nunc futurum contingens' because being necessarily implied by true propositions about the present it conveys no 'real' information about future states of affairs. The second kind of future contingents are those that concern truly future events and whose truth-value is in no way determined before these events take place or do not occur. About such future contingents no certain knowledge can be had, and such knowledge is in no way implied by the expositions of 'incipit' and 'desinit' as occurring in connection with terms denoting permanent things.

Next Bradwardine proceeds to substantiate that present motion implies not only previous but also future motion. This he does on the basis of the exposition of 'incipit' as occurring with terms signifying successive entities (2.3.1.2). Furthermore, he shows that this implication holds good for rectilinear as well as for circular motion (2.3.1.2.1.1).

Against this conclusion the objection is raised that if present motion implies future motion then surely no proposition about present motion will possess determinate truth-value since its consequent, i.e., a proposition affirming future motion, signifies a future contingent and for this reason cannot be known to be infallibly true. Furthermore, so the objection proceeds, this is certainly absurd and contrary to Aristotle as present motion is something we perceive every day.

In response to this objection Bradwardine points out that some propositions in the present tense are, in fact, statements about the uncertain future and their expositions show them to possess this covert reference to the future. Propositions about present motion are of this sort. In order for such a proposition to be true it is required not only that the object moving occupies a present position different from a past position but also that the object will occupy a future position different from its present position. If the object does not satisfy this last criterion then it will have achieved its last position and, consequently, will no longer be in motion. For this reason any proposition about present motion is certainly a proposition about a future contingent and as such indeterminately true or false.

Bradwardine is not much impressed by the claim that we perceive present motion inasmuch as logical reasoning shows that this is a sheer impossibility. On the contrary, what we perceive is in fact that something has moved. When we observe the billiard-ball rolling on the green cloth
we may at any instant say that the ball has moved because this we have seen, but neither sense perception nor intellectual reasoning allows us to affirm that the ball will continue its motion; it may have come to a stop.

According to Bradwardine it is thus imperative that we make a distinction between permanent and successive objects with regard to the implication 'nunc est ergo erit'. As regards permanent objects this inference holds good for logical reasons only, and therefore the future proposition implied by a present tense proposition is not a statement about a future contingent but a 'nunc futurum contingens'. As regards successive objects a proposition in the present tense is actually a statement about some future state of affairs, and therefore a proposition in the present tense is only true if we grant the truth of the corresponding proposition in the future tense. As a matter of course Bradwardine's view on the logical equivalence of present tense and future tense propositions dealing with successive objects implies that propositions about successive states or objects can be verified only retrospectively; and in this treatise Bradwardine shows himself to be fully conscious of this fact.

In the next four paragraphs Bradwardine builds on the foundation laid in section 2.3.1.2.1.1, and he proves the validity of the following four consequences:

'Sortes incipit moveri localiter, igitur immediate post hoc aliquod spatium erit pertransitum' (2.3.1.2.1.2);

'Sortes incipit moveri localiter, igitur Sortes immediate post hoc erit in duobus locis' (2.3.1.2.1.3);

'Sortes incipit moveri localiter, igitur Sortes non movebitur localiter antequam sit in alio loco quam nunc est' (2.3.1.2.1.4);

'Sortes incipit moveri localiter, igitur Sortes immediate post hoc instans pertransibit aliquod spatium quod non immediate post hoc pertransibit' (2.3.1.2.1.5).

In this context there is no need to deal separately with each of Bradwardine's proofs of the validity of these implications. However, it may be worth while to draw attention to the fact that in addition to the general principle of present motion implying future motion Bradwardine makes use of two further presuppositions.

Not surprisingly the first of these presuppositions is the continuous character of time and magnitudes. As we know, it is a characteristic feature of continuous entities that it is impossible to designate two
points that are immediately contiguous inasmuch as one point being assigned no immediately adjoining point can exist. As regards time this is to say as indeed Bradwardine does - 'inter quaecumque duo instantia cadit tempus medium'. Applied to the problem treated here this principle implies that given a segment of time or a distance limited at one end it is impossible to arrive at a point lying next to the dividing-point irrespective of this point being an internal or external limit.

Bradwardine's second presupposition is the distinction between composite and divisive sense. Though Bradwardine does not use the technical terms 'sensus compositus' and 'sensus divisus' it is evident that the contents of this distinction play an all important part in his argument. In its medieval version this distinction is based on the persuasion that subject and predicate terms change their way of signifying extramental objects if they are preceded by certain other words. Thus in the proposition 'ali- quod spatium immediate post hoc erit pertransitum' the term 'ali quod spatium' has 'suppositio determinata' which is to say that the proposition should be verified for some particular and definable distance. For this reason it is licit to make the following inference 'ali quod spatium immediate post hoc erit pertransitum, ergo istud spatium vel illud vel illud, etc.' A proposition which possesses these characteristics is said to have divisive sense. However, if we change the word order of the sentence quoted above and say 'immediate post hoc aliquod spatium erit pertransitum' then we have at the same time changed the supposition of the term 'ali quod spatium'. Now it no longer has determinate supposition but that kind of supposition which is called 'confusa tantum'. This is tantamount to saying that this term refers to a multiplicity of objects and that it is not possible to designate any particular object to which it refers in the context given. This change in supposition is conditioned solely by the fact that we have now placed the word 'immediate' before the 'ali quod spatium'. Propositions endowed with these characteristics are said to have composite sense, and words which influence the supposition of the subject or the predicate term in this manner are said to have 'virtutem confundendi terminum' or 'vim confundendi terminum'. In the third conclusion of the corollary (2.3.1.2.1.3) Bradwardine shows how not only 'immediate' but also 'prius' has this property.

That this distinction between composite and divisive sense is of fundamental importance in the context of Bradwardine's present treatise
should be evident from the fact that no instant immediately adjacent to a limit is assignable in any fixed period of time, just as no such point can be designated in any magnitude. For this reason the first version of the proposition given above is false whereas the second is perfectly true, as Bradwardine aptly explains (2.3.1.2.1.2).

In 2.3.1.2.1.6 follows an examination of the kinds of suppositions with which predicates occur in 'incipit' and 'desinit' propositions. As this is directed specifically against Ockham's doctrine as set out in the SL I,75 we shall postpone treatment of this polemic and its results to a later and separate section in the present introduction.

In 2.3.1.2.2 Bradwardine takes up the second part of the subdivision introduced in 2.3.1.2, *viz.*, those kinds of motion that are not local motion. In 2.3.1.2 Bradwardine had promised to show how present motion implies future motion in these other kinds of motion as well. However, as the principal aspects of the case are completely identical whether the motion in question is local or not, Bradwardine restricts his treatment to simply pointing out this identity.

Next Bradwardine turns to dealing with 'desinit' and in two conclusions he proves the identical exposition of 'desinit' as occurring in propositions whose subject terms refer to permanent and successive entities, respectively (3.1 - 3.2). As Bradwardine's exposition of 'desinit' is completely identical to that forged by Peter of Spain, and as Bradwardine's line of reasoning follows clearly from his general views set out earlier in the treatise, we may in this context forgo closer analysis.

Bradwardine introduces a third kind of objects, *viz.*, the instantaneous, in section 4.1. As far as our present knowledge of the medieval 'incipit' and 'desinit' tradition extends, this sort of objects was first introduced into this context by Walter Burley. Bradwardine is not quite convinced of the actual existence of such objects but if they do exist they certainly influence the expositions of 'to begin' and 'to cease'. As these objects possess being in only one instant the exposition of 'incipit' as occurring with subject terms designating objects of this kind must be by way of an 'affirmativa de presenti et negativa de preterito'. In assigning a first and a last instant of being for, respectively, the beginning and the ceasing of such objects one is in fact claiming that these objects begin to be and cease to be in one and the same instant.

40. See below, section V.3.ab - bb.
Apparently Bradwardine does not attach particularly great importance to these instantaneous entities, and compared to Walter Burley's exposition his treatment is also markedly unoriginal.

V.3 Bradwardine and Ockham in Discussion

As already mentioned Bradwardine's criticism of Ockham's views is exclusively directed against the exposition of the supposition of the predicate term in 'incipit' and 'desinit' propositions which Ockham submits in SL I, 75. For this reason we shall in the present section proceed in the following manner. First we shall give an account of Ockham's doctrine as it appears in SL I, 75 (aa) and show that Bradwardine's reproduction of Ockham's teaching is on the whole loyal (ab). Secondly we shall turn to Bradwardine's criticism of Ockham's view (ba) and to his proper doctrine on which this criticism is founded (bb). In the third place we shall present the exposition of the predicate term's supposition in 'incipit' and 'desinit' propositions which Ockham submits in SL II, 19 (ca), and finally we shall ask if Ockham's revision of his views on the present subject is related to Bradwardine's criticism (cb).

aa. Ockham's Teaching according to SL I, 75

In chapter 75 of the first part of the SL Ockham presents a discussion of the kind of supposition with which predicate terms of 'incipit' and 'desinit' propositions are endowed. In the first place Ockham stresses that in propositions of this kind - as also in sentences of the type 'Sortes ter fuit niger' - the predicate term does not have 'suppositio determinata' since one cannot descend from propositions of this kind to 'singularia per disiunctivam'. This is to say that one cannot draw the inference 'Sortes incipit esse grammaticus igitur Sortes incipit esse hoc vel incipit esse illud, etc.' pointing to all to whom the predicate term may refer. The reason for this is of course that Socrates may very well begin to learn grammar without for that reason beginning to exist or to be 'hoc'. It is equally true that in the proposition 'Sortes incipit esse grammaticus' the predicate term does not have 'suppositio confusa et distributiva' since this would entail the absurdity of Socrates' beginning to be all existing grammarians. According to Ockham the predicate term of the proposition given does neither possess 'suppositio confusa tantum' inasmuch as one is not allowed to 'descendere ad singularia per propositionem de disiuncto predicato'. The reason for this is that Ockham does not
consider the following consequence to be valid 'Sortes incipit esse grammaticus igitur incipit esse iste vel ille grammaticus' because Socrates may have been 'ille' long before he started to know grammar.

In accordance with this line of reasoning Ockham draws the conclusion that the predicate term in 'incipit' and 'desinit' propositions possesses a kind of supposition for which we have no name: 

... unam aliam (seil. suppositionem) pro qua tamen nomen non habemus.\(^{42}\)

This unchristened kind of supposition agrees with 'suppositio confusa tantum' in certain less important respects,\(^{43}\) but its difference in principle from both 'suppositio confusa tantum' and 'suppositio determinata' is cemented by the fact that in opposition to both of these kinds of supposition the unnamed kind of supposition does not allow of any kind of descent.

The ultimate reason for this remarkable state of affairs Ockham finds in the fact that 'incipit' as well as 'desinit' propositions are in fact equivalent to copulative propositions consisting of one proposition in the affirmative and one in the negative. As an example of this Ockham takes the statement 'Sortes incipit esse albus'. This is equivalent to or, in other words, is expounded by the copulative 'Sortes nunc primo est albus et ante non erat albus'. Clearly the predicate term 'white' has different kinds of supposition in the two 'propositiones exponentes'. In the affirmative one it has 'suppositio determinata' whereas in the negative one the predicate term 'white' has 'suppositio confusa et distributiva' because of the negation. Thus according to Ockham one is precluded from assigning any known kind of supposition to the predicate term in 'incipit' and 'desinit' propositions because of the fact that statements of this kind are 'exponibiles', and that each of the expounding propositions bestows a different kind of supposition on the predicate term.\(^{44}\)

\(^{ab.}\) Bradwardine's Presentation of Ockham's Teaching in SL I,75

Coming to Bradwardine's reproduction of Ockham's teaching in SL I,75 we may say at the outset that it is very loyal. Apart from the fact that Bradwardine has supplemented Ockham's exposition by adding a demonstration


\(^{44}\) Apart from the fact that Ockham as a matter of course substitutes 'suppositio determinata' for 'suppositio simplex', there is basic agreement between Peter of Spain's first rule of supposition (Peter of Spain (1976), p. 126) and Ockham's present exposition. However, it is not at all certain that Peter of Spain would accept the conclusion which Ockham draws from this relationship inasmuch as he seems to attach principal importance to the affirmative 'propositio exponens'. For this see below, section V.3.bb.
showing that the predicate term in 'incipit' and 'desinit' propositions has not got either 'suppositio simplex' or 'suppositio materialis' or 'suppositio discreta' Bradwardine follows Ockham quite closely. Thus Bradwardine is correct in placing great stress on the circumstance that the predicate term cannot, according to Ockham, have 'suppositio determinata' since one cannot descend 'per unam disiunctivam', just as it cannot have 'suppositio confusa tantum' inasmuch as one cannot descend 'per propositionem de disiuncto extremo'. Equally Bradwardine underscores Ockham's conclusion that in 'incipit' and 'desinit' propositions the predicate term must have some kind of 'suppositio innominata'.

That Bradwardine has left out Ockham's ultimate reason for adopting this viewpoint, viz., that this type of propositions imply a double 'suppositio' in the predicate term, and that this doubleness becomes visible in the expounding of such propositions, is not surprising. Bradwardine has undoubtedly conceived of this premise of Ockham's as evident and trivial.

ba. Bradwardine's Criticism of Ockham's Teaching in SL I,75

As his main point against Ockham's position Bradwardine contends that a term which does not supposit at all cannot possess 'suppositio innominata'. In SL I,75 Ockham had recognized that, as far as the supposition of the predicate term is concerned, there is a principal equivalence between, on the one hand, propositions such as 'Sortes bis bibit vinum' and, on the other, 'incipit' and 'desinit' propositions. For this reason Bradwardine, in his criticism of Ockham's views, proceeds to prove that the predicate term in the proposition 'Sortes bis bibit vinum' cannot refer to any 'denotatum'. Saying that 'vinum' has an unnamed kind of supposition is, according to Bradwardine, unreasonable inasmuch as there can be no quantity of wine of which it is true to say that Socrates drinks it twice. According to Bradwardine this line of argument can most reasonably be applied to any predicate term in 'incipit' propositions, provided that the 'incipit' is expounded by removing the present and positing the future. Bradwardine's reason for sustaining this point of view is naturally to be found in the circumstance that in the preceding part of his treatise he has made it abundantly clear that the continuity of time makes it fundamentally impossible to designate a first instant immediately adjacent to any limit or dividing-point. And the reason for this is of course that claiming time to be continuous is tantamount to saying that such a point cannot exist at all. Assigning an external limit to Socrates' becoming white is accord-
ingly the same as denying that there may be a first instant subsequent on this limit and in which Socrates could be white for the first time. Consequently, expounding the 'incipit' in 'Sortes incipit esse albus' by a 'negativa de presenti et affirmativa de futuro' entails denying that the predicate term 'white' has any kind of supposition inasmuch as there is nothing to which it could possibly refer.

The case is quite the opposite if the 'incipit' in the proposition given above is expounded by the positing of the present and the removing of the past or by an 'affirmativa de presenti et negativa de preterito'. Then, according to Bradwardine, there is clearly no problem as in this case the predicate term has 'suppositio determinata'. The reason for this is that on these premisses one is, according to Bradwardine, allowed to make an inference such as 'Sortes incipit esse grammaticus igitur Sortes incipit esse ille grammaticus vel ille, etc.' proceeding in this manner until one has exhausted the finite class of grammarians. One of the members of the disjunction can obviously be identified with Socrates and, accordingly, the 'incipit' proposition can be verified for this individual.

Against allowing of this kind of inference Ockham had, we recall, made the objection that acceptance of this sort of inference would imply accepting that Socrates begins to be 'illud' or Socrates which is patently false inasmuch as Socrates needs not start to be in the absolute sense of the word just because he starts to learn grammar or to be white. In response to this Bradwardine observes that the objection presupposes using the unexpounded 'incipit' proposition as a premise in an inference or an expository syllogism, and this presupposition Bradwardine is not willing to grant, as 'incipit' and 'desinit' propositions are equivalent to hypothetical propositions. Accordingly, the best rebuttal of the objection consists in simply pointing out that using an exponible proposition in this way is unwarranted.

**bb. Bradwardine's Proper Doctrine**

Summarizing his proper doctrine Bradwardine maintains, in perfect agreement with his criticism of Ockham, that the predicate term in 'incipit' propositions does not supposit at all if the 'incipit' is expounded by removing the present and positing the future. As is evident from Bradwardine's choice of examples in which the predicate term has no supposition he is convinced that the predicate term is without supposition in all

---

'incipit' propositions dealing with successive entities. As regards 'incipit' propositions whose subject terms refer to permanent objects Bradwardine espouses the view that the predicate term has determinate supposition. The supposition of subject terms of 'incipit' propositions poses no problem to Bradwardine as he maintains that in this respect 'incipit' propositions can be analysed in the same way as categorical statements.

The circumstance that Bradwardine does not make explicit how the predicate term supposit in 'desinit' propositions is undoubtedly due primarily to the fact that the section here called '2.3.1.2.1.6' is located in that part of the work which is devoted to the exposition of 'incipit'. However, on the basis of Bradwardine's exposition of 'desinit' as occurring with terms designating permanent and successive objects, respectively, it is evident that he would maintain that the predicate term of such propositions has no supposition. Thus it is not surprising that in his conclusion to the treatise (5.1) Bradwardine extends his previous analysis to be valid for predicate terms occurring in 'incipit' as well as 'desinit' propositions. Furthermore, in section 5.1 Bradwardine adds the rule that in 'incipit' or 'desinit' propositions in the negative the predicate term has 'suppositio confusa et distributiva'; he does not specify whether this rule holds good for only universal and negative propositions or for both universal and particular 'incipit' and 'desinit' propositions in the negative.

In order to understand why it is possible for Bradwardine to claim a single kind of supposition for the predicate term in 'incipit' propositions dealing with the beginning of permanent objects in spite of the fact that the predicate term is endowed with two different kinds of supposition in the 'propositionibus exponentibus' it is well worth pointing out that in this respect Bradwardine's exposition rests on a presupposition that is not made explicit. This presupposition stipulates that in the unexpounded 'incipit' proposition the predicate term has the same kind of supposition as in the affirmative 'propositio exponens'. This means of course considering the negative 'propositio exponens' as secondary in respect to the one in the affirmative, and in fact Bradwardine is not the first to take this stand as it is already to be found with Peter of Spain.

A question must be raised with regard to the consequences of Bradwardine's analysis of the 'suppositio predicati'. Bradwardine believes

46. Of course this is valid for all other kinds of 'incipit' and 'desinit' propositions as well.
47. See Peter of Spain (1976), p. 124.
that the predicate term holds no supposition in 'incipit' propositions dealing with successive objects and in 'desinit' propositions dealing with permanent or successive entities. As Bradwardine points out denoting some object ('supponere pro significato') is identical to 'supponere significative'. A question to which Bradwardine provides no answer is whether denying that a predicate term occurs with significative supposition in some proposition is tantamount to claiming that it does not function significatively in this proposition. If Bradwardine's answer to this is YES, then his characterization of the proposition 'motus incipit esse' as 'impossibilis' is clearly equivalent to saying that such propositions are devoid of meaning. But on this interpretation Bradwardine's exposition presented in the extraordinarily long corollary to the third conclusion will be at best rather odd. If Bradwardine's answer to the question is NO, then clearly he must recognize some kind of purely intentional signification. At any rate, Bradwardine's exposition is certainly incomplete in the sense that it does not explain how the predicate term's lack of reference is to be reconciled with the meaningfulness of propositions of this kind.

oa. Ockham's Teaching according to SL II,19

In chapter nineteen of the second part of his SL Ockham presents a second treatment of propositions containing the verbs 'to begin' and 'to cease'. His reason for introducing propositions of this sort into this context is his conviction that 'incipit' and 'desinit' cause propositions in which they occur to be equivalent to hypothetical propositions inasmuch as such propositions are exponible by means of a copulative statement.

Ockham fully realizes that some logicians expound 'incipit' and 'desinit' differently according to their occurring in propositions whose subject terms refer either to permanent objects or to successive ones. However, Ockham is convinced that the exposition of 'incipit' as well as 'desinit' is purely a matter of convention, and he fails to perceive what gain could possibly be obtained by such diverse interpretation. Instead he proposes to assign just one way of expounding 'incipit' and equally just one way of expounding 'desinit'. Accordingly, 'incipit' should always be expounded by two propositions of which one is in the affirmative and in the present tense, whereas the other should be in the negative and in the past tense. This is to say that Ockham assigns internal limits to

the beginning of permanent as well as successive entities, and that in the case of 'incipit' he maintains a 'positio de presenti et remotio de pre-terito'. Consequently, a statement such as 'Socrates begins to be white' is to be expounded by way of the proposition 'Socrates is white now and he was not white immediately prior to this instant'. On the other hand, a proposition containing 'desinit' should always, according to Ockham, be expounded by a copulative proposition of which the first is in the affirmative and in the present tense and the second in the negative and in the future tense. This is to say that Ockham assigns internal limits to the ceasing of permanent objects as well as successive ones, and that in this case he maintains a 'positio de presenti et remotio de futuro'. Consequently, a statement such as 'Socrates ceases to be white' should be expounded by way of the proposition 'Socrates is white now and he will not be white immediately after this instant'.

Having completed the basic limit decisions Ockham embarks on the task of determining the supposition of the subject term and that of the predicate term in 'incipit' and 'desinit' propositions. As regards the supposition of the subject term Ockham finds no real problem since he is convinced that in this respect there is no dissimilarity between 'incipit' and 'desinit' propositions on the one hand and categorical statements on the other.

As regards the supposition of the predicate term the matter is more complicated. According to Ockham the predicate term of universal and affirmative propositions of this kind has 'suppositio confusa tantum' since from this sort of statement one can descend neither copulatively not disjunctively. In other words, one cannot draw the inference 'Omnis homo desinit esse albus ergo omnis homo desinit esse hoc album, vel omnis homo desinit esse illud album'. However, on the basis of Ockham's general definition of 'suppositio confusa tantum', we are justified in assuming that Ockham would recognize the validity of a 'descensus ad propositionem de disjuncto predicato', which is to say that Ockham would allow of the legitimacy of an inference such as 'Omnis homo desinit esse albus, ergo omnis homo desinit esse hoc album vel illud album, etc.' In a universal proposition in the negative and containing 'incipit' or 'desinit' the

49. At this juncture Ockham draws a distinction between using 'incipit' in a proper sense and using it improperly, and this is based on Aristotle (222 a 10 – 20). As Ockham intends to deal only with the proper use we may leave the improper use out of consideration.

predicate term has 'suppositio confusa et distributiva'; on the other hand, the predicate term of a singular proposition either in the affirmative or in the negative has 'suppositio determinata'.

In order to substantiate this new - and compared to SL I,75 - rather startling exposition Ockham observes that there are two ways in which terms may have 'suppositio determinata' or 'suppositio confusa et distributiva'. First they may possess these kinds of supposition in the sense that it is possible to descend to the object to which the term in question refers by means of only demonstrative pronouns. If a term has 'suppositio determinata' in this way we may legitimately draw an inference of this kind 'homo currit ergo hoc currit'. The second manner of having 'suppositio determinata' or 'suppositio confusa et distributiva' does not allow of making inferences of this kind. Instead of making a 'descensus per pronomina demonstrativa sola' it is, in this case, necessary to add the common noun from which the descent to demonstrative pronouns is made:

... per pronomina demonstrativa sumpta simul cum illo termino communi sub quo debet esse descensus.\[51\]

Applied to predicate terms in 'incipit' and 'desinit' propositions this is to say that predicate terms in these kinds of propositions do not possess either 'suppositio determinata' or 'suppositio confusa et distributiva' in the first sense but only in the second. The reason for this is the fact that an inference such as 'Sortes incipit esse albus igitur Sortes incipit esse hoc vel incipit esse illud, etc.' is invalid inasmuch as Socrates may have become 'hoc' or started to exist long before he becomes white. However, predicate terms of 'incipit' and 'desinit' propositions may have 'suppositio determinata' or 'suppositio confusa et distributiva' in the second sense. Consequently, if we are dealing with an 'incipit' or 'desinit' proposition in the singular an inference such as 'Sortes incipit esse albus igitur incipit esse hoc album vel incipit esse illud album, etc.' is perfectly valid. The reason for this is that Socrates may certainly have been 'hoc' before he became white but he was not 'hoc album' before he became white.


Compared to the exposition submitted in SL I,75 it should be evident that in SL II,19 Ockham has drastically altered his doctrine on the supposition of the predicate term in 'incipit' and 'desinit' propositions. An

obvious difference between Ockham's two expositions is of course the different kinds of supposition ascribed to the predicate term. Whereas Ockham in SL I,75 upholds a 'suppositio innominata' for predicate terms, in SL II,19 he is convinced that in no instance of an 'incipit' or 'desinit' proposition it is necessary to assign other than known kinds of supposition to the predicate term. The equally evident, and by no means less significant, difference between Ockham's views as expounded in SL I,75 and SL II,19 is the fact that whereas in SL I,75 Ockham refuses to recognize the validity of a 'descensus de disiuncto predicato' from any kind of 'incipit' and 'desinit' proposition, in SL II,19 he allows of this kind of inference in all cases of propositions containing the verbs 'to begin' and 'to cease'.

Confronted with this state of affairs we are bound to raise the question of Ockham's motives for making this volte-face. Without knowledge of Bradwardine's treatise it would probably be well-nigh impossible to reveal Ockham's incentives for so doing. However, by confronting Ockham's two expositions of 'incipit' and 'desinit' with Bradwardine's treatise it might be possible to recognize in Ockham's revised exposition a step-by-step reaction to Bradwardine's criticism.

First of all it is necessary to ask how Ockham in SL II,19 avoids the unfortunate consequence that the fact of two different kinds of supposition being ascribed to the predicate term in the 'propositionibus exponentibus' precludes the possibility of assigning any known kind of supposition to the predicate term in the unexpounded 'incipit' or 'desinit' proposition. Though this had been one of Ockham's two principal reasons in SL I,75 for not assigning any known kind of supposition to the predicate term in propositions of this sort, in SL II,19 Ockham does not specify how he has circumvented this possible objection to the doctrine set out in SL II,75. However, from the line of reasoning presented in SL II,19 it is evident that he has done this by giving principal pre-eminence to the affirmative 'propositio exponens'. This is to say that in SL II,19 Ockham has assumed the presupposition on which Bradwardine builds his exposition, and like Bradwardine he has allowed this decision to remain implicit.

Secondly, it is important to note that in SL I,75 Ockham had refrained from making explicit how he wished to expound 'incipit' and 'desinit' propositions. However, the example used by Ockham in this context seemed to indicate that he subscribed to the expositions forged by Peter of Spain, 52

52. As Ockham in SL I,75 did not explicitly allow of exceptions to the exposition given it would seem unlikely that he agreed with the 'two-states-approach'.

and naturally Bradwardine made this assumption in his criticism. If, in this respect, Ockham agreed with Peter of Spain at the time of writing Sl. I,75 - and this is the natural assumption - then he certainly did not after having accepted Bradwardine's presupposition that the predicate term in the unexpounded 'incipit' or 'desinit' proposition has the same kind of supposition as in the affirmative 'propositio exponens'. Retaining Peter of Spain's expositions and adopting Bradwardine's presupposition would in fact mean adopting Bradwardine's conclusion that in every affirmative 'incipit' and 'desinit' proposition (those dealing with the beginning of permanent objects being excepted) the predicate term cannot possess supposition as the continuous character of time and motion prevents the existence of entities which could serve as 'denotata' for such a predicate term. Consequently, Ockham was forced to expound 'incipit' and 'desinit' in a way that would make all affirmative 'propositiones exponentes' into statements about the present. In response to this necessity Ockham made the second move of assigning internal limits to the beginning and ceasing of all kinds of objects. This second move he defended on the grounds that the assigning of limits or ways in which to expound 'incipit' and 'desinit' is only a matter of convention. In doing this he reveals himself as sharing Peter of Spain's and Bradwardine's conception of the logical task of making limits decisions as secondary to the continuous essence of time. On the other hand, at the same time this move drives him into taking a unique stand since neither Peter of Spain nor Bradwardine would agree that the fact of a dividing-point being common to both segments of the continuous entity divided implies the complete arbitrariness of assigning either external or internal limits to the two segments. Possibly Ockham would argue in favour of adopting this stance by pointing out that if making limit decisions is purely a matter of logical consideration and as such without

33. With Ockham giving pre-eminence to the 'propositio exponens affirmativa' becomes identical to giving pre-eminence to the 'propositio exponens de presenti'. In the 'De Puritate Artis Logicae' Walter Burley has taken over this doctrine of giving pre-eminence to the 'propositio exponens de presenti'. At the same time he retains Peter of Spain's expositions of 'incipit' and 'desinit', and on this basis he concludes that the predicate term of all 'incipit' and 'desinit' propositions has 'suppositio confusa tautum' (cf. Walter Burley (1955), pp. 195–196). Apart from the fact that this conclusion is odd as regards propositions about the beginning of permanent things, by combining his sources in this way Burley exposed himself to justified criticism from Bradwardine as well as from Ockham.
impact on the understanding of the flow of time as continuous, then the
logician should feel free to expound 'incipit' and 'desinit' without taking
into consideration how physical objects relate to continuous time. In
other words, if all time-segments fit together in continuous time irrepos-
tive of the limits assigned to them, then the continuous essence of time
and its implications for the physical entities that are measured against
time should be of no concern to the logician in his task of making limit
decisions.

In order to ensure the validity of his exposition of the predicate
term's supposition in 'incipit' and 'desinit' propositions Ockham had to
make a third move. Against endowing the predicate term with any known kind
of supposition he had in SL I,75 advanced the objection that this would en-
tail acceptance of an inference such as 'Sortes incipit esse albus ergo
Sortes incipit esse istud album, vel illud album, etc.' In SL II,19 Ock-
ham accepts this kind of inferences and he argues in favour of its validity
by denying the legitimacy of using the rule 'ab uno convertibilium ad re-
liquum est bona consequentia' in cases where the term in question has
'suppositio determinata'. By arguing along these lines Ockham clearly
nullifies his own previous objection and expresses full agreement with
Bradwardine's rebuttal of the objection, viz., that propositions equivalent
to hypothetical propositions cannot without further ado be used as ante-
cedents in inferences, and that for this sort of propositions the 'syllogis-
mus expositiorius' does not hold good.

Summing up we may say that there is a very high degree of probability
that Ockham has revised his exposition of 'incipit' and 'desinit' after
becoming acquainted with Bradwardine's treatise. All instances of signifi-
cant change in Ockham's views from SL I,75 to SL II,19 can be explained
on the basis of this assumption. Thus Ockham follows Bradwardine closely
in his first and third moves as well as in his introducing modifications
into his previous definitions of the different kinds of 'suppositio per-
sonalis communis'. On this basis Ockham is in a position to accept the
first part of Bradwardine's conclusion, viz., that the predicate term in
'incipit' propositions dealing with permanent things has 'suppositio de-
terminata'. However, as accepting the second part of Bradwardine's con-
clusion, i.e., that in all other cases the predicate term can have no sup-
position at all, would be totally ruinous to Ockham's logical system he is

forced to find a solution of his own. This he does by assigning internal limits to all cases of beginning and ceasing, and this is, of course, not paralleled in Bradwardine's treatise. However, it is important to remember that Ockham has been forced to adopt this solution by his acceptance of the legitimacy of Bradwardine's criticism and the validity of all but one of Bradwardine's basic principles.

4. The Place of Bradwardine's Treatise in the Medieval Tradition of 'Incipit' and 'Desinit'

Our present knowledge of the medieval tradition of 'incipit' and 'desinit' is strictly limited. This is due primarily to the circumstance that much of the literary output of scholasticism dealing with this subject has not yet been systematically catalogued or exhaustively described. It is equally true that nearly all sources which have been verified still await editing. Furthermore, a matter complicating the charting of this part of the scholastic tradition is the fact that expositions of 'incipit' and 'desinit' appear in the most diverse contexts. Thus the medieval schoolmen not only composed separate tracts on these two-terms or devoted separate chapters in their logical manuals to the treating of this subject, but they also included a large number of sophisms containing these terms in their voluminous collections of 'sophismata'. In view of the Aristotelian background to the tradition of beginning and ceasing the fact that 'incipit' and 'desinit' are also dealt with in commentaries on the Physiota is quite as could be expected. However, surprisingly enough 'incipit' and 'desinit' found their way even into commentaries on Peter the Lombard's four books of sentences.

56. For lists of medieval writings on this subject see Wilson (1956), pp. 29ff.; and Kretzmann (1976a), pp.131ff. To the sources mentioned in these works one may add the three anonymous treatises preserved in Codex Domini-

canorum. Vindobonensis 187 (153), fols.218r-219r; fols.219r-223r; fols.

223v-226r. Cf. below, note 57. A highly suggestive attempt at characterizing

the late medieval tradition of which the literature on 'incipit' and 'desinit' forms part is to be found in Murdoch (1975).

57. Thus in his commentary on the four books of sentences the so-called

'Monachus Niger' devotes the whole of question four to the problem 'Utrum

posito quo Beata Virgo fuisset in originali per instans potuerit Deus im-

mediate post illud instans eam mundasse ab originali'. In the three ar-

ticles constituting question four (MS Fribourg, Cordeliers 26, fols.105va-

11v) he submits a complete treatment of the problems involved in expanding 'incipit' and 'desinit' (for this work see Trapp (1956), pp.207ff., as well as Trapp (1965), pp.241ff.) Applying the doctrine of 'to begin' and 'to cease' to theological problems was also attempted by Thomas Buckingham.

In the fourth question of his sentence commentary (ed.Paris, 1505, fols.

54va-62rb) he asks the question 'Utrum sit dare primum instans meriti vel
demeriti'. 
Endeavouring to place Bradwardine's treatise in the medieval tradition of 'incipit' and 'desinit' it is thus important first of all to stress the highly provisional character of such a determination. It should be evident that Bradwardine's treatise belongs to that branch of the tradition of which Peter of Spain is the first advocate known at present, and which we have labelled the 'one-state-approach'. This affiliation is brought out by a number of distinctive features in Bradwardine's way of treating this subject. First of all Bradwardine does not believe that the expositions of 'to begin' and 'to cease' should explain transitions from one kind of state or object to another, and possibly different, kind of state or object. In fact, Bradwardine espouses the view that such transitions pose no problems, and this second feature aligns him equally with Peter of Spain, since in this he shows himself to share Peter's understanding of the Aristotelian conception of time's continuity. In the third place Bradwardine is persuaded that some expositions of 'incipit' and 'desinit' are obligatory inasmuch as the definition of, e.g., successive objects prevents one from assigning internal limits to their beginning and ceasing. In this respect Bradwardine is also in agreement with Peter of Spain.

As we know, in early scholasticism 'incipit' and 'desinit' had found their way into logic by way of sophisms. At present it appears that in later logical treatises on these two verbs sophisms retained their place as an important part of the exposition. The reason for this is that the solving of sophisms involving these terms provided a touchstone for the validity of the general rules laid down for expounding these 'syncataloga-remata'. In this respect Bradwardine's treatise is unique inasmuch as it does not contain any sophisms at all. However, it is probably well-advised not to stress this circumstance since many of Bradwardine's conclusions may be conceived of as test cases for his general rules, and as several of these conclusions possess the same general features as sophisms and their ability to rouse the reader's curiosity.

Coming to the relationship of Bradwardine's treatise with the fourteenth-century development of this tradition we must once more recognize that the limitation of our present knowledge prevents us from making any well-founded estimate of either Bradwardine's position among his contemporaries or of his influence on succeeding logicians. However, it is incontestable that Bradwardine's treatise belongs to the very early reaction to William Ockham's system of logic and, consequently, it should be viewed
together with Ps.-Richard Campsall’s 'De Logica Reali contra Ockham'.

Furthermore, as we hope to have shown, Ockham must have been quite impressed with Bradwardine’s exposition, and it is far from unreasonable to suggest that Bradwardine’s treatise may have been one of the foundations on which later logicians such as Richard Kilvington and William of Heytesbury composed their highly intricate sophisms involving 'incipit' and 'desinit'.

However, until such time as the critical edition of Kilvington’s collection of sophisms is published and we have obtained a general interpretation of William of Heytesbury’s rather unwieldy logical system, the precise nature of Bradwardine’s influence on the most significant of his successors in Oxford must remain a subject reserved for future research.


(1977) to which may be added Knuuttila (1979). For literature on Heytesbury see the references provided in Spade (1979) to which may be added Murdoch (1979); Murdoch (Anal.Char.); as well as Sylla (1981).

VI. Bibliography

VI.1 Medieval Authors


Monachus Niger: Quesitiones super Sententias. MS Fribourg, Cordeliers 26, fols. 82r-142v.


Thomas Maurfeld: Confusiones. MS Erfurt CA 40, 30, fols. 139r-144v.


VI.2 Modern Historians


THOME\textsuperscript{a} BRALDVARNDINI ANGLI DE INCIPIT ET DESINIT\textsuperscript{b}

A 50\textsuperscript{v} a
B 15\textsuperscript{o} a
C 24\textsuperscript{v} b
D 215\textsuperscript{v} a

1.1

Ad clariorem\textsuperscript{1} igitur\textsuperscript{2} notitiam istarum\textsuperscript{3} duarum dictionum\textsuperscript{4} 'incipit' et 'desinit' habendam in\textsuperscript{5} primis\textsuperscript{6} taliter\textsuperscript{7} procedimus\textsuperscript{8}: primo aliquas suppositiones supponendo\textsuperscript{9}, secundo aliquas distinctiones adiungendo\textsuperscript{10}, tertio\textsuperscript{11,12} conclusiones ad\textsuperscript{13} materie\textsuperscript{16} declarationem\textsuperscript{15} cum aliquibus obiectionibus et solutionibus adiungendo\textsuperscript{13,17}.

Prima suppositio est hec\textsuperscript{18} quod "posito de presenti" vocatur una\textsuperscript{19} propositio affirmativa\textsuperscript{20} de presenti\textsuperscript{21}, et "remotio de\textsuperscript{22} presenti" vocatur\textsuperscript{23} una propositio\textsuperscript{24} negativa de\textsuperscript{25} presenti\textsuperscript{26}. Et "posito\textsuperscript{27} de preterito" vocatur una propositio affirmativa de preterito, et "remotio de preterito\textsuperscript{29}" vocatur una propositio negativa de preterito. Item, "posito de futuro" vocatur una propositio affirmativa de futuro, et "remotio\textsuperscript{30} de futuro" vocatur\textsuperscript{31} una\textsuperscript{32} propositio negativa de futuro\textsuperscript{28}.

Secunda suppositio est hec\textsuperscript{33} quod non est dare ultimum instans\textsuperscript{34} rei permanentis in esse\textsuperscript{35}, et quod est dare primum\textsuperscript{36} instans\textsuperscript{37} rei permanentis in esse.

Distinctio premittenda est hec\textsuperscript{38} quod aliqua nomina vel aliqua dictiones sunt signa\textsuperscript{39} rerum permanentium, et aliqua\textsuperscript{40} sunt signa rerum successivarum. Dictiones sine termini rerum permanentium dicuntur non quia\textsuperscript{41} non\textsuperscript{42} significant res\textsuperscript{43} successivas, sed quia significant aliquas res quamvis iste res\textsuperscript{44} non moveantur\textsuperscript{45}, et\textsuperscript{46} huiusmodi\textsuperscript{47} dictiones\textsuperscript{48} sunt\textsuperscript{49}.

'homo', 'animal', 'albedo', 'album', 'quantitas', 'quantum', et sic de aliis. Dictiones sive termini rerum successivarum dicuntur non quia non significant res permanentes, sed quia non significant res permanentes nec aliquas alias nisi 66 movientur. Et huiusmodi vocabula sunt ista: 'motus', 'tempus', 'movere', 'acquirere', 'pertransire'.

Istis premissis iam ponendae sunt aliqua conclusiones, primo circa hanc dictionem 'incipit', secundo circa hanc dictionem 'desinit'. Iterum ponendae sunt aliqua conclusiones in terminis rerum permanentium, secundo in terminis rerum successivarum.

2.1

PRIMA CONCLUSIO est hec: quicquid incipit esse in rebus permanentibus hoc nunc est et prius non fuit. Istam conclusionem probabo sic, et sit ista res permanens: quae incipit esse a, tunc sic:
/C 24 val cuiuscumque rei permanentis est dare primum instans. Sui esse, a est res permanens, igitur est dare primum instans sui esse.

Maior patet per secundam suppositionem. Minor patet per casum, et discursus patet in dario. Sequitur igitur conclusio.

Tunc sic: a rei permanentis est dare primum instans sui esse, sit illud instans gratia exempli nunc presens; hoc instans presens est primum instans esse a, igitur in isto instanti presenti a est et prius non fuit. Antecedens est verum, igitur et consequens. Veritas antecedentis patet per casum. Consequentia.

50 altitudo B; om. C. 51-52 om. C. 53-54 similia B. 55 quod B.
63 om. AC. 64 om. BD. 65 om. C. 66 movantur A. 67 om. D.
68 talia A; cuiusmodi D. 69 om. D. 70 signa talia sicut B; om. D.
71 et similis add. B. 72 prehabitam B; visum C. 73 om. BCD.
74 et primo C. 75 de D. 76-77 om. D. 78 de D. 79-80 om. D.
81-82 primo D. 83 item B; in primo C. 84-85 om. B. 86 et primo C.
87 igitur conclusio D. 88 illa A; ista C. 89 quod quicquid CD.
90 de B. 91-92 debet exponi per positionem presentis et remotionem preteriti C. 93 ista C. 94 om. B; conclusio C. 95 om. CD. 96 nec A; illa C. 97 om. C; add. i.m. D. 98 incipit nunc B. 99 om. A.
100 om. C. 101 a est B; erit C. 102 diu C. 103 in A; om. C.
104 esse ipsius a A. 105 nota est D. 106-107 regulam suppositam B.
108 om. C; nota est D. 109 om. AB. 110 discurrendo B; discursum C.
117 tunc conclusio A. 118 igitur tunc A. 119-120 om. A.
121 om. AD. 122-123 a tunc sic infertur minor sed ACD. 124 om. ACD.
125 om. B. 126 rei A; rei permanentis a D. 127 om. D. 128 etiam B; et similiter D.
129-130 antecedens B. 131 et consequentia CD.
patet, quia consequentis nullo modo potest stare cum antecedente, quia illa duo non sunt simul 'a prius' fuit vel a nunc non est, et cum hoc quod hoc instans presens sit primum instans esse a.

2.1.1

Ex ista conclusione sequitur generaliter quod omnis propositione affirmativa composita ex terminis rerum permanetum, in qua ponitur hoc verbum 'incipit', debet exponi per positionem de presenti et per remotionem de preterito. Verbi gratia sic dicendo 'Sortes incipit esse' ista propositione debet sic exponi 'Sortes est in hoc' instanti vel nunc est et ante illud non fuit, quorum duarum propositionum exponentium una est affirmativa et vocatur "positio de presenti", alia est negativa et vocatur "remotio de preterito", sicut patet per primam suppositionem.

2.1.2

Secundo ex dicta conclusione sequitur quod omnis propositione affirmativa composita ex terminis rerum permanetum, in qua ponitur hoc verbum 'incipit', convertitur cum una copulativa composita ex exponentibus, quia exponentes tales sunt quod ab una ad aliam est bona consequentia et everso. Verbi gratia ista propositio 'Sortes incipit esse' convertitur cum una copulativa 'Sortes nunc est et Sortes prius non fuit'. Et ideo sequitur 'Sortes incipit esse', igitur Sortes nunc est et prius non fuit'. Similiter sequitur everso. Ex istis sequitur quod semper a talli propositions.

affirmativa 200, in qua ponitur 201 hoc 202 verbum 203 'incipit', ad quamlibet 204 exponentem est /D 215/b/ bona consequentia, sicut 205, 207 patet de se 185, 206.

2.2


2.2.1

Ex istis 266 sequitur quod omnis propositio 267 affirmativa composita 268 ex terminis rerum successivarum, in qua 269 ponitur hoc verbum 'incipit'.

convertitur cum una copulativa composita ex una negativa de presenti et una affirmativa de futuro, et quod una ab ad aliam est bona consequentia. Illud patet de patet ut prius quod quod quod tali propositione /C 267,268/ ad quamlibet eius exponentem est bona consequentia.

2.3

Istis prehabit 294 propositio 295,296 TERTIA CONCLUSIO est 297, quod hic propositio 300 est impossibilis 'motus incipit esse'. Iam conclusionem probo sic: ista propositio est necessaria 'omnis motus est', igitur sita opposita simpliciter est impossibilis, videlicet 'aliquis motus non est'; et per consequens ista est impossibilis 'motus non est'. Consequentia est bona, ergo ista copulativa est impossibilis 'motus nunc non est et immediate post hoc erit'. Sed 317,318,319,320 motus incipit esse', igitur ista propositio 'motus incipit esse', est impossibilis. Primam propositionem assumtam probo.

Quod nec potuit esse falsa sine mutatione significationis terminorum postquam fuit imposita ad significandum, igitur 324 propositio est necessaria. Consequentia patet, quia arguitur ad diffinitione 344,345,346 ad diffinitionem 347. Antecedens 350 et de se 349.

Contra istam conclusionem arguitur: motus Sortis postem incipere esse. Motus Sortis est motus, igitur motus postem incipere esse. Discursus patet quia est syllogismus expositus. Maior patet de se quia motum est quod Sortes postem incipere se moveri. Minor patet quia ibi ponitur superius de inferiori affirmative.

Item, motus Sortis postem incipere esse, igitur motus postem incipere esse. Consequentia est bona, [quia] antecedens est verum, igitur et consequens. Quod consequentia sit bona patet quia arguitur ab inferiori ad superius sine distributione. Veritas antecedentis patet de se.

Item, quicquid postem non esse et postea esse, potest incipere esse. Sed motus postem non esse et postea esse, ergo motus postem incipere esse. Discursus patet de se, et maior similiter. Minor patet quia est una indebita cuius quilibet singularis est vera, quia non est aliqua motus quia per potentiam convenientem possit non esse et postea esse, et hoc precipe tenendum quod motus non sit res distincta a rebus permanentibus.

Ad primum istorum dicendum quod cum dicitur 'motus Sortis' potest incipere esse, illam concedo, et ad minorem cum dicitur 'motus Sortis est motus' dico quod si Sortes nunc non moveretur, illa est falsa, et si Sortes nunc moveretur, illa est vera, sed tunc non in veritate cum maior. Vidi breviter.
potest 431 dicitur 432 quod in talibus propositionibus equi
di lontibus non oportet discursum 434 ypo
teticis consequentiam. Ad probatio
menem quando 439 dicitur 440 quod 441 argui
tur ab inferiori ad superi
us affirmative 443, dico 444, 446 istam 447 negando 445, 448.

Et si ita 449 dicitur 450 contra quia 451 ambe 452 propositiones, 453

tam maior quam minor 455, sunt 456 affirmative, /D 216/a/ igi
tur 457 argu

tur affirmative 458, dico istam consequentiam negando, quia 461

ad hoc quod arguitur affirmative non tantum requiritur 463 quod propositio
nes 465 sint affirmative, sed uterius 467 requiritur quod quelibet

propositio exponens tales affirmativas 469 vel 470 saltem 471 neces
saria requienda ad expositionem talium propositionum 476 sit affirmativa.
et quia 477 sic 478 non est 479 in proposito /B 16/a/ eo 480 quod 481 una

exponentium 484 propositionum 485 est negativa 486, ideo non 487 argu

itar affirmative.

Ad aliud 488 quando 489 dicitur quod 491 quicquid potest non esse et 492

postea 493 esse potest incipere esse 490, 495, 496 istam 497 concedes

rdo 498. Et si uterius 499 quando dicitur 500 quod 501 motus potest 502 non 503

esse et 504 postea 505 esse 506, dico 507 istam 508 negando, quamvis per

potentiam prime cause positur 510 verificari 511, de qua potentia 512 nihil

loquor 514 ad presens, sed tantummodo 515 physice.

cursus B; om. D. 433 equivalentibus D. 434 et propositionibus C.

435 distributionem C. 437 secundum BC. 438 dictur B.

439-440 om. D. 441 quia BD. 442 suum superius C. 443 om. C.

444-445 consequentia est neganda B. 446-447 om. D. 448 nego D.


459 om. C. 460 om. B; etiam C. 461 om. C. 462 arguitur C.

463 om. C. 464 negatur B. 465 ille propositiones C; ambe propositiones

d. 466 sunt B; 467 etiam C. 468 negatur B; om. C.

469 propositiones C; om. D. 470 om. C. 471 scilicet C. 472 om. A.

473 requisitas C. 474 exponentes A. 475-476 talem propositionem B.

477 autem C. 478 om. C. 479 om. C. 480 om. CD. 481 quo C;

quia D. 482-483 om. C. 484 talium B; om. D. 485 om. D.

486 necessaria B. 487 om. B. 488 tertium BC. 489-490 om. C.

491 om. BD. 492 om. A. 493 post A; potest D. 494-495 om. BD.

496 om. AC. 497 ad istam B; maior C. 498 concedo A; conceditur C.

499-500 ad minorem A; sed minor est falsa C. 501 om. AD. 502 possess

503 om. C. 504 om. A. 505 potest D. 506 non esse C.

507-508 om. C. 509 om. B. 510 brevis posset A; poterit B.

511 ista verificari B. 512 om. BC. 513 non C. 514 loquitur C; om. D.

515 tantum C. 516 physice quod dicimus sive in illo tractatu intend

compleure B; physice loquendo dico ista D. 517-518 quarta conclusio
2.3.1

Ulterius sequitur ex premissis quod tales consequentie 'a incipit esse, igitur a erit' tam in terminis rerum permanentium quam in terminis rerum successivorum sunt omnino necessarie, et hoc ponendo in distinctis terminis.

2.3.1.1

Primo hoc probo in terminis rerum permanentium. Et probo hanc consequentiam esse bonam 'Sortes incipit esse, igitur Sortes erit' quia sicut ex predictis patet ills consequentia est bona 'Sortes incipit esse, igitur Sortes nunc est'; igitur quicquid sequitur ad consequentiam sequitur ad antecedens. Sed ad hoc consequens 'Sortes nunc est', sequitur quod Sortes erit; ergo ad hoc antecedens 'Sortes incipit esse' sequitur quod Sortes erit. Et quod ista consequentia sit bona 'Sortes nunc est, ergo Sortes erit' probo sic, quia si Sortes nunc sit, et cum per secundam suppositionem non sit dare ultimum instans rei perennis in esse, igitur hoc instans non est ultimum instans esse Sortis. Et sic hoc instans non sit ultimum instans esse Sortis, sequitur quod post hoc instans Sortes necessario erit, quia si Sortes post hoc instans non esset et nunc esset, sequitur quod hoc instans esset ultimum instans sui esse. Habeo igitur probatum quod ista consequentia est bona 'Sortes nunc est, igitur Sortes erit' et per consequens hoc 'erit' bona consequentia 'Sortes incipit esse, igitur Sortes erit'.

terminata veritas, et quod futura contingens posse sint determinate sciri. Sed hoc est contra Aristotelem primo Pery Ermenemas, igitur illud ex quo sequitur. Contrarium probato et arguo sic: "Sortes nunc est, igitur Sortes erit". Ista consequentia est bona, et antecedens est scitum a te esse verum, igitur consequens est scitum a te esse verum, quia qui scit premisas esse veras et scit discursam esse verum et bonum, scit conclusionem esse veram, quia aliter demonstratio numquam faceret scire nec esset silogismus faciens scire. Ex quo sequitur quod sicut scis istam propositionem 'Sortes est' ita scis istam 'Sortes est' Sed clarum est quod distincte et determinate scis. Ista 'Sortes est' quia tu vides manifeste quod Sortes est, igitur tu scis distincte et determinate istam 'Sortes erit'. Sed ista /C 25/ b propositio 'Sortes erit', est futurum contingens, igitur aliquod futurum contingens distincte et determinate scitur. Sed non est maior ratio de uno futuro contingenti quam de alio, igitur videtur quod omne futurum contingens potest determinate sciri.

Ad illud respondeo: pro cuius solutione notandum est quod futurum contingens duplex est, quia quoddam est futurum contingens quod pro illo pro quo est verum nullo modo potest esse falsum, et tale futurum contingens est 'nunc futurum contingens', quod sequitur necessario ex propositione vera et mere de presenti. Aliud

est futurum contingens quod pro illo instanti pro quo est verum pro eodem instanti potest esse falsum; et ista veritas vocatur "veritas indeterminata" quia non est necessario determinata ad unam partem, et talia contingentia sunt huiusmodi: 'Sortes bibit', 'Sortes comedet', etc.

Per hoc dico ad argumentum concedendo quod de primis futuris contingentibus potest esse determinata veritas et determinata et distincta scientia sicut de propositionibus mero de presenti ex quibus talia contingentia sequuntur. De futuris secundis contingentibus nulla est veritas determinata nec certa scientia et de talibus loquitur Aristoteles in loco sepius allegato.

2.3.1.2

Hoc idem ostendo in terminis rerum successivarum, videlicet quod tales consequentia sunt bona 'Sortes incipit moveri, igitur Sortes movetur'. Istam consequentiam probo: a propositione exposita ad quamlibet exponentem est bona consequentia, sicut ex habitus est manifestum. Sed ista propositio 'Sortes movetur' est unam exponens istius 'Sortes incipit moveri' sicut etiam patet ex predictis, igitur ista consequentia est bona 'Sortes incipit moveri, igitur Sortes movetur'.

Ulterior sequitur declaratio istius consequentis 'Sortes movetur, igitur Sortes movetur'. Istam consequentiam /probo/ et primo de motu locali, secundo de aliis motibus.

De 741,743 motu 744 locali 745 arguo 742 sic: Sortes movetur 746 localiter, igitur Sortes 747 est in loco, vel 748 igitur si 749 Sortes sit 751 in loco 750 habebit 752 aliquem alium 753 locum quam 755 nunc habet 757 vel 758 non 759. Si Sortes 760,762 habebit alium 763 locum quam 764 nunc habet 761,765 igitur Sortes 766 movebitur 767. /A 51 a/ Si 768 non habebit aliquem alium locum quam nunc habet 771, igitur Sortes 772 non movetur 769 localiter 773, quia habebit ultimo 774 loco cessat motus localis.

Idem potest probari de motu locali circulari uno corpore existente in 779 eodem loco 780 movendo tamem 782 circulariter. Sed 783 tunc debet fieri probatio respectu 785 partium illius corporis quod sic movetur 784, quia quacunque parte capta 786 ilius corporis vel 788 illa 789 pars 790 habebit alium 791 locum quam nunc 792 habet, et sic ulterius movebitur localiter, vel 795 ista 796 pars 797 non habebit alium locum quam nunc 798 habet, et sic non movebitur localiter, quia 801 moveri localiter non est aliud quam acquirere locum post locum. Patet igitur quod illa consequentia est bona 'Sortes movetur localiter, igitur Sortes' movetur localiter' quia ex opposto consequentis simpliciter sequitur oppositum antecedentis; nam sequitur 'Sortes non movetur' localiter, igitur 813 non habebit alium locum quam nunc habet et per consequens 'Sortes non movetur localiter', igitur 817 de primo ad ultimum 819 sequitur 'Sortes non movetur localiter, ergo Sortes non movetur localiter'.

cum illud consequens sit de futuro contingenti de quo non est aliquid determinata veritas, sequitur etiam quod de isto antecedente 'Sortes' movertur localiter non erit aliqua determinata veritas, quia in omni bona consequentia si consequens sit aliqui dubium et antecedens erit eidem dubium. Et si consequens sit indeterminate verum vel falso, et antecedens erit indeterminate verum vel falso. Et per consequens sequitur quod aliqua propositio esse mere de presenti non erit determinata vera vel falsa.

Item ulterior sequitur quod ilia consequentia sit bona 'Sortes movertur, igitur Sortes movebuntur', cum Impossible sit scire hoc consequens 'Sortes movebuntur', igitur impossibile erit scire hoc antecedens 'Sortes movertur', quod videtur maximme absurum, precipue cum videmus expressae aliqua moveri, et cum secundum Aristotelem motus sit sensibile commune.

Item sequitur, si ista consequentia sit bona 'Sortes movertur, ergo Sortes movertur', igitur sequitur quod aliqua propositio de preterito erit ita indeterminate vera sicut quecumque propositio de futuro contingenti, quod videtur esse contra istam propositionem communem. 'Omnis propositio de preterito vera est necessaria'. Assumptum probo et capio hanc propositionem de futuro 'Sortes movebuntur' qua propositio vocetur 'a'. Et capio hanc propositionem de preterito 'a fuit' verum. Tunc sic: a potest nunquam fuisse verum, igitur hoc propositio 'a fuit' verum potest nunquam fuisse vera. Consequentia patet de se ex hoc, quod veritas istius propositionis 'a fuit verum' dependet ex veritate a.

Ad primum istorum 900 respondeo; pro 901 cuius solutione et aliorum argumentorum 902 subsequentium est scindendum quod aliqua propositiones de presenti et de preterito sunt huiusmodi; quod veritas illarum propositionum 909 dependet totaliter /D 216\textsuperscript{a}/ ex veritate propositionum contingentium, de quibus nulla est determinata veritas vel falsitas, et 912, 914 saltem si tales propositiones de presenti et de preterito debeant exponi quod 918 una istarum 920 exponentium 921 erit propositio de contingentii de qua nulla 923 est determinata veritas vel falsitas 913. Verbi gratia istius 927 propositionis de presenti, 930 'Sortes movetur' 931, sunt 932 iste due propositiones, 934 'Sortes 935 immediate ante hoc' 936 fuit in alio loco quam nunc est 937, et 940 'Sortes immediate post hoc erit in alio' 941 loco quam nunc 943, que propositio est mere de futuro contingenti et reddit totam istam copulativam mere de contingentii. Et per consequens ista propositio de presenti 'Sortes movetur', cui 953 equalet copulativa 955 predicta, est contingens simpliciter 958. Aliae sunt propositiones de presenti 959 /C 25\textsuperscript{b}/ et de preterito in quorum 961 expositione non 963, 965 ponitur aliqua propositio 964 de futuro contingenti indeterminate vera vel falsa, cuiusmodi sunt 971 tales propositiones 973 in quibus ponuntur termini rerum permanentium ut 'Adam fuit homo', 'homo est animal'.

\begin{itemize}
  \item 900 om. C. 901 quod pro C. 902 om. D. 903 sequentium BD.
  \item 904 aliqua ACD. 905 propositio ACD. 906 aliqua propositio de D.
  \item 907 huius A. 908 earum A. 909 om. AC. 910 dependeat B.
  \item 911 contingentium C. 912-913 om. B. 914 vel D. 915 om. D.
  \item 916 futuro preterito C. 917 debent D. 918-919 om. AC. 920 om. CD.
  \item 921 om. C. 922 est A. 923 non C. 924 erit C. 925 ut D.
  \item 926 om. D. 927 illam istius D. 928 om. A. 929-930 om. C.
  \item 931 movetur localiter B. 932 que est de presenti sunt C. 933 om. C.
  \item 934 om. C. 935 quod B. 936 hoc instans B. 937 om. AB; alia est quod D. 938-939 om. B. 940 om. A. 941 aliquo AD. 942 prius D.
  \item 943 om. D. 944 veram C. 945 de contingenti A. 946 reddidit C.
  \item 947 om. C. 948 om. C. 949 om. B. 950 contingentem B; futuro contingenti C. 951 om. C. 952 movetur localiter B; om. C. 953 cuius D. 954 equivus vel equilibus C. 955 illa copulativa C. 956 suprehic dicta A; contingens B. 957 erit BD. 958 simpliciter contingens D.
  \item 959 futuro presenti C. 960 que D. 961 non habent D. 962 expositioni B; exponentes D. 963-964 om. D. 965 om. B. 966-967 aliqua terminus rerum successivarum vel etiam que non significant aliquas propositiones in quibus ponuntur aliqui termini rerum successivarum cuiusmodi sunt tales propositiones B. 968 nec D. 969 veram A; valet B.
  \item 970 cuius A; ut D. 971 sint D. 972 termini A; om. D.
  \item 973 om. C; iste D. 974 componuntur C. 975 termini vel aliquis terminus C. 976 successvarum C. 977 cuius sunt tales C. 978 et
Per 978 hoc ad 979 argumenta.

Ad primum concedo 980 conclusionem: quod aliqua propositio /B 167 a/ de presenti, sic ilia 981 in cuius expositione ponitur aliqua 982 futurum contingens indeterminate 983 verum vel falsum 984 , est indeterminate vera vel falsa sicut 988 illud 989 contingens quod ponitur in eius expositione.

Ad secundum dic 990 concedendo 991 conclusionem quod impossibile est scire hanc propositionem de presenti. Immo dico quod hoc 994 'Sortes' moveretur 996 , est 997 dubia sicut ista 998 'Sortes movebitur'. Quod potest demonstrari 999 per copulativam compositam ex eius 4 exponentibus cum qua ista propositio 5 convertitur, quia illa copulativa - sicut de se patet - ratione unius 6 partis est simpliciter 8 contingens. Et ad hoc quod 9 dicitur 10 quod nos videmus manifeste 11 aliqua 12 moveri, dico quod 14 - sicut argumenta expresse 15 probant - hoc est impossibile, sed hoc apparat nobis, sic ilia 16,20 quod aliqua 21 res moveatur 19,22, ex hoc quod immediate 23 ante hoc instans 24 illa 25 res movebatur 27 quia quod 28 prope est 29 nihil distare videtur.

Ad aliud 30 quod 31 dicitur 32 de Aristotele qui ponit motum esse 33 sensibile 34 commune 35 , hoc ideo dicit 36 non quia sentimus aliquid moveri, sed quia pluribus sensibus 37 percepimus 38 quod 39 aliquid movebatur. Quia sicut nos 40 non possimus 41 percipere per 42 sensum vel per 43 intellectum quod 44 aliquid 45 movebitur, ita etiam 46 non possimus percipere per 48,50 sensum vel per 51 intellectum 49 quod aliquid movetur.

Ad ultimum 52 argumentum 53 dico concedendo conclusionem quod aliqua propositio vera de preterito 54 est ita 55 bene 56 contingens et 57 indeterminata C.

---

nate 59 vera vel falsa 58 sicut aliqua 60 propositio 61 de futuro contingenti. Et tales propositiones 62 de preterito 63 sunt ille in quorum 64 expositione 65 ponitur aliquod futurum contingens indeterminate verum vel falsum; et 66 talis est hec propositio 67 'a fuit verum'. Et uterius ad hoc 58 quod dicitur 69 quod illa 71 propositio est communis quod 70 omnis 72 propositio de preterito vera est necessario, dico quod illa simpliciter est 73 falsa propter 74 rationes predictas.

2.3.1.2.1.2

Alia conclusio est ista que 75 etiam 76 sequitur 77 ex predictis 78, videlicet 79 quod illa consequentia 80 est bona 'Sortes incipit moveri localiter,igitur immediate /C 26 a/ post hoc aliquod spatum erit pertransitum 81, istam consequentiam 82 probo sic 83: Sortes incipit moveri 84 localiter, igitur immediate post hoc movebitur localiter. Consequentia patet per predicta 86 quia 87 arguitur ab exposito 89 ad exponens 88,90. Et uterius 91: immediate 92 post hoc movebitur 93, igitur immediate post 94 hoc 95 erit 96 in alio loco quam 97 nunc est 98; igitur immediate post hoc aliquod spatum erit pertransitum.

sit a 114, tunc sic 115: immediate post hoc Sortes movebitur localiter 116, igitur ante medium 117 a temporis erit aliquod /D 216V/b/ spatium pertransitum - sicut 118 de se patet 119 - et per consequens 120 a tempus totum 121 non erit antequam 122 aliquod 123 spatium 124 erit 125 pertransitum. Patet igitur quod illa 126 prima 127 consequentia est bona 'Sortes' incipit moveri 129 localiter, igitur immediate post hoc aliquod spatium erit 130 pertransitum'.

Contra istam conclusionem 131 arguo 132 sic: antecedens istius consequentiae est 133 possibile, et consequens impossibile 134, igitur consequentia non valet. Quod antecedens sit 135 possibile patet de se. Impossibilitatem consequentis 136 probo sic: nullum spatium erit immediate post hoc pertransitum, igitur non immediate post hoc erit aliquod spatium 137 pertransitum. Consequentia videtur plana quia - ut videtur - oppositum consequentis non potest stare cum antecedente. Ista enim 138 - ut 140 videtur 141 - non stant 142 simul 'nullum spatium immediate post hoc erit pertransitum' et 'immediate post hoc aliquod spatium erit pertransitum', quia ista 143 sunt contradictoria, ut patet de se. Sed ista 144 videntur 145 equivalere 146 'aliquod spatium erit pertransitum immediate post hoc' et 'immediate post hoc aliquod spatium erit pertransitum' 144.

/B 16V/b/ Antecedens 154 prime consequentiae patet inductive, videlicet quod 155 nullum spatium erit 156 pertransitum immediate post hoc 157, quia quocumque spatio dato 158 tempus 159 erit antequam illud 160 spatium 161 erit 162 pertransitum, ut 163 de se patet.

Item, nullus motus erit immediate post hoc, igitur nihil movebitur immediate post hoc. Et ultra, igitur non immediate post hoc erit aliquod spatium pertransitum. Consequentia videtur plana quia si nihil movebitur localiter immediate post hoc instans, cum omne spatium pertransitum per motum localem, sequitur quod Sortes non immediate post hoc pertransibit aliquod spatium. Primum antecedens probo, videlicet illud 'nullus motus erit immediate post hoc', quia si hoc est falsa, tunc sua opposita est vera, scilicet ista 'aliquis motus est immediate post hoc'. Sed hoc est impossibile quia capto quocumque motu medietas illius motus erit antequam totus motus erit, et per consequens totus iste motus non erit immediate post hoc.

Ad primum argumentum quando dicitur 'nullum spatium immediate post hoc', dico istam simpliciter concedendo quia sua opposita est impossibilis. Sed ultra nego consequentiam, videlicet illam igitur non immediate post hoc aliquod spatium erit pertransitum". Et ad probationem quando dicitur 'hoc est impossible aliquod spatium immediate post hoc erit pertransitum, etc.', dico illam consequentiam negando; et quando dicitur 'ille equivalent' dico quod ille propositiones aliquod spatium immediate post hoc erit pertransitum et immediate post hoc aliquod spatium erit pertransitum nullo modo equivalent quia una est impossibilis et alia possibilis. Et tota causa est quia in ista propositione 'aliquod spatium immediate erit pertransitum' subiectum supponit determinate, et in ista 'immediate post hoc erit aliquod

spatium pertransitum 247, 248, ille idem 249 terminus 250 supponit 251 confuse tantum 242. Unde 252 ista stant 253 simul 'nullum spatium erit pertransitum immediate 254 post hoc 255, et 'immediate post hoc 256 aliquid spatium erit pertransitum 257'.

Et si dicatur quod 258 ista consequentia est bona 'immediate 259 post hoc aliquid spatium erit pertransitum, igitur pertransitum erit aliquid spatium immediate post hoc 260, 261; per conversionem simplicem dico quod non debet sic converti, sed 262 potius 264 sic: 'igitur 263 immediate post hoc pertransitum erit aliquid spatium', ita semper 265 quod 266 in una propositione et 267 in alia ponatur 268 ly 269 'pertransitum' et 270 ly 'aliquid spatium 271', post totum illud 'immediate /C. 26 va/ post hoc 272'.

Ad aliud argumentum 273 quando dicitur 274 'immediate post hoc aliquid spatium erit pertransitum, etc.' 275 dico 276 istam 277 consequentiam 278 concedendo 279. Et ulterior concedo 280 quod sine tempore post hoc aliquid spatium erit pertransitum. Sed 281 ulterior nego consequentiam illam 282 quod aliquid movebitur in non-tempore.

Et si dicatur contra 283 quod 284 ad 285 omnem motum requiritur tempus, igitur 286 ad motum qui erit immediate post hoc requiritur 288 etiam tempus 289 concedo 290 istam 291 propositionem 292 quod ad omnem motum requiritur tempus 287, et tamen nullus tempus requiritur ad motum ad 293, 295 alium locum 294. Et ulterior nego 296 istam propositionem 'ad motum qui erit immediate post hoc /D. 217 Fa/ requiritur tempus' quia implicat 297 falsum 299, videlicet 298 quod aliquid motus erit 300 immediate post hoc.

Ad aliud argumentum 301 dico 302 negando 303 istam consequentiam 'nullus motus erit immediate post hoc, igitur nihil movebitur localiter immediate post hoc', cum quo 304 tamen stat quod immediate post hoc 305 aliquid 306, 310 movebitur localiter. Ulterior 308, 311 dico negando istam consequentiam 311 'igitur 312 aliquid spatium potest pertransiri sine motu 309'.

Ex istis sequitur ulterius quod sine motu post hoc aliquid spatium pertransiri. Istam consequentiam probo sic: sine illo motu potest aliquid spatium pertransiri, et sine illo motu et sic de singulis, igitur sine motu potest aliquid spatium pertransiri. Consequentia patet de se, et etiam antecedens, quia aliqua singularis sit falsa, videlicet illa, 'sine motu potest aliquid spatium pertransiri' aliqua singulari motu capto, tunc in contra: sit ille motus singularis a, igitur sine a motu non potest aliquid spatium pertransiri. Sed hoc est manifeste falsum quia ab alioquo mobili et sine a motu locali etiam cum aliquo motu potest aliquid spatium pertransiri, sic tur patet manifeste. Cum illo tamen stat quod nullum spatium potest pertransiri sine motu.

Alia conclusio est hoc illa consequentia est bona 'Sortes incipit moveri localiter, igitur Sortes immediate post hoc erit in duobus locis'. Istam consequentiam probo sic: Sortes incipit moveri localiter, igitur Sortes erit in duobus locis, et nullum tempus erit antequam Sortes erit in duobus locis. Et ultra, igitur Sortes immediate post hoc erit in duobus locis. Prima consequentia quantum ad istam partem 'Sortes incipit moveri localiter, igitur Sortes erit in duobus locis' patet de se eo quod nihil potest moveri localiter nisi pertranseat multa loca. Item, eadem consequentia quantum ad secundam partem, scilicet 'Sortes incipit moveri localiter, igitur nullum tempus erit antequam /C 26 V/b/ Sortes erit in duobus locis', ostenditur sic quia si ista consequentia non

sit bona, igitur oppositum consequentis potest stare cum antecedente; igitur illa stant simul vel saltem possunt stare simul 'Sortes incipit moveri localiter' et 'aliquod temporis erit antequam Sortes erit in duobus locis'. Capio tunc illud aliud temporis tempus, et vocetur 'a'. Tunc sic sic similis ante medium instans 'a' temporis Sortes erit in duobus locis, sicut de se patet; igitur totum illud tempus non erit antequam Sortes erit in duobus locis. Et sic potest argui de quocumque tempore dato vel dando antequam Sortes erit in duobus locis. Patet igitur quod illa consequentia est bona 'Sortes incipit moveri localiter, igitur immediate post hoc erit in duobus locis'.

Sed contra istam conclusionem arguo sic et pono istum casum, quod omnia loca in rerum natura vocetur 'a' vel 'b', et quod nullus locus qui vocetur 'a' vocetur 'b' nec econverso. Et pono quod iste locus in quo nunc est Sortes vocetur 'a', et quod Sortes incipiat moveri localiter. Tunc sic: Sortes incipit moveri localiter, igitur Sortes immediate post hoc erit in duobus locis. Et ultra, igitur immediate post hoc Sortes erit in a et in b. Et ultra, igitur Sortes erit simul in duobus locis. Consequens est impossibile, sicut patet de se, igitur illum ex quo sequitur.

quia si Sortes prius erit in a quam in b vel in b quam in a, vel igitur prius erit per tempus vel per instans. Non per tempus quia per nullum tempus Sortes erit prius in a quam in b, sicut de se patet. Nec etiam per aliquod instans quia inter quemque duo instantia cadit tempus medium, sicut patet per Aristotelem et Commentatorem in quarto Physicorum. Et per consequens si Sortes forent prius per instans in a quam in b vel e contrario, sequitur etiam quod per tempus foret prius in a quam in b vel e contrario.

Preterea, si Sortes immediate post hoc erit in duobus locis, vel igitur Sortes immediate post hoc erit in duobus locis simul vel successive. Non simul ut de se patet.

Nec successive quia si Successive, igitur prius foret quam in alicio, vel igitur per tempus vel per instans, et reditum primum argumentum. Preterea, per casum Sortes nunc est in a loco, iturum Sortes prius erit in b loco quam iterum erit in a loco, et per consequens Sortes non immediate post hoc erit in a loco et in b loco simul erit in a loco, iturum Sortes prius erit in b loco quam iterum erit in a loco, non immediate post hoc erit in a loco et in b loco simul erit in a loco, iturum Sortes prius erit in b loco quam in a loco. Consequentia patet quia suppositum per casum quod Sortes semper moveratur de a loco in b locum et de b loco in a locum, et sic in infinitum.
Ad primum istorum respondeo, et dico quod illa consequentia est bona 'Sortes incipit moveri localiter,igitur Sortes immediata post hoc erit in duobus locis'. Et ultra concedo quod isto casu posti Sortes immediate post hoc erit in a et in b loco. Sed ulteriormente nego istam consequentiam 'igitur Sortes immediate post hoc erit in a et in b simul'. Et ad probationem quando dicitur quod Sortes erit in a et in b loco, et Sortes non prius erit in a loco quam in b loci nec e converso, igitur Sortes erit in a et in b simul, dico concedendo illam consequentiam, et nego istam particulam antecedentis. 'Sortes non prius erit in b quam in a loco'. Et argumentum in oppositum, quando dicitur 'si Sortes prius erit in b loco quam in a loco, igitur per tempus erit prius vel per 569 instans; dico quod nec erit prius per tempus nec per instans sicut satis manifeste demonstrari potest. Sed bene dico quod Sortes erit prius in b loco per tempus quam in a loco, et hoc ideo quia in illa propositione 'Sortes per tempus erit prius in b loco quam in a loco' ly 'tempus' supponit determinare, et oportet quod supponat pro aliquo tempore singulari dato vel dando. Sed in illa propositione 'Sortes prius A 51a erit in b loco quam in a loco per tempus' ly 'tempus' supponit confuse tantum, et per consequens non contingit descendere ad aliquod suum singularum vel copulatius vel disjunctius.

Et si dicitur 'Sortes erit prius in b loco quam in a loco', igitur aliqua prioritate Sortes erit prius, dico istam consequentiam.

- 541 a A; b loco B. 542 cum D. 543 om. A. 544 om. BD.
- 545 a loco B. 546 vel B. 547 locis C. 548 om. A. 549 b B.
- 550 om. A. 551 a loco B. 552 concedo AC. 553 om. AB.
- 564 om. A. 565 om. B. 566 om. D. 567 igitur vel B.
- 574 om. D. 575 instans prius A. 576 om. B; satis patet et C.
- 577 dicitur B; sequitur illud D. 578 om. C. 579 om. C. 580 om. C.
- 581 om. C. 582 a D. 583 b D. 584 om. CD. 585 hoc B.
- 586 verificatur B; significetur D. 587 om. D. 588 alio C; aliquod D. 589 tempus D. 590 determinate C; singulare D. 591 datum D.
- 597 a D. 598-599 5-6-1-2-3-4 C. 600 b D. 601 om. C. 602 hoc B. 603 nec B. 604 continget AB. 605-606 om. C. 607 om. D.
- 608 om. A. 609 nec C. 610 nec C. 611 a CD. 612 b CD.
- 613 om. CD. 614 erit Sortes B; om. C. 615 prius etc. D.
quentiam negando 617, sed concedo istam "igitur" 618 Sortes prius erit in b 621 loco 622 quam in a 623 loco aliqua prioritate", et hoc tantum propter 625 causam 626 predictam 627.

Per 628,630 /C 27^b/ ista patet 629 ad 631 secundum argumentum 632. Quamdo 633 dicitur 634 "Sortes 635 erit in diversis locis vel 636,637 Sortes erit in duobus locis simul vel successive", dico quod successive 640 et nullo modo simul. Et uterius dico quod prius erit in uno loco quam in alio per tempus, sed per nullum tempus prius erit 644,645, et hoc 646 propter dictionem 'prius' que 647 habet 648 virtutem 650 confundendi terminum.

Ad alium 651 argumentum patet quod 652 idem, videlicet quod Sortes non simul erit in a et 653 in b, sed quod 654 Sortes 655 prius erit in b 656 quam in a et 657 et tamen immediate post hoc Sortes erit 659 in b 660 et 661 immediate 663 post hoc erit Sortes in a.

Et si dicatur quod ista proposition est vera de futuro quod 667 Sortes erit in a et in b, et Sortes erit in duobus locis, igitur aliquando 669 habebit vel saltam habere potest aliquam propositionem veram de presenti, sed non aliam 672 - ut 673 videtur - quam 674 istam 'Sortes erit 675 in a et in b'. Sed 676 hoc est impossibile, igitur et prima.

Ad 677 illud 679 dico quod 681 ista proposition est vera de futuro, et ista habebit 682 vel 684 potest habere aliquam veram de presenti vel 687 aliquas veras de presenti, pro quo est sciem quod non semper propositioni vere de futuro correspondet vel 691 correspondebit una proposition vera de presenti, quia quando propositioni vera 692 de futuro coram scelesti 690 et 691 coram divinitus 699 de futuro 694 evalet 696 plures propositionibus veris. /B 17^b/ vel exponitur
per plures propositiones veras, tunc illi propositioni vere de futuro correspondebant plures propositiones vere de presenti. Verbi gratia, isti propositioni vere de futuro 'Antichristus et dies iudicii erunt' /D 217<sup>v</sup>a/ non potest correspondere precise una propositioni vere de presenti quia hec semper est falsa 'Antichristus et dies iudicii sunt'. Sed sufficient ad veritatem istius de futuro quod sibi possint correspondere due vere de presenti, et hoc non simul sed successive, videlicet iste 'Antichristus est' et 'dies iudicii est', quia non erunt simul vere sed successive. Et sic dico quod ad veritatem istius de futuro 'Sortes erit in a et in b' non requiritur quod hec erit aliquando vera 'Sortes est' in a et in b', sed sufficient quod iste erunt vere 'Sortes est in a' et 'Sortes est in b', et hoc non simul sed successive.

2.3.1.2.1.4

Alia conclusio est ista quod ista consequentia est bona 'Sortes incipit moveri' localiter, igitur Sortes non movebatur localiter antequam sit in alio loco quam nunc est. Istam consequentiam probo sic: Sortes /C 27<sup>v</sup>a/ incipit moveri localiter, igitur Sortes nullum spatium pertransibit antequam erit in alio loco quam nunc est. Istam consequentiam probo quia oppositum consequentis non potest stare cum antecedente. Ista enim non stant simul 'Sortes incipit moveri localiter' et 'Sortes' aliquid spatium pertransibit antequam erit in alio loco quam nunc est', quia capto quocumque spatio, antequam Sortes veniat ad medium punctum illius spatii, Sortes erit in alio loco quam nunc est, et per consequens illud spatium non erit pertransitum a Sorte antequam Sortes erit in alio loco quam nunc est. Igitur Sortes non movebatur localiter antequam erit in alio loco quam nunc est. Tunc sic: nullum spatium erit pertransitum a Sorte antequam Sortes
erit in alio loco quam nunc est, ergo Sortes non movebitur localiter antequam erit in alio loco quam nunc est. Antecedens istius ultime consequentie patet per predicta. Consequentia patet quia arguitur ab uno convertibili ad aliud convertible. Quia idem est moveri localiter et pertransire aliquod spatium, et non pertransire aliquod spatium et non moveri localiter. Patet igitur ista consequentia 'Sortes incipit moveri localiter, igitur Sortes non movebitur localiter antequam Sortes erit in alio loco quam nunc est'.

Contra istam conclusionem arguo sic: si Sortes non movebitur localiter antequam sit in alio loco quam nunc est, igitur Sortes erit in alio loco quemque movebitur localiter, et cum Sortes non possit esse in alio loco nisi moveatur localiter videtur sequi quod Sortes movebitur localiter antequam movebitur localiter. Sed hoc falsum et impossibile, ergo illud ex quo sequitur.

Item, Sortes non potest exire locum in quo nunc est, nisi per motum localem, igitur motus localis erit antequam Sortes erit in alio loco quam nunc est. Et ultra, igitur Sortes movebitur localiter antequam Sortes erit in alio loco quam nunc est.

Ad primum istorum respondet. Quando dicitur "si Sortes non movebitur localiter antequam erit in alio loco quam nunc est, etc." dico istam consequentiam nagando quia nec Sortes movebitur localiter antequam erit in alio loco quam nunc est, nec Sortes erit in alio loco quam est antequam movebitur localiter. Et ulteriori concedo illam propositionem quod Sortes non potest esse in alio loco quam nunc est nisi moveatur localiter. Et ulterior nego istam consequentiam "igitur Sortes movebitur /C 27/ b/ localiter antequam movebitur /810/ localiter /809, 811/".

Ad alium argumentum quando dicitur "Sortes non potest exire locum in quo nunc est nisi per motum localem" concedo. Et ulterior nego istam consequiam "igitur motus localis erit antequam Sortes exibit locum in quo nunc est" quia iste dux propositiones stant simul in veritate 'nullus motus localis erit antequam Sortes exierit locum in quo nunc est' /B 17 V/ et 'Sortes non potest exire locum in quo nunc est nisi per motum localem'. Et 287 iste similiter 289. stant simul in veritate 'per nullum motum localem Sortes exibit locum in quo nunc est' et 322 'Sortes exibit locum in quo nunc est per motum localem'. Et tota causa est quia in istis duabus propositionibus 'Sortes exibit locum in quo nunc est' per motum localem et 'Sortes non potest exire locum in quo nunc est nisi per motum localem' ly 'motum localem' et supponit confuse tantum.

2.3.1.2.1.5

Alia conclusio est ista quod ista consequentia est bona 'Sortes incipit moveri localiter, igitur Sortes immediate post hoc instans pertransibit aliquid spatium quod non immediate post hoc instans /D 217 V/ pertransibit'. Istam consequiam probo sic: Sortes incipit moveri localiter, igitur nullum tempus erit antequam Sortes pertransibit aliquid spatium quod non immediate post hoc pertransibit. Istam consequiam quia oppositum consequentis non potest stare cum antecedente. Illa enim non stant simul 'Sortes incipit moveri localiter' et 'aliquid tempus erit antequam Sortes pertransibit aliquid spatium quod non immediate post hoc instans pertransibit quia capto quocumque tempore ante medium instans illius temporis Sortes pertransibit aliquid spatium quod non immediate post hoc pertransibita.

bit. Quod - ut magis pateat - vocetur illud tempus 'a', quod tempus erit antequam Sortes pertransibit aliquod spatio quod non immediate post hoc pertransibit. Tunc vocetur medium instans a temporis 'b'. Tunc ante b Sortes pertransibit aliquod spatio quod non immediate post hoc pertransibit quia totum illud spatium /C 28*/a quod Sortes pertransibit ante b instans non immediate post hoc pertransibit igitur totum a tempus non erit antequam Sortes pertransibit aliquod spatium quod non immediate post hoc pertransibit, et sic potest argui de quocumque alio tempore dato vel dando. Est igitur ista consequentia probata 'Sortes incipit moveri localiter, igitur nullum tempus erit antequam Sortes pertransibit aliquod spatio quod non /A 51*/b immediate post hoc pertransibit'. Tunc sic: nullum medium erit antequam Sortes pertransibit aliquod spatio quod non immediate post hoc pertransibit, igitur sine medio Sortes pertransibit aliquod spatio quod non immediate post hoc pertransibit. Et ultra: igitur immediate post hoc Sortes pertransibit aliquod spatio quod non immediate post hoc pertransibit. Et hoc fuit consequens probandum.

Contra istam conclusionem arguo sic: Sortes immediate post hoc pertransibit aliquod spatio quod non immediate post hoc pertransibit, igitur immediate post hoc Sortes pertransibit aliquod spatio, et illud non immediate post hoc a Sorte erit pertransitum. Et sic illud spatium non immediate post hoc a Sorte erit pertransitum et immediate post hoc a Sorte erit pertransitum que videntur esse contradictoria.

Ad illud dico negando istam consequentiam 'Sortes immediate post hoc pertransibit aliquod spatio, et illud non immediate post hoc pertransibit', igitur aliquod spatium immediate post hoc erit pertransitum a Sorte, et illud idem spatium non immediate post hoc erit pertransitum a Sorte, quia dico ista simul stare.
Ex predictis potest patere qualiter \textit{predicatum} \textit{et subiectum} \textit{supponunt} \textit{in propositione affirmativa in qua ponitur hoc verbum} \textit{incipit}. Sed quia circa hoc sunt diverse opiniones, primo \textit{unam} \textit{opinionem unius moderni recitabo, secundo eandem improbab} \textit{et tandem} \textit{veritatem declarabo.}

Una opinio \textit{unius} \textit{moderni} \textit{fratris} \textit{Guillelmi} \textit{dicti Ocham} \textit{est quod in omnibus} \textit{talibus} \textit{propositionibus} \textit{sortes bis} \textit{ubi} \textit{albus} \textit{sortes bis bibit \textit{C} 28$^\text{b}$. \textit{vinum}} \textit{sortes ter} \textit{comedit \textit{panem}} \textit{sortes incipit esse grammaticus} \textit{supponunt suppositione innominata. \textit{Istam} \textit{opinionem} \textit{predictus} \textit{doctor} \textit{declarat sic: clarum est quod predicata predictarum propositionum non supponunt simpliciter quia non supponunt pro intentionem anime, nec materialiter quia non supponunt pro voce vel pro scripto sicut de se patet. \textit{Relinquitur igitur quod supponunt personaliter. Tunc sic: omnis suppositio personalis nominata vel est suppositionis discreta vel determinata vel confusa et distributiva vel confusa tantum. Sed nulla predictarum suppositionum supponunt pre-}

---

dicta 994 predicata 995 predicaturn 996 propositionum 997 igitur inter sequitur 998 quod supponunt suppositione innominata 999. /B 17′b/ Assumptionum 999 declarat 2 sic: predicata 3 predicta 4 non supponunt discrete quia non sunt 5 nomina 6 propria nec 7 nomina communia 8 sumpta 9 /D 218′a/ cum pronominibus demonstrativis, nec supponunt 10 determinate 11 quia sub 12 illis 13 non contingit descendere per unam 14 disiunctam, non enim sequitur 'Sortes bis bibit vinum, igitur Sortes bibit hoc vinum vel 17 hoc vinum' et sic de singulis, quia quelibet pars disiunctive est falsa 16. Item, non sequitur 'Sortes incipit esse grammaticus, igitur Sortes incipit esse 19 iste grammaticus vel 20 iste vel 21 iste 22, et sic de singulis quia - sicut ipsa 23 dicit - quelibet pars 24 disiunctive est falsa. Nec etiam supponunt predicta 25 predicata 26 confuse et 27 distributive quia sub illis 28 non contingit descendere per unam copulativam, ut 29 de se patet 30. Nec etiam 31 supponunt confuse tantum quia sub illis 32 non contingit descendere per propositionem 33 de 34 disiuncto 35 extremo 36, non enim sequitur 'Sortes incipit esse grammaticus, igitur incipit 37 esse ille grammaticus vel ille vel 39 ille 40, et sic de singulis. Relinquitur 41 igitur 42 per sufficientem divisionem 43 quod predicata 44 predicta non 45 supponunt aliquam 46 suppositione innominata 47.

Contra istam opinionem arguo sic, et capio primo istam propositionem 'Sortes bis bibit vinum', et probo quod hoc predicatum non supponit suppositione innominata. Et arguo sic: iste terminus qui nullo modo supponit, non supponit suppositione innominata, sed ille terminus 'vinum' predicta propositione nullo modo supponit, ergo non supponit suppositione innominata. Maior notae est de se. Minor probatur quia non supponit materialiter nec simpliciter nec significativamente. Quod non supponit simpliciter nec /C 28\a materialiter, de se patet. Quod non significativamente probo, quia pro nullo significato supponit, igitur non supponit significativamente. Consequentia patet quia idem est supponere significativo et pro suo significativo. Antecedens patet inductivé quia est quedam universalis cuius qualibet singularis est vera, sicut de se patet.

Item arguitur de ista 'Sortes incipit esse grammaticus', si ly 'incipit' exponatur per remotionem de presenti et positionem de futuro. Si autem exponatur per positionem de presenti et remotionem de preterito, tunc etiam claram est quod predicatum supponit determinate sicut in ista propositione 'Sortes incipit esse grammaticus', si sic exponitur 'Sortes nunc est grammaticus et immediate ante hoc non fuit grammaticus'. Tunc dico quod hic 'grammaticus' supponit determinate quia sub illo contingit descendere per disjunctivam, sequitur enim 'Sortes incipit esse grammaticus, igitur Sortes incipit esse ille grammaticus vel ille, et sic de singulis quia qualibet una istarum verificatur pro illo grammatico qui nunc est Sortes.'

Et si dicatur contra: Sortes incipit esse iste grammaticus, et iste grammaticus est Sortes, igitur Sortes incipit esse Sortes, dico negando istam consequentiam quia in talibus propositionibus

50 om. C. 51 om. C. 52 predicatum vinum B. 53 om. C.
54 om. BC. 55-56 sed vinum est huiusmodi ergo etc. C; iste est huiusmodi igitur D. 57-58 patet B. 59 probatur sic C. 60 nec B.
61 supponat C; om. D. 62 vel B. 63 patet de se C. 64 om. B.
65 om. D. 66 patet de se C. 67 aliud C. 68 om. C. 69 om. B.
70 una vera B. 71 et C. 72 aliud si C. 73 arguitur etiam B.
74 ista propositione B. 75 albus vel grammaticus D. 76 quoque B.
77-78 planum C. 79 predicatum eius C. 80 om. C. 81-82 dicit C; sic exponatur C. 83 non C. 84 om. D. 85 postquam ante C.
97 Sortes incipit esse iste grammaticus D. 98 et D. 99 om. CD.
100 significato B. 101 quod B; que C. 102 non primo B.
103 contra hoc A. 104 om. CD. 105 om. C. 106 ad hoc A; om. B.
107 nego AB. 108 om. AB. 109 om. C. 110 om. C. 111 propo-
equivalentibus 110 ypotheticis 111 non valet 112 consequentia de 113 primo ad
ultimum nec etiam 114 tenet 115 sillogismus 116 expositorius 117

Ad 118 argumentumigitur in oppositum 120 quando dicitur 121 "tales termi
non supponunt discrete 122 nec 123 determinate nec 125 confuse nec mate-
rialiter nec simpliciter 126, igitur supponunt suppositione inominata 124", dico 127
negando 128 consequentiam 129, et causa est quia - sicut 130 superius
probatum 131 est - tales 132 termini 133 nullo modo supponunt precise si ly
'incipit' exponatur 134 per remotionem de presenti et positionem de futuro.

Restat igitur declarare 135 /B 18\ a/ qualiter termini supponunt 136 in
predictia 137 propositionibus pro 138 quo 139 breviter est sciendo quod in
talibus propositionibus 'Sortes bis bibit vinum', 'Sortes 140 ter comedit
panem 141', 'Antichristus 143 erit 144 homo', 'Sortes 145 incipit habere al-
bedinem' predicata nullo modo supponunt, sicut 146 manifeste patet 147 per
rationem 148 superius positam 149.

Item, in talibus propositionibus 151 'Sortes incipit esse albus',
'Sortes 152 incipit esse grammaticus 153, si ly 'incipit' exponitur 154 per
remotionem de presenti et positionem de futuro predicata 155 nullo /C 28\ b/
modo supponunt. Si autem ly 156 'incipit' exponatur per positionem de
presenti et remotionem de preterito tunc 158 predicata 159 supponunt deter-
minate 160.

De suppositione autem 160 subiectorum 161 predictarum 162 propositionum
affirmativarum in quibus ponitur hoc 163 verbum 'incipit' omnino 164 dicen-
dum est sicut de alius propositionibus categoriciis, videlicet 166 quod
secundum quantitatem propositionis supponunt 167 vel 168 discrete 169 vel 170
determinate vel 171 confuse 172.

sitionibus ypotheticis B; om. C. 112 tenet C. 113 a C. 114 de-
bet B; om. C. 115 fieri B. 116 sillogismus consequentia a primo
ad ultimum C. 117 expositorius et hoc si equivalent propositionibus
ypotheticis C. 118-119 et ideo dico breviter quod in talibus propositionis
predictis et similibus predicata nullo modo supponunt A.

120 oppositum respondetur B. 121 om. C; arguitur D. 122 discrete
D. 123-124 etc. D. 125-126 etc. C. 127 om. C. 128 negatur
C. 129 consequentia C; istam consequentiam D. 130 om. BC.

131 dictum C. 132 quod tales C. 133 om. C. 134 exponitur D.
135 videre C; dicere D. 136 supponunt D. 137 dictis C.
138 et B. 139 dico quo B; quo si D. 140-141 om. D. 142 comedat
B. 143 et Antichristus D. 144 est B. 145 om. C. 146 sed C.
147 patuit D. 148 rationes C. 149 predictas C; om. D. 150 de B.
151 nominibus B. 152-153 om. D. 154 exponatur B. 155 tunc C.
AD. 161 om. C; subiectis D. 162 om. AB. 163 om. D. 164 mo-
do C. 165 om. B; esse C. 166 om. D. 167 supponunt subiecta B.
B; etc. D. 173 de C. 174 ita B; consequenter C. 175 de C.
Ulterius est sciemund quod sicut prius argutum est in illa materia de motu locali, consimiliter potest argui quacumque alia specie motus quia eadem difficilias /D 218r/b/ est in istis duabus propositionibus. 'Sortes incipit pertransire aliquod spatum' et 'Sortes incipit acquirere aliquam albedinem', et sic de aliis speciebus motus.

3.1

Post predicta restat dicere expositionem istius verbi 'desinit'. Est igitur breviter sciendum quod omnis propositio affirmativa in qua ponitur hoc verbum 'desinit' que est composita ex terminis rerum permanentium vocando res permanentes illas que per aliquod tempus manent - exponitur per remotionem de presenti et positionem de preterito, sicut ista propositio. 'Sortes desinit esse animal', debet sic exponi : Sortes nunc non est animal et immediate ante hoc fuit animal.

Quod autem ista propositio debeat sic exponi probatur sic, nam ista consequentia est bona 'Sortes desinit esse animal', igitur Sortes nunc non est animal, quia oppositum consequentis non potest stare cum antecedente. Ista non stant simul 'Sortes nunc est animal' et 'Sortes desinit esse animal'. Quod autem ista non stant simul probatur sic : Sortes desinit esse animal, igitur Sortes ulterius non erit animal. Ista consequentia plana est.

Igitur Sortes nunc sit animal et Sortes ulterius non erit animal, sequitur quod hoc esset ultimum instans esse Sortis, sed hoc est impossible per secundam suppositionem superius positam, ergo illud ex quo sequitur. Consequentia assumpserat, scilicet ista...
Sortes desinit esse animal, igitur Sortes 236 ulterius non erit 237 animal',
patet de se clarum enim est 221 / C 29 r a/ quod 238 si 239 Sortes uterius erit animal quod 240 Patet 242 igitur quod necessarium 243 sit sic 244 245 exponere 246 247, 249 'desinit' in 248 termi
nis 250 rerum permanentium per 251 remotionem de presenti et positionem de preterito 252. Ex 253 quo sequitur quod omnes tales consequentiae sunt 255 bone 'Sortes desinit esse animal, ergo Sortes 256 immediate ante hoc fuit animal'. Item 257 sequitur 258 'Sortes desinit esse animal, ergo Sortes 259 nunc non est animal'. Item 'Sortes desinit' 262 esse animal, igitur 260 immediate ante hoc Sortes 263 fuit 264 animal, et 265 nunc non est animal'.

Et tenet omnes 266 tales consequentiae per hanc 267 regulam: a propositione exposita ad 269 propositiones similium sumptas vel 271 ad quamlibet illarum per 272 se sumptam 274 est bona 276 consequentia.

3.2

Alia 277 conclusio est ista 278 quod 279 omnis 280 propositio composita 281 ex terminis rerum successivarum in qua ponitur hoc 283 verbum 'desinit'
debet similiter exponi per 284 remotionem de presenti et positionem de preterito; sicut ista 'Sortes desinit moveri' debet 287 sic exponi 286: Sortes nunc non movetur et 288, 290 immediate ante hoc movebatur. Ista expositio 291 probatur sic: Sortes desinit moveri, igitur Sortes nunc 292 non movetur 298. Ista 293 consequentia patet quia oppositum consequentis non stat 294 cum antecedente 295, igitur 296 prima consequentia est bona. Quod autem oppositum consequentis non stat 298 cum antecedente patet quia repugnans 299 opposito consequentis 300 stat cum antecedente 301, igitur 302 oppositum antecedentis 303, 304 non stat cum antecedente 297. Assumptum probatur: ista
consequentia est bona 'Sortes desinit moveri, igitur Sortes ulterius non movebitur', sed ista non stant simul 'Sortes nunc movetur' /$B$

$18r/b/ et 'Sortes ulterius non movebitur' ut patet de se, igitur nec ista stant simul 'Sortes nunc movetur' et 'Sortes desinit moveri'. Patet igitur quod ista consequentia est bona 'Sortes desinit moveri, igitur Sortes nunc non movetur'. Quod autem ista non stant simul 'Sortes nunc movetur' et 'ulterius non movebitur' de se patet

/A 52r/a/ quia sic est dare ultimum instans motus quod est impossible, et omnia illa patent per predicta.

Contra istam conclusionem arguit sic: si illa propositio sic exponeretur, tunc ista consequentia foret bona 'Sortes desinit moveri, igitur Sortes immediate ante hoc movebatur' sicut patet per regulam predictam, sed consequens est impossibile, ergo illud ex quo sequitur. Impossibilitas consequentis probatur sic: Sortes immediate ante hoc movebatur, igitur Sortes sine medio ante hoc movebatur. Et ultra: igitur Sortes sine tempore movebatur. Et ultra: igitur motus fuit sine tempore quod est impossible, sicut patet per Aristotelem quarto et sexto Physicorum et pluribus aliis locis.

Item, Sortes immediate ante hoc movebatur localiter, igitur Sortes immediate ante hoc pertransivit aliquod spatium. Et ultra: igitur sine tempore pertransivit aliquod spatium. Et ultra: igitur sine medio Sortes pertransivit aliquod spatium, igitur aliquod spatium, etc. Consequens impossibile sicut patet per Aristotelem in predictis locis, ergo et antecedens.

Ad primum illorum dico concedendo hanc propositionem 'Sortes sine tempore movebatur'. Et ulterius /C 29r/b/ concedo quod sine

318 om. D. 319 nunc non A. 320 tunc D. 321 om. AC.
322 motum C. 323 om. C. 324 patent plane D. 325 respondem A.
tempore potest esse motus, quia sine hoc tempore potest esse motus
et sine hoc et sic de singulis, igitur sine tempore potest esse mo-
tus. Consequentia patet quia arguitur inductive a singula-
ribus ad universale.

Item, ista est universalis vera cuius quilibet singularis est vera,
igitur ipsa est vera. Quod autem quilibet singularis sit vera
/D 218v a/ ostenditur sic, quia hoc est vera 'sine hoc tempore fuit mo-
tus' quia clarum est quod sine hoc tempore fuit motus in alio
 tempore, quia sine hoc tempore presenti et futuro fuit
motus in tempore preterito, et sic potest argui de quocumque
alio singulari. Sed ultra dico negando hanc propositionem
'motus fuit sine tempore' quia nullus motus fuit sine tempore,
et tota causa istius diversitatis est quia in ista propositione
'sine tempore fuit motus' 'ly 'motus' in ista propositione universa-
li', supponit confuse tantum, et in ista propositione 'motus fuit'
sine tempore 'ly 'motus' supponit' determinate, et per con-
sequens oportet quod verificetur pro aliquo singulari, sicut
in illa propositione 'animal fuit homo' oportet quod 'ly 'animal' sup-
ponit determinate, et per consequens oportet quod hec propositio
indefinita verificetur pro aliquo singulari animali. Sed sic non
oporet in illa propositione 'omnis homo fuit animal' quod 'animal'
verificetur pro aliquo singulari animali.

Ad aliud argumentum dico concedendo hanc propositionem
'sine tempore fuit aliquod spatium pertransitum', et nemo illam
'aliquod spatium fuit pertransitum sine tempore'. Et hoc totum
propter causas predictas.

383 hoc tempore B; isto D. 384-385 etc. A. 386 antecedens patet
de se consequentia B. 387 declaratur B. 388 arguo A; est B.
389 universalis C. 390 om. BC. 391 sed quilibet singularis etc.
igitur D. 392 et A; erit B. 393 om. A. 394 ista AD.
395-396 quando A. 397-398 om. C. 399-400 om. B. 401 aliquo C.
402 om. D. 403 de presenti C. 404 vel B. 405 de futuro C.
406 fit C. 407 de C. 408 om. C. 409 singulari etc. D.
410 om. AD. 411 nemo A. 412 illam C; istam D. 413 fit C.
414 absque C. 415 om. A. 416 fit C. 417 om. A; ratio B; bona D.
418 om. C. 419 om. A. 420 fit C. 421-422 om. AC. 423 iste
C. 424 om. AC. 425 fit C. 426 om. B. 427 om. B.
428-429 om. D. 430 stat C. 431 relinquuitur C. 432 om. A
433 verificari A; supponit C. 434 aliqua D. 435-436 sed sic non
oporet quando supponit confuse tantum A; om. C. 437-438 om. B.
439-440 om. B. 441 quia B. 442 om. B. 443 verificatur B.
444 aliquo alio B. 445-446 om. B. 447-448 om. A. 449 illud B.
450 om. C. 451 illam C. 452 quod sine B. 453 negando B.
454 om. C. 455 om. D. 456 patet per C. 457 caus C; rationes D.
458 predictas C. 459 tertia B. 460 om. C. 461 res alique C.
4.1

Alia conclusio est ista quod si sint alique res que tandem manent per instans, tun in omni propositione affirmativa composita ex terminis supponentibus pro talibus rebus illy 'incipit' et 'desinit' debent exponi opposito modo. Verbi gratia, ista propositio 'forma specularis' incipit esse' debeb exposi per positionem de presente et remotionem de preterito, et ista propositio 'forma specularis' desinit esse' debeb exposi per positionem de presenti et remotionem de futuro, ita quod semper positio de presenti debet poni in expositione utriusque. Consimiliter dicendum de istis propositionibus 'lux incipit esse', 'lux desinit esse', 'instans incipit esse', 'instans desinit esse'. Ex illis sequitur manifeste quod eadem res potest incipere esse et desinere esse in eodem instanti.

5.1

Et ulterior est sciendum quod predicatum propositionis affirmative, in qua ponitur hoc verbum 'incipit' vel 'desinit', vel simpliciter [supponit] [vel] /C 29\al non supponit vel supponit determinate.

Item, predicatum propositionis negative, in qua ponitur hoc verbum 'incipit' vel 'desinit', semper supponit confuse et distributive.

Et subiecta omnium talium propositionum sive negativarum supponunt diversimode sive negativarum diversimodo secundum diversitatem.

