THE NATURE AND LOGIC OF THE INDEFINITE

NAME AND VERB

IN BOETHIUS' IN LIBRUM ARISTOTELIS

Peri Hermêneias

COMMENTARII I ET II.

by

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Abstract

Using the concepts of 'syntax' and 'semantics' all the relevant passages containing Boethius' comments on indefinite names and verbs in his two commentaries on Aristotle's *Peri Hermêneias* are classified and analysed. The occurrences reveal a doctrine. (Part I,1-5). The indefinites are not ill-defined terms, but homonymous expressions contained in the non-strict definitions of name and verb. (I,1). Aristotle's assertions concerning the signification of indefinites relate ultimately to his views on predication, existence, non-existence, truth, and falsity: the negation of what does not exist is true. (I,2). The indefinites are not superfluous, but elements of the theory of the categorical proposition and its negation, as developed in *Peri Hermêneias*. This theory is not complete without indefinites. (I,4).

Boethius' analysis of the sources, which he calls antiqui, reveals an ancient concern about the nature of the indefinites among the Peripatetics. His antiquiores refers to ancient philosophers and in particular to Plato: they do not (or do not properly) analyse the notion of indefinite signification, negation, and not-being. In Boethius' explanation, which differs radically from that of Ammonius, Aristotle was the first to give a consistent account of indefinites and to describe them in technical language. (I,3).

For Boethius, Aristotle in *Peri Hermêneias* also determines a logic of the categorical proposition with indefinites. This logic follows the fact that all the species of categorical propositions have been determined. Boethius provides a comprehensive exposition of the relations stated by Aristotle and, unlike Ammonius, he reports valuable information for the history of Logic in the expositions of Herminus, Alexander and Porphyry. (II,1 and 2).

As to the doctrine, Boethius' and Ammonius' explanations are dependent on earlier Greek sources, but their commentaries are independent of each other. The detail of Boethius' sources and Boethius' dependence on them are controversial. The evidence reveals difficulties in accepting the hypotheses of a servile dependence on this Greek material and of a unique codex originating in the school of Proclus as the only source of Boethius' commentaries on Aristotle. (I and II).
## Contents

<table>
<thead>
<tr>
<th>Title</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstract</td>
<td>2</td>
</tr>
<tr>
<td>Contents</td>
<td>3</td>
</tr>
<tr>
<td>Acknowledgements</td>
<td>8</td>
</tr>
<tr>
<td>Abbreviations and Signs</td>
<td>9</td>
</tr>
<tr>
<td>Introduction</td>
<td>11</td>
</tr>
</tbody>
</table>

### PART 1

**THE NATURE OF THE INDEFINITE NAME AND VERB**

1. The Indefinite Name
   1.1 Syntax
      (i) Aristotle's text 39
      (ii) Indefinite name and negation 41
      (iii) Indefinite name and \( \lambda y y \) 44
      (iv) Is the indefinite name an ill-defined term? 47
         (iv. 1) Ackrill's interpretation of \( \lambda y y \) 48
         (iv. 2) Boethius' interpretation of \( \lambda y y \) 48
         (iv. 3) The position of \( \tau \) at 16b. 26 53
         (iv. 4) Ammonius' interpretation of \( \lambda y y \) 54
      (v) Boethius' position: the indefinite name is a well-defined term 59
         (v. 1) The treatises on the categorical syllogism 60
   1.2 Semantics
      (i) The text 67
      (ii) A textual problem: the reading of 16a. 32 68
      (iii) The indefinite signification of the indefinite name 70
      (iv) The extension of an indefinite signification 71
      (v) 'Quoniam unum quidem significat, sed infinitum' 74
      (vi) Is there an incompatibility between the definition of name and the notion of indefinite name? 75
         (vi. 1) Montanari's interpretation 77
         (vi. 2) Boethius' position 81
2. The Indefinite Verb

2.1 Syntax

(i) Aristotle's definition of verb and his intention 95
(ii) The indefinite verb as a \textit{tota imperfecta sententia} 98
(iii) Indefinite verb and negation 103
(iv) Ackrill's criticism: is the indefinite verb a misnomer? 108
(v) Predication and proposition: the genesis of a negation 110

2.2 Semantics

(i) The definite and indefinite verb: similitude and difference 115
(ii) 'What is excluded is definite but what is posited is indefinite' 117
(iii) Does a chimera run? the ontological context 119
(iv) Truth and predication of the indefinite verb 120
(v) The veridical proposition: the sense of \textit{διότιον} (16b. 15) in predicating indefinite verbs 123
  (v. 1) Ammonius' interpretation of \textit{διότιον} (16b. 15) 124
(vi) Boethius' final answer on signification of the indefinite verb 125
(vii) Is 'not-just' an indefinite verb: a further objection by Ackrill 128
(viii) Existential import of singular propositions and indefinite verbs 129
  (viii. 1) Does non-existence constrain us to tautologies? 143
  (viii. 2) Ammonius on 21a. 25-33 146

3. \textit{Antiqui} et \textit{Antiquiores}:

(i) The historical view of Boethius' commentary 153
(ii) \textit{Antiqui} 155
(iii) Is there a modification of the name's definition by the \textit{antiqui}? 162
(iv) \textit{Antiquiores} 170

4. Indefinite Propositions

(i) Chapters 2, 3 and 10 185
(ii) A textual problem: the lectio of 19b. 11 in *Aristoteles Latinus* 187

(iii) The number of the categorical propositions and the doctrine of the indefinite names 189

(iii. 1) The classification of categorical propositions 190

(a) The categorical proposition with two terms 191

(b) The categorical proposition with three terms 196

(iii. 2) The generation of categorical propositions 203

(iii. 3) The arithmetical calculus of the number of categorical propositions 208

(a) Ammonius' calculus 228

(b) Ammonius' and Syrianus' calculi: similarities and differences 235

(c) Syrianus' calculus and the school of Proclus in Athens 236

(iii. 4) Diagrams 240

(a) Figure 1 240

(b) Figure 2 241

(c) Figure 3 242

5. The Doctrine of the Indefinite Names and its Sources 243

(i) The doctrine of the indefinite names 245

(i. 1) Historical antecedents of the doctrine 246

(a) Theophrastus and transposed propositions 246

(b) The Stoics and Peripatetics on negation 254

(c) Alexander's testimony 260

(ii) The decline of the doctrine of the indefinite names in Ammonius' commentary 271

PART II
THE LOGIC OF INDEFINITE NAMES 275

(i) General considerations 275

1. The three-term propositions 280

A. The Indefinite Predicate 283

1.1 Unquantified propositions 283

(i) Aristotle's introduction to logic of the indefinite names 280

(ii) The ancient expositions of *PeriH.* 19b. 22-24 283
(ii. 1) Alexander's exposition 285  
  (a) Form and meaning of a privative proposition 285  
  (b) 'To be unjust' and 'to be not-just' 287  
  (c) The arrangement 288  
  (d) The logical relations of the diagram 290  
    (d. 1) Boethius' report of Alexander in the First Commentary 291  
    (d. 2) Boethius' report of Alexander in the Second Commentary 293

(ii. 2) Porphyry's exposition 299  
  (a) The logical relations 301  
  (b) Proofs 302  
  (c) Further proofs: are they by Boethius? 305  
  (d) Porphyry's arrangement of 19b. 22-24 307  
  (e) The diagonal relations 309

(ii. 3) Hermenus' exposition 311

(ii. 4) Ammonius' exposition 313  
  (a) Ammonius' arrangement of 19b. 22-24 317

(ii. 5) Porphyry's and Ammonius' expositions 318

### 1.2 Quantified Propositions

(i) The ancient interpretations 330  
  (i. 1) Alexander's exposition 331  
  (i. 2) Porphyry's exposition 333  
    (a) Proofs 334  
    (b) The diagonal quantified propositions 338

(i. 3) Hermenus' exposition 340

(i. 4) Ammonius' exposition 342  
  (a) The diagonal relations 345

### 1.3 Singular indefinite propositions

(i) The incomplete treatment of singular propositions 346

(ii) Singular propositions in Boethius' first commentary 347

(iii) Universal and singular oppositions 349

### B. The Indefinite Subject

(i) General considerations 355
(ii) The dissimilarity between propositions with indefinite and definite subject
(iii) Dissimilarity in quantified propositions

C. Equivalences

(i) 20a. 16-23: Aristotle's digression
(ii) Equipollences
(iii) Boethius' proof of equivalence for 20a. 20-23
   (iii. 1) A proof for 20a. 20-23 from a stricter view
(iv) The canon of Proclus
(v) Is there any incompatibility between An. Pr. I, 46 and PeriH. 10?
(vi) A rule of transformation in propositions with indefinite subject

2. The two-term propositions

(i) General considerations
(ii) The equivalence between three- and two-term propositions
(iii) Objections to the doctrine of equivalence: the indefinite participle
(iv) The case of a syllogism in Plato
(v) Conclusion and non-conclusion of syllogisms with indefinite premisses
(vi) Boethius' interpretation of the syllogism

Select Bibliography
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Signs and Abbreviations

'...' : the expression '...'; the notion '...'
( ... ) : etc.
"... " : quotation
[... ] : word(s) added to clarify the sense of a phrase in translation
< ... > : expression supplied by the editor in original text
** * ** : lacuna in original text
x→y : y follows from x (= if x is true, y is true); x and y propositions
x↔y : x is equivalent to y (= y follows from x, and vice versa), (sometimes 'x = y')
x≠y : x is different from y
x↔y (when they are diagonal) : x and y can be true together
x→y (when they are diagonal) : x and y cannot be true together
x<->y (when they are diagonal) : x and y can be true together, but only sometimes
x↔y : logical equivalence to be proved
x + y : x plus y (x and y are numbers; sometimes x is the subject, and y the predicate)
x * y : x multiplied by y (x and y numbers)

The signs in the apparatus criticus are those of the editions cited

PeriH. = Peri Herméneias (= De Interpretatione)
in Int. = Boethius' first commentary on PeriH.
in Int. 2 = Boethius' second commentary on PeriH.
Amm. in Int. (sometimes in Int.) = Ammonius' Commentary on PeriH.
Steph. in Int. (sometimes in Int.) = Stephanus' Commentary on PeriH.
in PeriH. = Aquinas' commentary on PeriH.
AL = Aristoteles Latinus
An. Post. = Posterior Analytics
An. Pr. = Prior Analytics
CAG = Commentaria in Aristotelem Graeca
Cat. = Categories
De Syntaxi = Apollonii Dyscoli Peri Syntaxeôs
DSC = Boethius' De Categoricis Syllogismis
Eud. Eth. = Eudemian Ethics
FHSG = Theophrastus of Eresus. Sources for his Life, Writings, Thought and Influence.
GG = Grammatici Graeci
GL = Grammatici Latini
in An. Post. = Commentary on *Posterior Analytics*

in An. Pr. = Commentary on *Prior Analytics*

in Cat. = Boethius' commentary on *Categories*

in Isag. 2 = Boethius' second commentary on Porphyry's *Isagoge*

in Isag. = Boethius' first commentary on Porphyry's *Isagoge*

in Met. = Commentary on *Metaphysics*

in Top. = Commentary on *Topics*

*Isag.* = Porphyry's *Isagoge*

*ISC* = Boethius' *Introductio ad Categoricos Syllogismos*

*Met.* = *Metaphysics*

*OCT* = Oxford Classical Texts

*OLD* = *The Oxford Latin Dictionary*

*Phys.* = *Physics*

*PL* = *Patrologia Latina*

*Scholia* = *Scholia in Dionysii Thracis Artem Grammaticam*

*SLJ* = A Greek-English Lexicon (Liddell, Scott & Jones)

*Soph.* = Plato's *Sophist*

*Theaet.* = Plato's *Theaetetus*

*TLL* = *Thesaurus Linguae Latinae*

*Top.* = *Topics*

N.B.: (i) Boethius' *in int.* and *in int. 2* are always cited by line(s) and page(s); the reverse has been adopted for the other commentaries on *PeriH*.

(ii) In the main text, the first reference to secondary studies has been given in full, and the following ones by author's name, year of publication and page number. In the Introduction, all references are in this abbreviated form. Full details are given in the bibliography of secondary studies.
Introduction

In his review of J. Magee's book, Professor G.J.P. O'Daly has drawn attention to a point which deserves serious consideration: namely, that a reader interested in Boethius' translation of PeriH. or in his two commentaries on this treatise finds a rather small number of modern systematic studies devoted to them. Yet, Aristotle's PeriH. has been known in the medieval Latin West principally through these works of Boethius.

In 1953, A.N. Prior examined Boethius' monograph Introducitio ad syllogismos categoricos and presented a systematic study on one of the points of Aristotle's logic which has

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4 Though Aristotle's Categories is the text most commented in antiquity, PeriH. has a continuous history of commentary. According to Boethius (in Int. 2, 24, p. 9), Theophrastus wrote the first commentary on it: namely, περὶ Καταφάσεως καὶ Ἀποφάσεως, or 'On the Affirmation and Denial'. The notice is given as an important sign of the authenticity of PeriH., which was doubted by Andronicus of Rhodes (cf. in Int. 2, 13 ff., p. 11), and —according to H. Maier—it is also a sign of its genuine title. (Cf. H. Maier, (1900), p. 59). Some fragments are extant. (Cf. FHS, and I.M. Bochenski, (1947)). Some notices given by Boethius also indicate commentaries by Aspasius (I a. C.), apparently by Herminus (II a. C.), and Alexander of Aphrodisias (II/III a. C.). These works have been lost, but there are fragments and reports of them, especially in Boethius and Ammonius. Also, Porphyry (III a. C.), who is important source for Boethius—only fragments (cf. J. Bidez (1913), p. 65). Some notices in Ammonius (e.g. in Int. p. 135, 14; p. 1, 8) suggest oral teaching by Iamblichus (IV a. C.) and Proclus (V a. C.). Syrianus (V a. C.), Proclus' master, wrote a commentary, but it is not extant. Some of his opinions are commented on by Boethius and Ammonius, and there is an express translation by Boethius at in Int. 2, 20 et ff., p. 321. Ammonius says that he is recalling the oral teaching of Proclus (cf. in Int. p. 1, 8). Boethius' commentaries on PeriH. name neither Proclus nor Iamblichus. Boethius' and Ammonius' commentaries were written contemporaneously. Those of Boethius are dated ca. 513-16 (De Rijk, (1984)), but precedence of one over the other has been not proved. After Ammonius, all ancient commentaries are essentially derived from him: Philoponus, Olympiodorus, and Elias (VI a. C.), and also Stephanus (VII a. C.). Stephanus' commentary is extant (see Hayduck 1885). Some fragments of Olympiodorus in Tarán (1978). Derivative from Ammonius are also the commentaries of c. VIII and XI. The commentary by St Th. Aquinas (1268), which was completed by Cajetan, makes use of Ammonius' commentary through the translation of William of Moerbeke. Further details in Arens (1984); Isaak (1953).


received —perhaps due to other reasons too— scant attention: the logical relations (of opposition, entailment, etc.) which hold between categorical propositions with and without a subject- or predicate-term, i.e. which are indefinite. This enabled J. Barnes\textsuperscript{7} to remark subsequently that one of the main points of difference between Aristotle's classical treatment in the *Prior Analytics* and Boethius' account of categorical syllogistic is the detailed consideration of indefinite terms exhibited by the latter.

The work which we present now attempts both to supplement the relative lack of material devoted to Boethius' translation and two commentaries on *PeriH.*, and to complete the work already initiated by A.N. Prior.

Both A.N. Prior's paper on Boethius' *Introductio ad syllogismos categoricos* and an earlier one by I. Thomas\textsuperscript{8} had produced the satisfactory impression that, in general, the logic of the categorical propositions with indefinite terms is consistent.\textsuperscript{9} This was already by itself an important starting-point. However, the work from which all this matter derives had not been examined at all: Boethius' two commentaries on Aristotle's *PeriH.*. Here, one might hope to find indications of Aristotle's reasons for giving both specific (though concise) consideration to the nature of the indefinite terms (names and verbs) and a logic of the propositions containing these elements.

Before considering the main results and conclusions which were obtained from the mentioned works of Boethius, let us make a summary exposition of an external matter of highest importance for understanding Boethius' commentaries on *PeriH.*.

Boethius shares the glory of devoting the most complete and detailed account of the nature and logic of the indefinite names

\textsuperscript{7}cf. J. Barnes (1981), pp. 73-89.

\textsuperscript{8}Ivo Thomas, O.P. (1949). I. Thomas' paper (*CS(n): A n Extension of CS*) presents *CS* (*n*) as a axiomatized system intending to extend, by introducing the indefinite term (=n) in categorical propositions of kinds A, E, I, and O, the traditional laws of the logical square, of simple and *per accidens* conversion, and twenty-two modes of categorical syllogism which are deduced from the modes *Barbara* and *Ferio* in *CS*. *CS* is a system developed earlier by I.M. Bochenski (cf. *On The categorical Syllogism*, in *Dominican Studies*, vol. I, 1, 1948, pp. 35-37),

\textsuperscript{9}It is worth noting that I. Thomas (1949), p. 160 calls for further formal proof of consistency between *CS* and *CS(n).*
and verbs with Ammonius Hermeiou, who in his commentary on *PeriH.* develops similar reflections and explanations. Accordingly, to explore our subject involved the analysis of Ammonius' comments on this treatise too. The work presented here contains so many instances where Boethius' and Ammonius' comments differ one from another that it seems unbelievable that the hypothesis suggesting dependence of Boethius' comments on Ammonius has been maintained and defended in the recent past. The mere reading of the following pages of our work will show that a list of these differences could be both redundant and endless.

When the problem of the sources of Boethius' commentaries on Aristotle is considered, the best account continues to be that advanced by J. Shiel: namely, that Boethius has translated his explanations from Greek material. As to our work, Shiel's hypothesis is, in general, confirmed. Not only do the scholars who reject either partially or totally this hypothesis not offer a more defined and consistent alternative, but also there are some aspects of Boethius' commentary on *PeriH.* which cannot be explained in another reasonable way. In Boethius there sometimes is a lack of obvious and palpable relations, connections, and contrasts.

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10 For Ammonius' life, work and his activity in the Alexandrian school, see L.G. Westerink (1962), pp. x-xiii.
11 Ammonius In Aristotelis *De Interpretatione Commentarius,* A. Busse (Ed.), in *Commentaria In Aristotelem Graeca,* vol. iv, 4.6, Berlin, 1895.
12 This hypothesis was advanced and defended by P. Courcelle (1969). See further references at Part I, 5., (c).
13 We have touched on this point at Part I, 5.,(c).
15 The problem of the sources of Boethius' commentaries is far from being resolved, but J. Shiel in 1958 (see Shiel, 1990) has made a substantial contribution. His hypothesis has produced an important controversy too. The scholars involved in specific studies of some of Boethius' commentaries or monographs have not adopted it and, in some cases, they have produced papers against it. So Stump (1974), Asztalos (1993). A paper aiming specifically at rejecting Shiel's hypothesis is that by Ebbesen (1990). In his book, Chadwick (1981) also opposes the hypothesis. J. Barnes (1981) does not seem keen to accept it either. So too Magee (1989). But, among others, De Rijk (1974), Zimmermann (1991), Minio-Paluello (1957), p. 360, (1970, and in all his other references to Boethius), have agreed with Shiel. (A history of this debate here at Part I, 5. (i), (c). The article by De Vogel (1971/2) is a good introduction to the history of the discussion. However, the author's attempt at a solution must be assessed carefully: it cannot be read without the correction in the Postcript, p. 37 (1972)).
between different parts of the comments and explanations which he makes. An example may illustrate this. In commenting on *PeriH.* 20a. 20-23, while Ammonius proves equivalence for the relations involved in this passage by displaying detailed material stemming from Proclus, and makes some reflections concerning the universal validity of Proclus' rule of deduction (i.e. the 'Canon of Proclus'), Boethius has problems in proving the equivalences in question: he gives two tentative proofs, which are not in Ammonius, both valuable for Logic, but both incomplete. After that, he attempts a proof which is again incomplete from a logical viewpoint. The supplement of this proof was available and manifest in Porphyry's table for quantified propositions,\(^{16}\) which he had commented on earlier, but he does not use it, does not mention it, nor does he show any sign revealing that he is aware of a possible relation. The only interpretation which could reasonably explain this point is that Boethius translates material which was incomplete in this part.\(^{17}\)

J. Shiel's characterization of Boethius' comments on Aristotle as translation of explanations contained in Greek material later than Porphyry but anterior to Ammonius works well. We could call this account 'the general hypothesis of Shiel' and identify it with his statement of 1974, in his article *Boethius and Eudemus.*\(^{18}\) But, if the general sense of Shiel's hypothesis is confirmed in our work, the specific one, i.e. that which Shiel gives in his article of 1958 and confirms in 1990\(^{19}\) is not in perfect accordance with our results. The specific hypothesis characterizes Boethius as follows:

"A (1) mechanical translator of explanations taken from Greek material which is found (2) in marginal notes of a (3) single copy of Aristotle's 'Organon', which (4) derives from the school of Proclus in Athens."

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\(^{16}\) See Part II, C., (i). Also A., 1.2, (i.2).

\(^{17}\) This point is treated at Part II, C., (iii). See also *ibid.*, (iv).

\(^{18}\) Shiel (1974), p. 17. "And so I come back to the general conviction I have written about elsewhere, that Boethius translated his explanations from some Greek book later than Porphyry but anterior to Ammonius, and that in numerous cases one could visualise the exact Greek words he copied from."

\(^{19}\) cf. Shiel (1990).
Shiel's assumption that Boethius, in his comments on *PeriH.*, maintains a servile dependence on his Greek material\(^{20}\) is not in complete agreement with our results. Boethius' comments rather show that, in relevant parts, he faces his translations with a strategy of understanding. In fact, point (1) in the specific hypothesis has an important counter-example. In his comments on *PeriH.* 19b. 22-24, Boethius has at his disposal the expositions of Herminus, Alexander of Aphrodisias and Porphyry. In his first commentary, he presents Alexander's interpretation of this difficult passage, but not in its complete breadth: Boethius postpones the full interpretation to his second commentary with the view to give a clearer and more concise first exposition of 19b. 22-24. In the second commentary, Boethius gives the remaining explanation and makes a comparison between Alexander's and Porphyry's interpretations.\(^{21}\)

Shiel does not comment on this postponement, but if one could take the words through which he explains the fact of a double commentary on *PeriH.*, our case still remains oddly explained. Shiel, in fact, argued that the idea of splitting up the Greek material in a twin commentary "was probably suggested by the lay-out of his Greek manuscript."\(^{22}\) If this were so, then the deferral of Alexander's interpretation of 19b. 22-24 should have been suggested in this way too. But this would imply that Boethius had material already divided into two expositions (i.e. a first and a second commentary). This is not impossible, if one believes that he was following an exact copy of Porphyry's commentary on

\(^{20}\) J. Shiel (1990), p. 361. "The translation of these various marginalia and the arrangement of them into a continuous commentary according to the order of Aristotle's words would seem to be Boethius' only title of originality. [And in note:] Even this may be an overstatement if we allow for ancient editorial activity." Let us note that in the *Postscript* of 1983 (cf. Shiel (1984), p. 183) Shiel conceives Boethius as playing the secondary role of "prolix expansion and connections and re-arrangements", but this role is called into question in his revision of 1990: the expansions, connections etc., could be those of his early editors (cf. Shiel (1990), p. 370, n. 83). Accordingly, the expression 'servile dependence on his Greek material' means that Boethius does not even play a secondary role of arrangement of his material (= mechanical translation).

\(^{21}\) Cf. Part II, A., (ii.1), (d.2).

\(^{22}\) J. Shiel (1990), p. 360, n.39. This idea is neither in the original version of 1958, nor in that of 1983 (= Fuhrmann/Gruber (1984)).
PeriH., but this possibility is ruled out by our example above.\textsuperscript{23} All this is easier to explain by means of an idea which has no counter-examples and which Shiel himself sometimes accepts implicitly:\textsuperscript{24} namely, Boethius' strategy of understanding the material on which he works.\textsuperscript{25}

Boethius' comments on the nature and logic of the indefinite names and verbs can also advance an important qualification to point (4): namely, the material which Boethius has here at his disposal cannot have originated in the school of Proclus in Athens. There are two clear counter-examples, but other passages are also in disagreement with (4).\textsuperscript{26} The arithmetical calculus of the number of all the categorical propositions which are treated by Aristotle in \textit{PeriH.} is a common characteristic of the ancient commentaries on this treatise.\textsuperscript{27} Ammonius' calculus is different from that of Boethius, (who follows Syrianus here), not only in the total result, but also in the algorithm employed and in the number of variables which are considered. Boethius follows Syrianus in an awkward merging of 'matter' and 'modality' of the propositions (= \textit{qualitates propositionum}) to get the total number, while Ammonius distinguishes between these two variables and also determines the 12 syntactical patterns (τὰ προσδεδώματα) of the modal categorical propositions. Both points are entirely absent from Boethius' commentary.

Now, the distinction between 'matter' and 'modality' as well as the determination of the 12 patterns are a contribution to and an improvement of the calculus from the logical and arithmetical viewpoints. Obviously, had Boethius known these two contributions he would have used them: they are not mere

\textsuperscript{23} On Alexander's commentary on \textit{PeriH.} and the possibility that Boethius directly reflects this teaching, Cf. Part I, 5., (i), (c). See also Part II, 1., A., 1.1, (ii.1), (d.2). Besides, let us note that the actual possibility of a twin commentary for \textit{PeriH.} by Alexander and Porphyry is unlikely. The idea of a double commentary is put into practice by Porphyry for \textit{Categories,} but nothing of this is said for \textit{PeriH.}, but only that "it was lengthy" (cf. Stephanus in \textit{Int.}, p. 63, 9). Boethius suggests that the one of Alexander was also lengthy (cf. in \textit{Int.}, 2, 1-4, p. 3), but nothing indicates a double mode of exposition.

\textsuperscript{24} See for example Shiel (1982), p. 139. And also Shiel (1990), p. 368.

\textsuperscript{25} This point at Part II, A., 1.1, (ii).

\textsuperscript{26} Cf. Part I, 1.2, (i), n. 219. And Part I, 4., (iii.3), (c), n. 678.

\textsuperscript{27} Cf. Part I, 4., (iii.3). Also, Part II, A., (i).
opinions or dispensable doctrines. Their non-occurrence implies that he did not know them. Now, Ammonius acknowledges dependence on the oral teaching of Proclus, so that if one accepts that this improvement is Proclan, it will follow that Boethius' twin commentary on *PeriH.* does not have Proclan elements where it should have them.

A second case is also symptomatic. Boethius does not allude to the canon of Proclus, but he should have used, or at least mentioned this rule of deduction, not so much because his material was scanty at 20a. 20-23,²⁸ but because the canon is a contribution to Logic.²⁹ These results, then, create difficulties for believing that Boethius' Greek material for *PeriH.* derives from the school of Proclus in Athens.

As to (3), there are further complications. Shiel arrives at the conclusion that Boethius' comments on Aristotle’s logical works all derive from a single codex, from the evidence of Proclan influence in Boethius' commentary on *Categories.* The opinion of Proclan influence in Boethius' commentary on *Categories* is supported by limited evidence, but correctly.³⁰ However, not only the total absence of Proclus' name in Boethius' commentary on *PeriH.*, but also the fact that it does not contain Proclan influence where it is expected raise justified questions concerning the validity of the idea of a single codex containing Proclus' teaching: rather, the material that Boethius seems to have had for his comments on *Categories* was not the same as that for *PeriH.* The sources of the latter seem to be entirely non-Proclan.³¹

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²⁸ cf. Part II, C., (i).
²⁹ Cf. Part II, C., (vi). As we explain here later (p. 34), the canon of Proclus is the discovery of a logical law which allows us to state equivalence between two categorical propositions.
³¹ As Shiel realizes in his last revision (cf. Shiel (1990), p. 369, n. 74) "the idea that it could have been a single codex, rather than several, containing the Organon treatises is palaeographically feasible but remains unsupported. But now combined study of the *Aristoteles Latinus* and the new *Aristoteles Graecus* would be illuminating on this point."
The material that we have analyzed can neither confirm nor disconfirm point (2). Some authors, however, have challenged Shiel's reading of the relevant passage:

nam et plurimorum sunt in unum coacervatae sententiae et duorum
ferme annorum spatium continuo commentandi sudore consumpsimus.

"For there are scholia of numerous points heaped up all together and so I have spent almost two years in a constant sweat of writing comments."

Shiel's reading, when modified by some important interpretations, does not say anything which can disprove the existence of material annotated in the margin of, let us say, a book, for the crucial point is coacervatae sententiae, and none has interpreted more convincingly than Shiel the meaning of this expression. That does not mean that Shiel has interpreted it definitively, because the exact way in which Boethius composed his commentary on PeriH, something that Shiel has investigated accurately, is still puzzling. The specification made by Shiel in (2) depends on singular or historical circumstances, and it cannot be proved or disproved unless evidence of this kind is presented.

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33 In Int. 2, 2-6, p. 421. And Shiel (1990), p. 361.
34 Shiel's discussion of these interpretations in Postscript 1983 (= Fuhrmann/Grube (1984), p. 182), and also in Shiel (1990), p. 361, nn. 40, 41. We can also add here Asztalos' interpretation. Asztalos (1993), pp. 405-6, n.127 observes correctly that sententia in Boethius' commentary on logic means 'view', 'judgement' (cf. also Nuchelmans (1973), p. 125; and here Part I, 2.1, (ii)). Hence, she takes sententiae plurimorum as 'the views of very many (philosophers)'. But, in this context, there is no substantial difference between scholia and 'views (of very many)'. She argues, given the phrase which precedes (namely: Sextus hic liber longae commantationi termiinum ponit, quae quodam magno labore constiterit ac temporis mora), that the work of Boethius (labor) consisted in collecting these many views, but this is less clear from the Latin. Here, it is clear, rather, that Boethius gives as cause of the magnus labor the fact that the views (= sententiae) which are coacervatae in unum (= heaped up in one format) are of many philosophers, (= plurimorum).
35 This is why J. Magee (1989), p. 3, is right, in principle, to observe difficulties in believing in codices with marginalia before the time of Proclus' teaching. However, from "the relative obscurity surrounding the
Most of the authors have been prompted by the discouraging consequences of Shiel's hypothesis. Shiel himself was conscious that his characterization of Boethius *logicus* impoverished the traditional content of his figure. He praises Boethius as best as his results allowed him to do it, but he allows for a qualification which sounds strange in the context where the labour and contribution of the ancient commentators of Aristotle must be assessed. Shiel qualified Boethius as 'an unoriginal commentator'.

This qualification is vague and its application awkward, for it does not permit us to distinguish him either from Ammonius, who relies on the oral teaching of Proclus, or Stephanus who follows Ammonius. We do not know what is in Porphyry which was not already in Alexander, or how original Alexander was in relation to his predecessors. There are some degrees of innovation in Iamblichus and Proclus, but their teaching here, as reported by Ammonius, does not seem to be in commentary form, but oral. That they might have been not absolutely original in an eventual commentary is clear from the points that the expositions of Ammonius and Boethius, which are entirely independent, have in common: this common teaching reveals how much Iamblichus and Proclus took from Porphyry and Alexander. 'Originality' and 'non-originality' are concepts appropriate to assess scientific theories and apply to innovations created by the imagination. Within the commentary tradition they are improperly applied.

Shiel's opinion of non-originality in Boethius can also sound hasty, because both we do not know what was Boethius' intention in composing his commentaries on Aristotle, (unless the immediate one of setting out the material in Latin), and there is no reason to doubt Boethius' philosophical aspirations and theoretical capacity. Finally, the judgement could even sound

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history of the codex before the fourth century and the absence of extant sixth-century codices with scholia such as those Shiel postulates" one cannot imply (as he does) that Boethius owned a copy of Porphyry's commentary on *Perih.*, for the Greek material which Boethius had at his disposal could be another form of discontinuous Greek notes than that contained in *codices with marginalia*. See also S. Ebbesen (1990), p. 376, n. 15 (here, though, only points (1) and (5) are relevant to discussion).

misplaced, for Boethius himself does not claim originality in Mathematics or Logic.  

The analysis dealt with above shows that the so-called 'hypothesis of Shiel' consists of two parts. The first, which is not actually a hypothesis, but a thesis convincingly demonstrated, states that Boethius has mostly translated his explanations from Greek notes or (we prefer this expression) from discontinuous material. The second one is properly the hypothesis, namely, that this discontinuous material was annotated in the margins of his single copy of Aristotle's Organon, which originated in the school of Proclus in Athens. 

The investigations of J. Shiel have placed modern scholars at the correct starting-point to further advance the comprehension of the problem of the sources of Boethius' commentaries on Aristotle. He has also opened a perspective to reconsider the importance of these commentaries. In fact, our work shows a valuable aspect of Boethius' commentary on PeriH., namely, that it is an abundant source of information on ancient doctrines, many of which are only attested here. 

The need of studies concerning Boethius' commentaries on and translation of PeriH. is already manifest when we consider the difference between Ackrill's interpretation of Aristotle's definition of λόγος at 16b. 26-28 and that of Boethius. Aristotle defines λόγος as follows: λόγος δ' ἐστι φωνὴ σημαντικὴ, ἣς τὰν μερὰν τὴν σημαντικὴν ἐστὶ κεχωρισμένην, υὸς φάσις ὁλὴ ὑδὲ κατάφασις. Ackrill translates this definition as "A significant spoken sound some part of which is significant in separation —as an expression, not as an affirmation", and conceives an idea of λόγος from this literal translation. Boethius also translates Aristotle literally, but produces an interpretation different from Ackrill. He says that Aristotle means "(...) all its parts are significant in separation (...)", Ammonius' exposition permits us to understand more clearly the difficulty: Aristotle says 'some part of which' not because there are parts which are non-significant, but on the

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38 cf. Part I, 1.1, (iv. 1).  
39 Cf. ibid., (iv. 2).  
40 ibid., (iv.4).
contrary because Aristotle means (and he is in agreement with Boethius) that the parts of a λόγος are all significant. The point is one of interpretation. Aristotle's definition of λόγος is ambiguous.41

Starting from his reading, Ackrill raises justified questions concerning the validity of Aristotle's notion of indefinite name: in fact, why should one take it as a name and not as a λόγος, provided that in an indefinite name, e.g. 'not-man', some part is significant and Aristotle's definition of λόγος is satisfied with this characteristic? What does Aristotle introduce the notion of indefinite name for? Ackrill's comments suggest an inconsistency in Aristotle.

In Boethius, however, we find the development of a remarkable ancient doctrine:42 Aristotle in PeriH. assumes two kinds of definition for name, verb and phrase (λόγος), i.e. for the elements composing the categorical proposition (λόγος ἀποφαντικός): namely, strict and non-strict definitions. Stephanus,43 who in this point recovers the doctrine which Boethius knows, suggests that Aristotle proceeds in this way because of the nature of the objects which are to be defined. According to the strict definition, a phrase is a significant spoken sound, every part of which is significant in separation; this definition excludes the negative particle, adverbs, conjunctions and, in general, all the non-significant parts of a phrase. Ackrill takes 'phrase' to be a not-single word, but in Boethius' view there is no phrase without at least two significant parts. In this view, therefore, an indefinite name cannot be a phrase. Ammonius confirms this doctrine, and makes known that it is a Peripatetic one.44

Boethius shows that the distinction between imperfect and perfect phrase arises from here. A perfect phrase (perfecta oratio) makes a complete meaning (plenus intellectus) due to the name and verb; an imperfect one (imperfecta oratio) makes an incomplete meaning (imperfecta sententia) due to the occurrence of two names (e.g. 'Plato and Socrates'), or two verbs (e.g. 'to walk

41 Ibid., (iv. 3).
44 Cf. Part I, 1.1, (iv. 4).
and say'). An indefinite name is not an imperfect phrase either, for in every indefinite name there is only one significant word, i.e. the name, while the negative particle is not significant: it cannot be taken as a name or as a verb.\(^{45}\)

The material of *ISC* and *DOC* confirms an articulated distinction between phrase and indefinite name.\(^{46}\) Here, there are two remarkable arguments which are totally consistent with the view of Boethius' first and second commentaries. The arguments make the distinction definitively clear.

This Peripatetic doctrine also clarifies the relation between the definition of name and the notion of indefinite name. Montanari has justifiably asked for the exact relation between both.\(^{47}\) Montanari's attempt at a solution\(^ {48}\) shows that no modern author has clarified the question of how the indefinite name relates to the definition of name. Boethius' explanation is again important.

The doctrine states that Aristotle in *Perih.* intends to take into consideration all that can be said to be a name, even though it cannot be properly or absolutely a name. Under the strict definition of name, an indefinite name must be excluded from being a name, but in its non-strict sense the indefinite name falls under this definition.\(^ {49}\) Aristotle, according to this doctrine, would maintain a non-strict definition of name and verb in order to see where the indefinites and the inflections of the name and verb fall, and a strict one to see what is the specific nature of name and verb.\(^ {50}\)

Boethius' commentary contains a unparalleled historical view suggesting that this doctrine is implied by Aristotle himself. Certain ancients (*antiqui*) were involved in a discussion as to whether the indefinite name should not be called a name or should but with a certain qualification.\(^ {51}\) Since Aristotle calls it (16a.30-31) 'indefinite name', he would accept the second

\(^{45}\) Cf. Part I, 1.1, (iv.2).

\(^{46}\) Cf. Part I, 1.1, (v.1).

\(^{47}\) Cf. Part I, 1.2, (vi); see also (vi.1).

\(^{48}\) cf. Part I, 1.2, (vi.1)

\(^{49}\) Cf. Part I, (vi.3).

\(^{50}\) Cf. Part I, (vi.3); and 3., (ii).

\(^{51}\) Cf. Part I, 3., (i), and (ii).
position. Boethius clarifies that the *antiqui* who include the indefinite name in the definition of name contribute to the discussion with a comparison that clarifies the relation between these two kinds of name: the indefinite name is homonymously a name, just as a dead man is called a man.\(^{52}\)

This doctrine is as ancient as the Peripatetics who are involved in this discussion.\(^{53}\) Signs of this discussion in Stephanus' commentary on *PeriH.* led Montanari to the misinterpretation that there was a modification of the definition of name (and verb) in the post-Ammonian commentators, which intended the exclusion of the indefinite name (and verb) and inflections of the name (and verb) from the definition of name (and verb).\(^{54}\)

Boethius' commentary contains another doctrine of ancient provenance. Alexander of Aphrodisias is the more certain *terminus ad quem,* but it was also present in other earlier Peripatetics.\(^{55}\) Ammonius mirrors this doctrine faintly.\(^{56}\) Boethius' report suggests that the notions of indefinite name and verb are required by Aristotle's theory of negation of the categorical proposition. According to the ancient commentaries, Aristotle states a distinction between categorical propositions with two terms (e.g. 'a man walks') and three terms (e.g. 'a man is just').\(^{57}\) Boethius advances the idea that the indefinite verb (e.g. 'does not walk') states the negation in two-term propositions, and that in three-term ones the verb 'is' works as an indefinite verb too.\(^{58}\) However, there are no indefinite verbs in propositions, but they only exist in isolation. The doctrine does not deny our common idea that the negative particle states the negation, but makes a difference here: the negative particle does not state the negation of a proposition without forming first an indefinite verb, which is properly the cause of the negation.\(^{59}\)

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\(^{52}\) Cf. Part I, 3., (i) and (ii); also 1.2, (vi.3).

\(^{53}\) Cf. Part I, 3., (iii).

\(^{54}\) Cf. Part I, 3., (iii).

\(^{55}\) Cf. Part I, 2.1, (iii); and 5., (c).

\(^{56}\) Cf. Part I, 5., (ii).

\(^{57}\) Cf. Part I, 4., (iii.1).

\(^{58}\) Cf. Part I, 2.1, (iii).

\(^{59}\) *Ibid.*
Boethius maintains the view that Aristotle considers it convenient to attach the negative particle to the verb of the proposition and through this, although the comprehension of the indefinite verb results ambiguous (for the indefinite verb is indistinguishable from the negation in the proposition), the theory of negation is not ambiguous. Boethius challenges the view of the Stoics, who in his view intend to state the negation by attaching the negative particle to the name (e.g. *non homo ambulat*).\(^{60}\) That Aristotle's theory of negation is not ambiguous and, further, that it is clearly defined, becomes manifest in what Boethius suggests, namely, that Aristotle defines not only what is the corresponding negation of an affirmation (whether of two or three terms), but also that he defines all the cases in which a proposition is not the negation of an affirmation. In fact, the negation of (a) 'a man walks' is (a') 'a man does not walk', and the other possibility, namely, (b) 'a not-man walks' is an affirmation with indefinite name. Similarly, in three-term propositions, the negation of (c) 'a man is just' is (c') 'a man is not just', and not (d) 'a not-man is just', or (e) 'a man is not-just'. In fact, (d) and (e) are not defined as negations: the former is an affirmation with an indefinite subject, the latter an affirmation with an indefinite predicate, or 'transposed', as Theophrastus called it.\(^{61}\) All the other cases and their variations are determined by the notions of indefinite name and verb.\(^{62}\) This doctrine resolves the multiple objections raised by Ackrill\(^ {63}\) and that by Montanari.\(^ {64}\)

The doctrine expresses its complete force in propositions. Boethius suggests not only that Aristotle's theory of negation states one and only one negation for affirmation, but also that for every affirmation there is a negation. The commentary suggests this in a remarkable way: namely, that the number of all the species of categorical propositions is finite, and Aristotle in *PeriH.* 10 has determined their number and order.\(^ {65}\) The commentary

\(^{60}\) Cf. Part I, 5., (i.1), (b).

\(^{61}\) Cf. Part I, 5. (i.1), (a).

\(^{62}\) Cf. Part I, 5. (i.1), (b).

\(^{63}\) For a summary of the objections, cf. Part I, 2.1, (i); discussion of these objections *ibid.*, (iv), and 2.2, (ii), (vii).

\(^{64}\) Cf. Part I, 2.1, (v).

\(^{65}\) Part I, 4., (iii).
expresses Aristotle's point through a generation,\textsuperscript{66} classification\textsuperscript{67} and arithmetical calculus\textsuperscript{68} of all these patterns.

Ammonius also relates this arithmetical calculus to the principle that for every affirmation there is a negation, and for every negation an affirmation. However, in his commentary the arithmetical view predominates.\textsuperscript{69} Apparently influenced by Proclus,\textsuperscript{70} he presents \textit{PeriH.} as a geometrical treatise whose aim is the determination of all the categorical propositions. He emphasises not only the impossibility of conceiving more combinations of terms in generating a categorical proposition, but also that there are no more propositions than those presented by Aristotle here.\textsuperscript{71}

The idea of relating Aristotle to arithmetical completeness of simple propositions seems to be common to the ancient commentators. Alexander of Aphrodisias embarks on a calculus in commenting on \textit{An. Pr. I, 25a. 1-3; lamblichus, Philoponus, Galen were also familiar with similar matters,}\textsuperscript{72} and Boethius refers to certain interpreters of \textit{PeriH.}, other than Herminus, Alexander and Porphyry, applying this view to \textit{PeriH.} 19b. 30-31.\textsuperscript{73} In modern discussions about completeness in Aristotle's logic the idea of arithmetical completeness of the number of propositions remains untouched.

Both Boethius' commentary and that of Ammonius seem to belong to a common textual tradition of \textit{PeriH.} where the indefinite name is determined by the same characteristics as the indefinite verb: namely, to signify indifferently anything whether existing or not-existing (ὅποιος ὁμοίως ἐφ᾽ ὅτου οὐ πάρχει καὶ ὁντος καὶ μὴ ὁντος 16b. 15). In the texts printed in the editions of Minio-Paluello and Th. Waitz we do not read this characteristic of the

\textsuperscript{66} Part I, 4., (iii.2).
\textsuperscript{67} Part I, 4., (iii.1).
\textsuperscript{68} Part I, 4., (iii.3).
\textsuperscript{69} Part I, 4., (iii.3), (a), (b).
\textsuperscript{70} Part I, 4., (iii.3), (c).
\textsuperscript{71} Part I, (4., (iii.3), (a).
\textsuperscript{72} cf. Part I, 4., (iii.3).
\textsuperscript{73} cf. Part II, (i).
indefinite name, but the ancient commentators explain its nature from this premiss.

The explanation of 16b. 15 given by Boethius and Ammonius is a common piece of ancient semantics. According to Boethius, every name, whether common (e.g. 'man') or proper (e.g. 'Cicero') signifies something definite. So 'man', for instance, can be defined by the characteristics of 'rationality' and 'mortality'. An indefinite name, on the contrary, e.g. 'not-man', excludes the signification given by the definite name 'man' and gives us to understand everything which is not a man. The indefinite name can denote some of the things which are excluded, but what it denotes in fact is unknown: it is uncertain and indetermined. According to this explanation, the signification of the indefinite name enables us to predicate indifferently an indefinite name of everything whether existent or non-existent, as is stated (of the indefinite verb) at 16b. 15.

When Boethius comments on the signification of the indefinite verb, he says not only that the indefinite verb can signify, like the indefinite name, what is existent and what is non-existent, but he also adds that the indefinite verb can be truly said (potest vere dici) both of things which are not existent, like the chimera, and things which are existent, like a man. Boethius and Ammonius take 16b. 15 to be what distinguishes an indefinite verb from a definite one, for the latter cannot be indifferently predicated in truth of everything whether existent or not-existent. In this view, what is excluded by the remark of 16b. 15 is not the sense but the truth of propositions predicing a definite verb of things which are not existent, e.g. 'a chimera runs'. Accordingly, it is false to predicate a definite verb of things that do not exist.

This explanation of 16b. 15 accords entirely with Cat. 13b. 27-35, the clearest expression of what has been called by some modern scholars 'Existential import of singular propositions': if an object does not exist, then the affirmation containing this not-
existent object as grammatical subject is false, but the negation is true. But since Boethius says that the indefinite verb states the negation, it seems possible to conclude that the so-called 'existential import of singular propositions' is a particular case of 16b. 15 and depends ultimately on Aristotle's concept of negation and indefinite verb. A proof of this seems to be the fact that this interpretation of 16b. 15 enables us to reconcile Cat. 13b. 27-35 with *PeriH.* 21a. 25-28, where the denial of the implication 'Socrates is a poet, then Socrates exists' has been taken as a contradiction of existential import and a contradiction in Aristotle. At 21a. 25-28, in fact, an affirmation about a singular subject does not imply that the subject exists.

Boethius and Ammonius are unaware of this modern problem, but the comment they make on this passage (21a. 25-28 and a.32-33) might resolve the problem. Some modern authors have advanced the thesis that Aristotle's doctrine of non-existence implies an acceptance that the only thing which can be said of what does not exist is that it does not exist. However, though Boethius and Ammonius, in fact, state that what does not exist cannot be said to exist, they maintain the view that Aristotle permits us to apply the verb 'to be' to what does not exist, if it is applied in a purely predicative sense, to express that the nonexistent in question is opinable (εξωτικόν, *opinabilis*). The verb 'to be', in this case, is always predicated κατὰ συμβεβηκός, (secundum accident) and, in this sense, propositions with a nonexistent subject can be true.

The proposition 'Homer is a poet' is an example but, as Ammonius argues, 'the goat-stag is not-just' can also be taken as another one. It is, then, not only clear that a κατὰ συμβεβηκός predication of 'to be' can make true affirmations, true opinions (opinabilis), when referred to nonexistent things which depend purely on our imagination (and Homer is taken so here), but also that 'Homer is [simpliciter]' does not follow from 'Homer is a poet', because the 'is' in 'Homer is a poet' is κατὰ συμβεβηκός, while in 'Homer is [simpliciter]' is καθ' αὐτό, and it actually means that

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Homer exists. Accordingly, what Aristotle would imply with his example of Homer at 21a. 25 f. is that even from the truest opinion made of an opinable subject (i.e. 'Homer is a poet'), one cannot derive the existence of the subject ('Homer is [simpliciter]'), i.e. a judgement of reality as if the matter in question is knowable (scibilis). When the matter is knowable, that is, when the subject exists in re, 16b. 15, i.e. the doctrine of the indefinite verb, governs its predication as to truth and falsity, in complete accordance with the so-called 'existential import of the singular propositions', for every negation is true if it is stated of a nonexistent subject (i.e. the indefinite verb, which states the negation, applies truly to what does not exist).83

The historical view of Boethius' commentary is the only testimony that we have in connection with the circumstances originating Aristotle's discussion of the nature of the indefinite names and verbs in PeriH.. Boethius refers to certain antiquiores and suggests that they were not Peripatetics but some more ancient authors than Aristotle. Ammonius and all the post-Ammonian commentators, refer to certain παλαιότεροι, but they interpret their existence in the mythical way that Proclus' Commentary on Plato's Cratylus suggested.84 Boethius implies that these antiquiores are found in the late Parmenidean tradition, and Plato's discussion in Sophist appears to be the immediate precedent of Aristotle's determination of the nature of the indefinites in PeriH..85

Boethius' commentary suggests that τὸ ἀνώνυμον, which is another expression applied by Aristotle to the indefinite name at 19b. 6 and 7, is the name through which Plato approaches the nature of the indefinite name and verb before Aristotle's analysis in PeriH.. The late dialectical dialogues and also Timaeus give support to this view.86 τὸ ἀνώνυμον is what Aristotle first calls 'indefinite name', and Boethius suggests that the imposition of this technical name was possible once the nature of this kind of expression was determined. In this point, Aristotle would disagree

83 Ibid., (viii).
84 Cf. Part I, 3., (iv).
85 Ibid.
with Plato's solution in *Sophist*. Plato here determines the nature of expressions like 'not-beautiful' as that which is different from beautiful, just as not-being' is that which is different from being, but Aristotle would define it, more precisely, as the absence of beautiful, that is, as a contradiction.  

Aristotle's logical examination of categorical propositions with indefinite names in Chapter 10 is sufficiently complete to suggest that he follows the classification of the categorical propositions that Boethius and Ammonius attribute to him. The idea of dividing this logical examination of Chapter 10 into two-and three-term propositions, and in this last kind into A. The Indefinite Predicate, B. The Indefinite Subject, and C. Equivalences, seems to cope both with all the kinds of proposition which are classified, and with all the observations made here by Aristotle, on which Boethius and Ammonius comment.

Aristotle introduces the logic of the propositions with indefinite name by examining characteristics of the three-term propositions with indefinite predicate (i.e. A.). He intends to state the logical relations between indefinite, privative and simple propositions. In this examination, the nature of the expression that he uses is highly compressed and quite obscure. He, whether or not conscious of the condensed expression, refers to *An. Pr.* I, 46 where a similar arrangement and relations are alluded to, but there he (curiously) does not clarify sufficiently the point either: at least he does not clarify how the privative should be inserted in the diagram, which would help enormously to understand what he means at 19b. 22-24.

Boethius refers to this passage (19b. 22-24) as one hard to understand because of its extreme obscurity and subtlety and as a challenge for the human mind. Boethius prefers the interpretation of Porphyry, but realizes the value of that of

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88 cf. Part II, (i).
89 cf. Part I, 4., (iii.1).
90 cf. Part II, 1., A., 1.1, (i).
91 *Ibid.*, (i). See diagram of these propositions, for instance, at (ii.1), (c).
92 cf. text and further explanation at *Ibid.*, (i).
94 *Ibid.*, (ii.2).
Alexander of Aphrodisias. Herminus' interpretation is severely criticised. In spite of the differences between one and other interpretations, these three ancient accounts have something in common: namely, to give 'to be unjust' (the privative predicate) as identical with 'to be not-just' (the indefinite predicate). Ammonius, perhaps following Proclus, presents an innovation here. Ammonius states that 'to be unjust' is more specific than 'to be not-just', hence the latter follows from the former. Ammonius also interprets all the relations contained in 19b. 22-24 in terms of 'to be more specific' and 'to be more general', and he is able to give a final interpretation of this passage different from all his predecessors.

Ammonius and Porphyry (Boethius) agree one with another in the disposition of the propositions of 19b. 22-24, but neither in the nature of the logical relation stated here nor in the way that the propositions must be taken in accordance with the sense of this passage.

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*Simple Propositions*

- **B/A**
  - Aff.
    - a man is just
  - Neg.
    - a man is not just

*Privative Propositions*

- **B/A**
  - Neg.
    - a man is not unjust
  - Aff.
    - a man is unjust

*Indefinite Propositions*

- **B/A**
  - Neg.
    - a man is not not-just
  - Aff.
    - a man is not-just

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95 *Ibid.*, (ii.1).
96 *Ibid.*, (ii.3).
97 cf. *ibid.*, (ii.1), (b); (ii.2), (b); (ii.3).
The figure shows that Ammonius (A) does not accept equivalence between privative and indefinite propositions, but entailment, as indicated. All the remaining relations are identically verified by Porphyry (B) and Ammonius (i.e. B/A). Accordingly, Porphyry interprets 19b. 22-24 as follows: B1 and B2, which are negations, are consequents of the simple and indefinite affirmations respectively in the way the privations are, because in the privative propositions the negations are also consequents of the affirmations. The expression while two will not refers to the simple and the indefinite affirmations, because they work as antecedent in the relations.  

Ammonius takes A1 and A2 (i.e. the indefinite propositions) to be two of the four cases alluded to by Aristotle, and they are related to the simple affirmation and negation in the way the privations are, that is, by entailment, because just as the indefinite propositions are related to the simple ones so too the privative ones are related to the simple ones (so, for instance, in the first column, A1 is implied by the simple affirmation, and so too the negative privation is implied by the simple affirmation). Accordingly, Aristotle's expression while two will not refers to the simple propositions, for they are not ordered to the indefinite as the privative ones are.

Beyond 19b. 22-24, Ammonius seems to interpret Aristotle correctly in claiming that between 'to be unjust' and 'to be not-just' there is not equivalence. He grounds this non-equivalence on the Aristotelian doctrine about which Ackrill (1963), p. 143, reminds us in his comments on PeriH. 10. The indefinite name (let us say not-x) coincides with the privation (let us say un-x) when the quality in question (x) is necessary to the subject: for instance even and odd predicated of numbers, or health and sickness said of animal bodies (Cat. 11b. 38 ff.). There is no intermediate between these contrary qualities and, in these substrates, they are correctly defined as contradictory properties.

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99 PeriH. 19b. 22-24: "Because of this there will here be four cases (two of which will be related, as to order of sequence, to the affirmation and negation in the way the privations are, while two will not)." Ackrill (1963).
100 ibid., (ii.2), (d).
101 Cf. Part II, 1., A., (ii.4), (a).
102 Cf. ibid., (ii.5).
However, when the quality does not inhere necessarily in the subject, and an intermediate state is possible, like in black and white in the body, or just and unjust in the man (Cat. 11b. 38 ff.), the indefinite name (e.g. 'not-just') does not coincide with the privation (i.e. 'unjust').

Aristotle's logical analysis of three-term singular propositions (with indefinite names), e.g. 'Socrates is not-just', seems to be characterized by a relative incompleteness, for he does not clarify whether this kind of proposition maintains the same vertical and diagonal relations as the unquantified and quantified propositions. One cannot think that his silence about this point (and that of all the commentators) is due to the fact that the same relations are verified here too. In fact, there are some problems here: namely, whether 'Socrates is just' and 'Socrates is not-just' can be true together in different times, as 'a man is just' and 'a man is not-just' are said to be, when they refer to different subjects.

The only point made by Boethius and Ammonius is that in singular propositions Aristotle examines an exception: namely, that 'Socrates is not just' is equivalent to 'Socrates is not-just', though this does not happen in universal propositions nor, as Ammonius adds pertinently, in particular and unquantified propositions either.

Aristotle's analysis of three-term propositions with indefinite subject (e.g. 'a not-man is just') is not as complete as one would expect. Boethius provides more details than Ammonius to complete Aristotle's remark, but they are insufficient anyway. An exhaustive recalling of all the logical relations that Aristotle states in PeriH. is necessary to understand Boethius when he states that the unquantified propositions with indefinite subject do not relate logically to those with a definite one.

Actually, Boethius' commentary indirectly opens the question of whether the weakest of the logical relations distinguished by Aristotle, namely, 'two propositions can be true together' (ἐν δύο ἕξεσται αὐτοὶ... }

103 Cf. ibid., (ii.5). Also Part I, 2.1, (i).
104 cf. ibid., 1.3, (i).
105 Ibid., 1.3, (i).
106 Ibid., 1.3, (iii).
107 cf. ibid., B., (ii).
108 Ibid.
is not verified between a proposition with definite subject and another with an indefinite one (e.g. 'a man is just' - 'a not-man is just'). Aristotle's remark about quantified propositions with indefinite subject is more specific: he says that two propositions, one with definite subject and other with an indefinite one, cannot be equivalent (ταύτων σημαίνειν). But doubts here still remain, for what about weaker relations, like 'to be true together' or even 'to be capable of being true together'? Modern or formal semantics provides a valuable clarification here and permits us to see what is the place that the doctrine of similarity and dissimilarity of categorical propositions developed by Aristotle and the ancient commentators occupies in this discipline.  

One of the most striking characteristics of Boethius' and Ammonius' commentaries of *PeriH.* (hence of all the ancient commentaries) is to have interpreted Chapter 10 of this treatise as a section of Aristotle's logical writings where equivalences between indefinite and simple propositions are set out. Porphyry proves some of the logical relations between quantified propositions based on equivalences between indefinite and simple propositions (e.g. 'no man is just' = 'every man is not-just'), and Ammonius goes on to state a general rule to find the other proposition of an equivalent pair, as Proclus taught it. There is a disagreement, however, between modern commentators whether to accept this, but the ancient account does not seem wrong.  

Further, Boethius presents the two equivalences at 20a. 20-23 based on a text of Aristotle which transposes the order of one of the equivalent pairs. Our OCT runs: "No man is just follows from 'every man is not-just', while the opposite of this, 'not every man is not-just', follows from 'some man is just' (for there must be one)"), but Boethius' text of Aristotle says "'Every man is not-just' follows from 'No man is just' (...". There is no convincing reason to explain this change; rather, Boethius' commentary intensifies the

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110 cf. Part II, 1.2., (i.2), (a); also *ibid.*, C., (i); see also C., (v).
111 cf. *ibid.*, C., (iv).
112 Cf. *ibid.*, C., (ii).
doubts concerning what was the genuine text of Aristotle. At least two other examples where the tradition of MSS of *PeriH.* is not in complete agreement with the text that Boethius assumes to comment on it can be exhibited.Boethius faces some problems in proving equivalence at 20a. 20-23; however, this is not due to the fact that the pairs of propositions presented by Aristotle here are not equivalent, but to what seems to be incomplete material—as we have suggested earlier. Ammonius makes 20a. 20-23 an occasion to praise the discovery of his master Proclus: a rule which allows us to find the other proposition of an equivalent pair, if in the initial proposition the quantity and the subject are maintained, and the predicate and the quality are changed (from definite to indefinite, and from affirmative to negative, or vice versa). The so-called 'canon of Proclus' is presented as the general principle which is implicit at 20a. 20-23. Ammonius grounds it remarkably. In his calculus of the number of categorical propositions he had suggested that every well-formed proposition can be recognized and classified. Now he suggests that every categorical proposition is implied and implies another which its equivalent The canon works plainly for quantified propositions, but Ammonius claims that for unquantified propositions it is also valid if the predicative relation to a subject is considered in isolation: for instance, 'is just = 'is not not-just'.

The canon seems to be a species of equipollence, and to correspond to what is called 'obversion' in modern traditional logic. Let us take an example: 'Every S is P' is equivalent to 'No S is not-P': this equivalence is both an example by Ammonius to illustrate the canon and a well-known equivalent pair in tables of obversion. However, again, modern logicians do not define

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113 Cf. *ibid.*, C, (ii).
114 Cf. Part I, 1.2, (ii); and Part I, 4., (ii).
115 cf. Part II, C, (iii.1).
116 Here above; see also Part II, C, (iii).
119 For the meaning of this term, see Part II, C, (ii).
120 Part II, C, (iv).
121 See references at *ibid.*, (iv).
obversion identically: some take it as an operation which involves equivalence, others as one which does not. In the first position, implicitly or explicitly, the canon is identified correctly with obversion.

That Aristotle presented equivalences in *PeriH*. 10 cannot be denied: one could maintain the view (different from the ancient commentators) that Aristotle at 20a. 20-23 does not present equivalences but only entailment (one proposition follows from another), but later at 20a. 39-40 he explicitly asserts that 'every not-man is not-just' is equivalent (ταύτην σημαίνειν) with 'not not-man is just'. Boethius maintains that 20a. 39-40 is a formal derivation from 20a. 20-23.¹²² In fact, if in the equivalences of 20a. 20-23 the definite subject-term is replaced by the indefinite one, the express equivalence of 20a. 39-40, and that 'some not-man is just' = 'not every not-man is not-just' will be also obtained. Boethius suggests that further equivalences can be found from initial ones by this rule of transformation.¹²³ The link between 20a. 20-23 and 20a. 39-40 makes it difficult to argue that Aristotle at 20a. 20-23 did not mean equivalence.

Some modern commentators have advanced the argument that Aristotle would maintain the view that negations follow from affirmations, but this in the view of Boethius and Ammonius is not a universally applicable law, but precisely what changes in Aristotle's logical considerations at 20a. 20-23 and 20a. 39-40.¹²⁴ Besides, neither Boethius nor Ammonius seem to understand that *An. Pr.* I, 46 (where literally at least there is no equivalence) should be taken as the explanatory norm for *PeriH*. 10. In their view, the allusion to *An. Pr.* I, 46 (made at *PeriH*. 19b. 31) is limited to a clarification of the arrangements of unquantified (19b. 22-24) and quantified propositions (19b. 32-35), but they do not show signs that both texts should be taken as symmetrical expositions.¹²⁵

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¹²² Cf. *ibid.*, (vi).
¹²⁴ See *ibid.*, (ii).
¹²⁵ Part II, C, (v).
Equally, a modern view maintaining that Aristotle in *PeriH.* assumes another concept of indefinite predicate than in *An. Pr.* I, 46 (for in *PeriH.* there would be equivalences but not in *An. Pr.* I, 46—but here negations always follow from affirmations) is a case difficult to substantiate beyond the literal sense of these two texts, for in Porphyry's interpretation of the diagrams of 19b. 22-24 and 32-35, Aristotle assumes equivalences both in *PeriH.* and in *An. Pr.* I, 46. Ammonius' case here is different, for he does not claim equivalences for the mentioned diagrams. However, he has stated the equivalences of 20a. 20-23 and 39-40 (which, in his view, are instances of the canon of Proclus) as different from the logical relations of the diagrams, by suggesting that Aristotle both in the diagrams and in *An. Pr.* I, 46 is concerned with a κατ' αὐτὸν predication, i.e. with the logical relations in which the terms of the propositions have signification *in re.*

Boethius and Ammonius realize that Aristotle distinguishes not only between two- and three-term propositions, but also that in propositions with two terms there are two types: (i) 'a man *is*', or propositions in which 'is' is alone, and (ii) 'man *walks*', or those in which 'is' does not fit (20a. 3). Boethius does not present properly a logic of the propositions with two terms, but a doctrine of semantic equivalence between propositions in which 'is' does not fit and three-term propositions which, finally, produces an extension of the logic of the propositions with three terms.

According to Boethius, every two-term proposition in which 'is' does not fit can be validly transformed into an equivalent proposition with three terms if the verb in the two-term one is replaced by the verb 'is' plus the participle: for instance, 'a man *walks*' = 'a man *is walking*'. The ground of this doctrine is that the verb 'to be' is contained in every verb. The doctrine in question stems from Alexander of Aphrodisias, and Boethius' comments on it are the only testimony.

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126 ibid., C, (v).
127 Ibid.
128 Ibid.
129 Part II, 2., (i).
130 Ibid. (ii).
131 Ibid.
132 Ibid.
The doctrine, however, creates some difficulties: how should a proposition like 'every man is not-walking' be reduced to its equivalent two-term form? Does 'every man is not-walking' signify the same as 'every man is not walking'?\textsuperscript{133} The answers to these questions are contained in the case of a syllogism in Plato,\textsuperscript{134} which is formed by only negative premisses, but remains conclusive: the fact of being conclusive implies that the negative premisses are further transformations of indefinite affirmations (i.e. affirmations with an indefinite participle in the predicate). Since both premisses are universal in the mentioned syllogism, the case of the syllogism implies that a negation with two terms like 'every man does not walk' can be transformed into an affirmation with indefinite predicate like 'every man is not-walking', and therefore that (as was inquired initially) 'every man is not walking' = 'every man is not-walking'.\textsuperscript{135}

Though the syllogism is correct,\textsuperscript{136} the way in which the equivalence is set out is strange, and it cannot be counted as a strict proof of the equivalence in question. We have undertaken the examination of whether this equivalence is correct and whether similar equivalences can be verified for unquantified, particular and singular propositions, and whether they could agree with the rest of the logical relations already demonstrated.\textsuperscript{137}

One of the most apparent facts in Boethius' commentary on \textit{PeriH.} is the existence of a doctrine of indefinite names and verbs occupying exactly the extension of Book Four of Boethius' second exposition. This fact had been realized earlier by some scholars.\textsuperscript{138} The genuine sense of this doctrine seems to be that of a self-contained body of teaching which completed what Aristotle left implicit in \textit{PeriH.} 2, 3, and 10 concerning the nature and logic of the indefinite names and verbs. The historical antecedents of this doctrine are connected with Alexander of Aphrodisias,\textsuperscript{139} the

\textsuperscript{133} \textit{Ibid.}, (iii).
\textsuperscript{134} \textit{Ibid.}, (iv).
\textsuperscript{135} \textit{Ibid.}, (iv).
\textsuperscript{136} \textit{Ibid.}, (v).
\textsuperscript{137} \textit{Ibid.}, (vi).
\textsuperscript{138} cf. Part I, 5., (i).
\textsuperscript{139} cf. \textit{ibid.}, (1.i), (c); and above nn. 55, 132.
Stoics\textsuperscript{140} and Theophrastus.\textsuperscript{141} Porphyry, by contrast, is not expressly named here, but only when Boethius comments on the logical relations of the indefinite propositions of 19b. 22-24 and 19b. 32-35.\textsuperscript{142}

A notice by Boethius, namely, that Theophrastus wrote on similar points to Aristotle, permits us to assume, when taken with another notice by Alexander and Ammonius, that Theophrastus is one of the sources of the doctrine that Boethius presents in his commentary,\textsuperscript{143} for Alexander and Ammonius say that Theophrastus used an alternative name for referring to that which for Aristotle was a three-term proposition with indefinite predicate (e.g. 'a man is not-just'), i.e. 'transposed proposition' (ἐκ μεταβόσεως).\textsuperscript{144}

Ammonius' report of this fact suggests not only that Theophrastus imposed a name on those propositions, but also that he was the first in explaining the sense of the transposition of the propositions in the diagrams that Aristotle presents in \textit{PeriH.}, and so the first in elucidating the obscure sense of 19b. 22-24.\textsuperscript{145}

But Ammonius' report is limited, and the other ancient commentators do not add relevant information. So the figure of Theophrastus as a source of the doctrine that Boethius develops in Book Four remains intriguing.\textsuperscript{146}

\begin{footnotes}
\item[140] Cf. \textit{ibid.}, (i.1), (b); and above n. 60.
\item[141] Cf. \textit{ibid.}, (i.1), (a).
\item[142] Cf. \textit{ibid.}, (i.1).
\item[143] Cf. \textit{ibid.}, (a).
\item[144] \textit{Ibid.}
\item[145] \textit{Ibid.}
\item[146] A final word must be said concerning the book of C.W.A. Whitakker \textit{Aristotle's De Interpretatione. Contradiction and Dialectic.}, Oxford 1996. Due to its recent publication, I could not give comprehensive consideration to the general interpretation of this book. However, I have used one of his observations in note 238, Part I, 1.2, (v), and I have made a specific comment on one of his points in note 586, Part I, 4., (iii.2). In both cases, his opinions do not depend on the context in which his general interpretation of \textit{PeriH.} develops.
\end{footnotes}
1. The Indefinite Name
   1. 1 Syntax

   (i) Aristotle's text

   At PeriH. 16a. 29-32, the words by which Aristotle refers to
   the nature of the indefinite name are extremely concise, and they
   by themselves might not suggest much to our mind. Aristotle
   says:147

   16a 29
   
   [\[\text{\footnotesize \textit{\textquoteleft \textquoteleft not man\textquoteright \textquoteright is not a name, nor is there any correct name for}
   \textit{\textquoteleft \textquoteleft it is neither a phrase nor a negation. Let us call it an}
   \textit{\textquoteleft \textquoteleft indefinite name.}

   Aristotle's words have not suggested particularly much to
   Ackrill in his comment on this passage either; rather, they have
   led him to ask some justified questions, and express doubts
   concerning the effectiveness of the distinctions which Aristotle

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147 cf. Aristotelis Categoriae et Liber de Interpretatione, L. Minio-Paluello
(Ed.), Oxford 1949, p. 50.
148 cf. J.L. Ackrill, Aristotle's Categories and De Interpretatione.
Translation with notes. Oxford 1963, p. 44.
attempts to make between the indefinite name and the other grammatical elements presented in this passage. Ackrill has remarked correctly that while Aristotle gives a cogent argument to prove that 'not-man' is not a negation (ἀνόμοις) at PeriH. 20a. 31-36, he does not offer any argument to distinguish an indefinite name from a phrase (λόγος). Accordingly, Ackrill thinks that if Aristotle would have undertaken this task, his attempt would have been not free of difficulties. So, Ackrill's comment suggests that Aristotle's account of the nature of the indefinite name not only is incomplete, but also contains a number of contradictions.

Therefore, although Ackrill's comments are minimal, his remarks seem to open a serious problem which is worth adding to our main question of what is the nature of the indefinite name in Boethius' commentary. Is Aristotle's account of the indefinite name sufficiently accurate to guarantee its grammatical existence and establish its difference from any other element that he distinguishes in PeriH.?  

149 cf. Ackrill (1963), p. 117. Aristotle at 20a. 31-36, gives a reason for this. In Ackrill's translation: "Names and verbs that are indefinite (and thereby opposite), such as 'not-man' and 'not-just', might be thought to be negations without a name and a verb. But they are not. For a negation must always be true or false; but one who says 'not-man' —without adding anything else — has no more said something true or false (indeed rather less so) than one who says 'man'".  

150 cf. Ackrill, (1963), pp. 117-8. "If his reason for not counting it as a name simpliciter were that it is not a single word this should make it count as a phrase". As we see, in particular, the difficulty of distinguishing an indefinite name from a phrase (λόγος) is clearly problematic for Ackrill, since 'not-man', for example, in so far as it cannot be considered a single word, should be understood as a phrase. Aristotle does not seem to elucidate the point. But the crux of this difficulty is whether Aristotle in 16a. 31 means λόγος as 'phrase' or 'sentence', since both terms are correctly a translation for the Greek word λόγος, as Ackrill says. It is plausible that Ackrill's problem arises from his translation of λόγος by 'phrase' in this passage or, to be more exact, from the general problem of translating this word. In page 124 of his commentary, Ackrill has given an exposition of this difficulty. He says that he is forced to adopt different renderings for this word in different contexts. As a result, he has adopted many basic meanings for the term. As to 16a. 31, the relevant meanings are 'sentence' or 'phrase'. But, he has decided finally to translate λόγος as phrase here. Accordingly, in the passage mentioned, Aristotle appears to be distinguishing an indefinite name from a phrase. Although his decision to render λόγος by 'phrase' at 16a. 31 seems to be correct, his assumption of λόγος as a not-single word will be discussed through this chapter.
(ii) **Indefinite name and negation**

First of all, in the Latin version of *PeriH.*, Boethius has translated 16a. 30-32, thus: 151

16a-30 'Non homo' vero non est nomen; at vero nec positum est nomen quod illum oporteat appellari — neque enim oratio aut negatio est — sed sit nomen infinitum.

Now, in the corresponding section of his first commentary, whose lemma is virtually the same as his translation, 152 Boethius seems to agree with Ackrill that, in this passage, Aristotle has given a not completely clear definition of the indefinite name, and he goes on to say: 153

Boethius recognizes that the expression 'non homo', i.e. 'not-man' (or 'a not-man') is ambiguous. His reason for accepting this ambiguity seems to be based on the fact that an indefinite name could be understood as some one of the other grammatical elements that Aristotle also has defined, or is to define, in

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151 cf. *Aristoteles Latinus* (=AL), II.1, 2 (16a.30-32).
152 Namely: "Non homo vero non est nomen. at vero nec positum est nomen, quo illud oporteat appellari, neque enim oratio aut negatio est, sed sit nomen infinitum." (in *Int.* 20-23, p. 51).
particular, λόγος, (or oratio), and ἀπόφασις, (or negatio). Boethius agrees completely with Ackrill in considering the difference between an indefinite name and a negative statement (negatio) to be based on the presence of truth and falsity. An expression like 'a not-man' might be a negative statement (negatio) but, as Boethius observes, every negative statement means something true or false, but when one says 'not-man', or even 'a not-man', one does not express anything true or false. This difference is quite evident and, as Ackrill remarks, Aristotle by himself argues along these lines when he considers the possibility of indefinite names as negations at PeriH. 20a. 31-36.\(^{154}\)

Boethius, however, in this passage of his first commentary, also makes an effort to find a reason for this difference. According to him, unless something is added to the verb 'to be', and put at the side of it (proximus),\(^{155}\) no truth or falsity is stated in any composition of the parts of a phrase (in qualibet orationis partium conpositione perficitur). Thus, the presence of a verb is the minimal condition of truth or falsity in a combination of words, and this agrees with what Aristotle explained in his introductory remarks (16a. 14-16).\(^{156}\) The commentary does not give a further

\(^{154}\) Besides, as E. Montanari remarks (La Sezione Linguistica del Peri Hermêneias di Aristotele, vol. ii, p. 150, Florence 1988), the ancient commentators in general and, on this basis, the medieval interpreters as well, distinguished indefinite name from negation in a similar way. He cites Ammonius in Int, p. 42, 11 ff.; and Anonymous Comm. p. 1, 11 ff. (Cf. Anonymous Commentary on Aristotle's De Interpretatione, (= Codex Parisinus Graecus 2064), pp. 139-16, L. Taran (Ed.), 1978), which present the argument that an indefinite name is transformed into a name, if the negative particle is removed, while the negative proposition becomes an affirmation. It is worth adding that this argument must proceed from a common source, certainly more ancient than Boethius' and Ammonius' commentaries, since it is also in Boethius' ISC (cf. PL 64, p. 764, C.9-D.5; and later here Part I, 1.1, (v. 1) The treatises on the categorical syllogism).

\(^{155}\) Proximus here, like at in Int. 3, p. 45, and in Int. 2, 24, p. 252, means 'put at the side of', which is distinguished from 'in composition with' (compositum), like 'cervus' in 'hircocervus': ipsum [hircocervus] quamquam sit compositum, tamen simpliciter dictum veritati et falsitati proximum non est. (in Int. 2-3, p. 45). Boethius' commentary, at in Int. 2, 24, p. 252, is similarly explicit: quod dico homo ambulat homo simplex nomen quasi affirmationi est proximum, (...).

\(^{156}\) Boethius' expression: 'ut supra ait' (in the passage above quoted), refers to the previous passage at 16a. 14-16: "Nomina igitur ipsa et verba consimilia sunt sine compositione vel divisione intellectui, ut 'homo' vel 'album', quando non additur aliquid." (AL II.1, 1). This condition of adding at least the verb 'to be' to a name for making a name a sentence (λόγος) is commented on by Boethius at in Int. 1-9, p. 44: "in his [i.e. simplicis voces
explanation of what kind of composition is referred to by the expression *in qualibet orationis partium compositione*, and this by itself suggests that the predication of a verb, at least the verb 'to be', is the only condition of truth or falsity in a phrase (*oratio*).\(^{157}\)

Therefore, given that there is no verb in any indefinite name, even the verb 'to be', an indefinite name is not a negation.

The difference between an indefinite name and a negation is plain enough; the justification to raise a problem concerned with their difference might arise either from the fact that in every indefinite name there is a combination of words, and one of these is clearly a name, or from the presence of the negative particle 'not' in every indefinite name. But, as Boethius shows, on the one hand, in an indefinite name there is no combination which can be taken as the combination proper of a negation, since—as he has remarked—although there is a name, the negative particle 'not' is not a verb. And, on the other hand, as Boethius assumes from his previous comments, not every combination of words will produce truth or falsity, but only a combination of names and verbs.\(^{158}\)

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\(^{157}\) There is a further development on this matter in our following analysis. The commentary will state that all the combinations that single names and verbs can make are correctly named 'phrase' (*oratio*). But not all of these will be an *oratio perfecta* (in *Int.* 2, 6 ff. p. 86), like 'Socrates walks', which combines a single name and verb. An imperfect phrase, like 'Socrates in lycio cum Platone' (*ibid.*, 19-25, p. 86) is only an *imperfecta oratio*, because its sense is not complete (in *Int.* 2, 30-5, p. 8-9; 2, p. 16; 7, p. 81; 11, p. 95). Later, (cf. in *Int.* 2, 32-29, pp. 99-100), Boethius clarifies that even though the subject of a simple (or categorical) proposition, like 'Socrates walks' or 'sol oritur', can be other than a single name, like an indefinite name, (e.g. 'non homo ambulat'; cf. also *PeriH.* 19b. 10-12; and 16-17), or even a verb (e.g. 'ambulare moveri est'), the predicate consists always of a verb: "non semper subiectum nomen esse, semper autem praedicatam in solo verbo consistere." (*Ibid.*, 24-25, p. 100). Accordingly, Boethius' commentary here reiterates his earlier words on existence of truth and falsity in combinations of words: "nisi enim aut est aut fuit aut aliquid huiusmodi sit additum aut quod idem valeat adponatur, enuntiatio non fit." (*Ibid.*, 28-29, p. 100). Cf. also Part I, 4., (iii.2).

\(^{158}\) In his introductory remarks at 16a.10-18, Aristotle has explained this point by means of his example of the *τραγεδίας*. This word is meaningful and in it there is a combination of words (*τραγεδίας* and *ἐλαφος*), but there is no truth or falsity by the mere fact of this combination, except —Aristotle explains—that 'is' or 'is not' is added. Boethius and Ackrill have given a very similar explanation. Ackrill (1963), p. 114, says that "Aristotle supports
As we said earlier, Ackrill has advanced the objection that if one supposes, in the passage of Aristotle quoted above, that λόγος stands for 'phrase', as Ackrill translates here, then Aristotle has not provided sufficient elements to distinguish an indefinite name from a phrase. Moreover, Ackrill also has advanced the difficulty that if Aristotle's reason for not counting an indefinite name as a name simpliciter were that it is not a single word, this should make it count as a phrase. In other words, Ackrill has stated that Aristotle might not be distinguishing successfully an indefinite name from a phrase (λόγος).

By contrast, in the passage cited above, Boethius does not seem to be conscious of the problem that Ackrill observes. As Boethius explains there, every oratio conjoins verbs and names the statement that a noun or verb by itself cannot be true or false by taking an example of a name that might seem a strong candidate for a truth value. Since the name 'goat-stag' applies to nothing it might be thought to be (always) false. But this is not so. One who says 'goat-stag' has after all not said 'goat-stag exists'; this or some other verb must be added before there is anything true or false". Boethius also emphasises the importance of this example, and he comments on it that Aristotle here is proving that only the combination of names and verbs will produce truth and falsity, since not only names and verbs, which are taken alone, are separated from truth and falsity, but also certain combinations that are said without verb (quaecumque conposita (...) simpliciter dicta). Boethius says: "Magnam vim habet huius subtilitas. non enim sola illa nomina vel verba a veritate ac mendacio separata sunt, quaecumque simplicia sunt, sed etiam illa quaecumque conposita, si sint simpliciter dicta. hircocervus enim conpositum nomen est significans hircum et cervum, sed nisi ei aut esse aut non esse addatur, ut dicamus hircocervus est vel hircocervus non est, nullus inde veri falsive intellectus poterit provenire." Cf. in Int., 23-1, pp. 44-45.

159 Or, in other words, if it is assumed that λόγος in this part of the text has a wide sense, that is, means not only 'sentence', but also 'phrase'.

160 Cf. Ackrill (1963), pp. 117-8. Ackrill's doubt seems to be based on the reasoning that if Aristotle accepted that an indefinite name is a not-single word, then he should accept that it is a phrase. Therefore, Ackrill's argument supposes clearly that for Aristotle a phrase is a not-single word. Now, Ackrill has tried to solve his own objection by assuming that "Probably Aristotle thinks of an indefinite name as a single word but he thinks that it fails to name anything in the way in which an ordinary name does: it stands for no definite kind of thing and can be applied to a wildly various range of objects", (ibid., pp. 117-8). Ackrill is right to recall this, but this semantic fact—which is stated by Aristotle himself—does not guarantee the syntactic consistence of an indefinite name. Thus, Ackrill's assumption that Aristotle would solve the mentioned objection in this way is also a matter to be analysed.
(verbis nominibusque). There is no indication of how the combination of names and verbs is realised in an oratio, but, according to Boethius, the expression 'non homo', 'not-man', has two parts (duabus partibus constat), in one of which there is a name, but there is not a verb. Accordingly, one can apprehend correctly a name, that is, a meaning, when an indefinite name is uttered, but given that the negative particle 'non', i.e. 'not', is neither a verb nor a name, the minimal condition to form an oratio is not present in an indefinite name. Thus, the expression 'not-man' is not an oratio.\(^1\)

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1\(^{1}\) Again, the existence of a verb in combination with or separation from other word is introduced by Aristotle as a necessary condition of truth and falsity. An obvious consequence is that neither a verb nor a name, when they are alone, can imply truth or falsity. As the following passage shows, this condition already excludes the infinitive form of the verb: "Nam cum dico: Socrates ambulat, hoc ipsum quidem, quod eum ambulare concepi, nulla composito est; quod verum intellectus progressione ambulatione cum Socrates coniungo, quaedam iam facta est composito." (in Int. 2, 30-3, pp. 46-7). And also it excludes the third person singular, if nothing else is added, ut in sapit: "nisi enim cui insit verbum illud fuerit additum, non fit enuntiatio: ut cum dico sapit, nisi quid sapiat dicam, propositio non est." (in Int. 2, 7-10, p 76). Compositions or divisions consisting only of names, like 'Socrates and Plato', and 'Neither Socrates nor Plato', are also excluded (cf. in Int. 2, 14-15, pp. 47-48). However, this same condition does not exclude implicit compositions, like (i) the verb 'est', when it is the answer of a question like 'mundusne animal est?'; and (ii) verbs in which the subject is tacit, like lego, and where, as Boethius indicates, there is also a tacit composition: 'illa enim nomina quae ita dicuntur simplicia, ut veritatem aut falsitatem quodammodo valeant designare, huiusmodi sunt, ut intra se atque intra significa tionem suam quandam retineat compositionem, ut si dicat lego, hoc est enim dicere lego, tamquam si dicat ego lego, hoc autem composito est." (in Int. 2, 31-6, pp. 47-8). This last point is also made by Ammonius, who introduces this point through the question of how Aristotle can say that neither the name nor the verb expresses truth or falsity, given that verbs in the first person (τοι πρώτου προσώπου) like περιπατῶ, or in the second person, like περιπατεῖς, or even in the third person with a known subject, like ὅτι ("it is raining", i.e. 'Zeus rains'), indicate truth or falsity (cf. in Int. p. 28, 11-31). Ammonius' answer shows again that it is not the verb by itself, but the combination (συνήθως) of verb and a pronoun (τὰ δὲνώματα τῶν προσώπων), that produces truth or falsity (ibid., p. 28, 16-19). According to G. Nuchelmans (Theories of the Proposition, Leiden 1973, pp. 95-96), the point was discussed by ancient Greek grammarians. All these grammarians, and so some philosophers together with them, maintained that, in general, expressions like περιπατῶ, etc. constitute a phrase. So Dionysius Thrax, Scholia p. 57, 12 (Scholia in Dionysii Thracis Artem Grammaticam (Hilgard (Ed.), Leipzig, 1901, in Grammatici Graeci (=GG)) would explain that although these kinds of expression are not a combination of words, as a strict definition of λόγος would require it (namely, 'a combination of speech in prose that makes known a complete thought', Nuchelmans, ibid., p. 91), they can be counted as a phrase because of their complete sense. Similarly, Nuchelmans (ibid., p. 95) observes that in Dionysius Thrax Scholia, p. 515,
In the second commentary, which has a wider perspective than the first one, Boethius confirms essentially his earlier judgement by discarding completely the possibility of thinking of a not-man as an oratio.

It is manifest that Boethius here has adopted a more comprehensive notion of oratio. First of all, the starting-point of this analysis is this notion itself. Then, here oratio does not mean only a combination of names and verbs. Rather, every oratio, as the commentary says, involves either names or verbs, or two verbs or many, or only names: in his second analysis, the meaning of oratio has been clearly extended. Now, although the range of an oratio is wider, Boethius confirms his earlier words: there is not an oratio in an indefinite name. Again, the key fact for not counting indefinite names as an oratio is that 'not' is neither a name nor a verb.

13, it is said that these expressions are a phrase because "the thing that performs or undergoes the action or passion is supplied from outside by the understanding". He notices (ibid., p. 95) that this is the way taken by Ammonius, and also by Sextus Empiricus (Outlines of Pyrrhonism, 1, 199): the man who says περιπατῶ is virtually (δυνάμει) saying ἐγὼ περιπατῶ. The point would be also grounded, says Nuchelmans (ibid., p. 95), on that the pronoun is taken as a noun: Dionysius Thrax, Scholia, p. 515, 33; and also Apollonius Dyscolus De Syntaxi, p. 17, 5 (Apollonii Dyscoli Peri Syntaxeōs, G. Uhlig (Ed.), in Grammatici Graeci, 2, 2; Teubner Eds., Leipzig 1910).

162 As Boethius himself recognizes, he excluded subtleties and difficulties in his first exposition, but he added them in his second commentary. Cf. in Int. 2, 1-5, p. 251.

163 in Int. 2, 13-22, p. 61.
(iv) Is the indefinite name an ill-defined term?

The result up to here is that, on the one hand, Boethius rejects the identification of the indefinite names with oratio, and, on the other hand, that he develops his first and second commentary without noticing a further objection, namely, that 'not-man' can be considered as a phrase, in the sense of Ackrill's definition of 'phrase', that is, a not-single word. The fact invites us to analyse why Ackrill thinks that λόγος can signify 'phrase', in the sense of 'a not-single word', in the passage of Aristotle quoted above, and also to revise the definition of λόγος that Aristotle maintains at PeriH. 16b. 26-28, and the corresponding translations of Boethius and Ackrill. First of all, Aristotle says:\textsuperscript{164}

\begin{align*}
16^b & 26 \text{λόγος} \text{ δὲ \ έστι φωνὴ σημαντικὴ, ής τῶν μερῶν πι σή}\text{μαντικῶν \ έστι \ κεχωρισμένον, \ \ώς \ φάσεις \ ἀλλ' \ οὐχ \ \ώς \ \κατά-} \\
& \text{φως.}
\end{align*}

\begin{flushright}26 \text{ δὲ om. Σα}^{A}(s)\end{flushright}

These words have been translated by Boethius thus:\textsuperscript{165}

\begin{align*}
16^b & 26 \text{DE ORATIONE. - Oratio autem est vox significativa, cuibus} \\
& \text{partium aliquid significativum est separatum (ut dictio,} \\
& \text{non ut adfirmatio);} \\
\end{align*}

\begin{flushright}26 QUID SIT ORATIO SzGlNk: \textit{spatium tituli} Ch vox est transp. \\
Ch 27 ut dictio separatum transp. Ch post dictio versus erasus He \\
adfirmatio + vel negatio SzTnGlNkCs (C)\end{flushright}

Finally, Ackrill has translated Aristotle thus:\textsuperscript{166}

\begin{footnotesize}
\begin{enumerate}
\item \textsuperscript{164} Aristotelis Categoriae et liber de Interpretatione, L. Minio-Paluello (Ed.), Oxford 1949, p. 51.
\item \textsuperscript{165} AL II.1, 4. So too in both lemmata: \textit{in} Int. 26-28, p. 66; \textit{in} Int. 2, 18-20, p. 80.
\item \textsuperscript{166} Ackrill (1963), p. 45.
\end{enumerate}
\end{footnotesize}
16b 26. A sentence is a significant spoken sound some part of which is significant in separation — as an expression, not as an affirmation.

(iv.1) Ackrill's interpretation of \( \lambda \gamma \rho \sigma \)

The versions by Boethius and Ackrill of this passage of PeriH. can be considered as equivalent translations of Aristotle's definition of \( \lambda \gamma \rho \sigma \). However, as I will show, the same Greek produces two different interpretations of what Aristotle understood by \( \lambda \gamma \rho \sigma \). In other words, the difference between Ackrill and Boethius in respect of whether an indefinite name is or not \( \lambda \gamma \rho \sigma \) is due to different interpretations of 16b. 26-28. As is said above,167 Ackrill's reading of 16b. 26-28 entails that for counting a spoken sound as \( \lambda \gamma \rho \sigma \) it suffices that one of its parts, not every part, be separately significant.168

It is natural, then, that Ackrill thinks that there can be a \( \lambda \gamma \rho \sigma \) in an indefinite name, e.g. 'not-man', and foresees difficulties for Aristotle, since one of the parts of this expression is significant, namely, 'man'. So, as Ackrill takes it, 'not-man' satisfies the definition of phrase. However, Boethius' interpretation of Aristotle's definition of \( \lambda \gamma \rho \sigma \) will exclude this possibility.

(iv. 2) Boethius' interpretation of \( \lambda \gamma \rho \sigma \)

According to Boethius' interpretation of Aristotle's definition, a \( \lambda \gamma \rho \sigma \) is a spoken sound whose parts are significant in separation. Boethius' interpretation of these words of Aristotle excludes the possibility that some of the parts of a \( \lambda \gamma \rho \sigma \) be non-significant in separation, and he entails that the parts of a \( \lambda \gamma \rho \sigma \), or rather, its parts, must be significant.

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167 See above (iii) Indefinite name and \( \lambda \gamma \rho \sigma \), n. 14.
168 Ackrill's grounds for his translation in 16b. 26-8 are, of course, reasonable. He says that Aristotle means that 'some parts' of the \( \lambda \gamma \rho \sigma \) are significant, not 'every part', because one must think of "letters of words and the syllables of polysyllabic words are parts of the sentence-or-phrase without being independently significant parts." (cf. Ackrill (1963), p. 124).
Boethius' commentaries on Aristotle's definition of λόγος will dissipate any doubt about whether he has or has not taken the words of Aristotle in the way suggested, and at the same time, it will permit us to understand more clearly his earlier remarks on the syntactic nature of the indefinite names. According to his own words in the first commentary, an oratio differs from the name and verb because the part of an oratio signifies something separately.169

sed distat oratio his ex quibus ipsa effecta est id est nominibus atque verbis, quod eorum partes nihil extra designant, orationis vero pars aliquid separata significat.

That first remark entails not only that the parts of a name or a verb do not signify anything separately,170 but also that the parts

169 in Int. 2-5, p. 67.
170 So it is concluded by Aristotle immediately after (16b. 30-32): ἀλλ' ὡς ἢ τοῦ ἀνθρώπου συλλαβὴ μὲν οὐδὲ γὰρ ἐν τῷ μόνῳ τῷ χαμηλῶτερῳ, ἀλλὰ φωνὴ ἐστὶ νῦν μόνων. Boethius' commentary presents a complete account of the parts of names. This is as follows: (i) in the case of a single name it is clear that its parts (letters or syllables) do not signify anything (PeriH. 16b. 30). So Boethius (in Int. 29-3, pp. 47-8) remarks that in Socrates, which is a name significant in separation (quod disiunctum a tota conexione significat), its parts are not significant in separation: neque enim So neque cpa neque tes aliquid praeter nomen extra designant. The point is plain and Ackrill here agrees with Boethius. Now, Aristotle also indicates that (ii) certain blocks of letters are not significant in a single name, as 'ice' in 'mice'. Aristotle only points out that here 'ice' is simply a spoken sound (οὐδὲ γὰρ ἐν τῷ μόνῳ τῷ χαμηλῶτερῳ, ἀλλὰ φωνὴ ἐστὶ νῦν μόνων, 16b. 31-32). But here Ackrill differs from Boethius in explaining the point: while for Ackrill 'ice' is by itself significant, "but it does not carry that significance when it forms a part of 'mice" (1963, p. 116), for Boethius 'ice' is not significant at all. Boethius explains that 'ice' is a part of the name, it signifies together (consignificat) with the name, but it does not signify as a part of the phrase (i.e. as a dictio). In general, Boethius remarks that the particles or blocks of letters, and even a name in a complex name, are not significant per se, because what is significant per se composes the phrase, that is, the name and the verb: "sed quod aio dictionem esse id quod dicimus homo, idcirco dictio est quoniam per se significat. syllaba vero eius nominis quod est homo, quoniam nihil designat, non est dictio (hoc est sed non una hominis syllaba) vel si videatur quidem significare, pars tamen sit nominis et consignificet in nomine, in tota oratione nihil significat. neque pars orationis est. quod per hoc dixit quod ait: nec in eo quod est sorex rex significat, sed vox est nunc sola nihil significat. unde probatur huiusmodi particulas non esse dictiones." (in Int. 2, 24-10, pp. 91-2). Accordingly, (iii) in the case of complex names Aristotle himself at 16a. 21-26 explains that ἵππος in καθαίρεται does not signify anything in its own right (οὐδὲν καὶ ἦν αὐτὸ σημαίνει) as it does in the phrase καθαίρεται ἵππος. So also Boethius (in Int. 14-17, p. 49): "in his vero quae conposita sunt, quoniam ex duobus significativis in
of an oratio must be significant parts, that is, must be names and verbs, and therefore that every oratio will be significant, because it is composed of names and verbs.\(^1\)

Boethius calls this interpretation of the definition of λόγος the integra definitio orationis,\(^2\) and after determining how these parts (the name and the verb) are significant separately,\(^3\) he expresses it as follows:\(^4\)

oratio est vox significativa secundum placitum, cuius partes aliquid extra significant.

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\(^1\) cf. the sense of the expression integra definitio in Part I, 1.2, (vi.3) The 'integra nominis definitio'; and also 2.1, (i) Aristotle's definition of verb and his intention.

\(^2\) cf. Aristotle's definition of verb and his intention.

\(^3\) namely: (i) ut dictio, non ut affirmatio, i.e. in a phrase, e.g. 'a man is an animal', the name and the verb are significant as name and verb, (i.e. they are not true or false). Aristotle says 'not as an affirmation', for in a non-simple phrase, like 'if it is day, there is light', 'it is day' is an affirmation (and so true or false): in Int. 9-22, pp. 67-69. Similarly, (ii) non sicut instrumentum, sed secundum placitum, means 'not by nature as the eyes are natural instruments of sight, but by convention: in Int. 1-20, p. 70.

\(^4\) Boethius' doctrine of the parts of the name (i.e. a spoken sound is significant by itself only if it is significant in the phrase) complements his observations concerning the nature of the phrase. It also seems to provide a key to answer the four questions that Ackrill has presented in his comments on this topic (cf. Ackrill (1963), pp. 115-7). Similarly, it seems to complement the passage at in Int. 2, 23-5, pp. 145, to which many scholars have drawn attention as a basis of the medieval account of syncategorematic terms. (See here P. V. Spade, The semantics of terms, in The Cambridge History of Later Medieval Philosophy, Cambridge 1982, pp. 190-1; see also here N. Kretzmann, Syncategoremata, exponibilia, sophismata, pp. 211-214; and also, G. Nuchelmans, (1973), p. 124).
The *integra definitio orationis* is confirmed and explained further in the second commentary. Here, accordingly, the starting-point is that every *oratio* is significant.\(^{175}\) On this principle, every case that can be included as an *oratio* is considered.\(^{176}\)

Videtur *Aristoteles* illas quoque voces orationes putare, quaecumque vel ex nominibus vel ex verbis constent, non tamen integrum colligant intellectum, ut sunt et *Socrates* et *Plato*, et *ambulare* et *dicere*. haec enim quamquam pleni intellectus non sint, verbis tamen et nominibus conponuntur.

Boethius explains that Aristotle also includes under the definition of *oratio* spoken sounds (*voces*) composed of names and verbs which do not contain a complete sense (*integrum intellectus*), that is, those in which there are present either names with names, or verbs with verbs, like for example, 'Plato and Aristotle' and 'to walk and say'. According to him, although there is not a complete sense in these expressions, they are nevertheless compounded by names and verbs which are significant by themselves, and therefore, a significant *oratio* is present in both cases. To ground this position, Boethius follows the definition of *oratio* (*λόγος*) that, as he thinks, Aristotle gave. At this point it is clear that he interprets the literal translation of *λόγος* which he gave, since according to him, Aristotle in fact says that "an *oratio* is a significant spoken sound (*vocem significativam*) whose parts signify something separately, 'they signify', Aristotle says, not 'they signify together' (*consignificant*), as with a name and a verb."\(^{177}\)

\(^{175}\) In the second commentary, Boethius accepts — already from his introductory words — that every *oratio* either perfect (or that with *plenus intellectus*), or imperfect (or that in which something still needs to be heard for a full sense) is significant. Thus: "orationem vero aliae sunt perfectae, aliae imperfectae. perfectae sunt ex quibus plene id quod dicitur valet intelligi, imperfectae in quibus aliquid adhuc plenius animus exspectat audire, ut est *Socrates* cum *Platone*. nullo enim addito orationis intellectus pendet ac titubat et auditor aliquid ultra exspectat audire." (in *Int.*, 2, 30-5, pp. 8-9); cf. also in *Int.*, 2, 2, p. 16; 7, p. 81; 11, p. 95.

\(^{176}\) in *Int.*, 2, 28-32, pp. 80-81.

\(^{177}\) in *Int.*, 2, 3-6, p. 81.
Accordingly, Boethius accepts the presence of an *oratio* even in expressions like 'equus ferus',\(^{178}\) that is, an incomplete phrase (*oratio inperfecta*), because in such expressions there is a spoken sound compounded by names (*vox conposita ex nominibus*), and although there is not a complete sense (*plenum sententiam*), its parts signify —contrarily to the case of names— something separately.\(^{179}\) Even more, Boethius observes that here Aristotle does not mention some exceptions to his definition, but that every *oratio inperfecta* must be considered as an *oratio*,\(^{180}\) because, as he explains, the definition of *oratio*, (i.e. a spoken sound whose parts signify something in separation and *per se*,) includes phrases whose sense is incomplete.\(^{181}\)

These explanations of the notion of *oratio* show unquestionably that Boethius and Ackrill have interpreted in a different way the definition of *λόγος* given by Aristotle at *PeriH.* 16b. 26-28. While for Ackrill a not-single word is a sufficient condition for being a phrase, for Boethius this is not enough, because the phrase's parts always are significant parts by themselves, and in an indefinite name there is always present a non-significant part, which is 'not', and only one name, which signifies a definite and significant substance. That explains, too, why Boethius, in his first and second commentary, insists on the occurrence of this negative particle as the reason for not counting

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\(^{178}\) To illustrate this kind of *oratio*, Boethius takes the example that Aristotle himself gives at 16a. 21-2: καλὸς ἄρμος. So Boethius' example, i.e. *equus ferus*, would correspond to Aristotle's term. Boethius' translation says: in 'equiferus' enim 'ferus' nihil per se significat, quemadmodum in oratione quae est 'equus ferus'. (AL II.1, p. 6: ad 16a. 21-2).

\(^{179}\) in *Int.* 2, 6-11, p. 81. docet autem illa quoque res eum etiam imperfectas, conpositas tamen ex nominibus ac verbis voces orationes dicere, quod ait, cum de nomine loqueretur, in eo quod est *equiferus* nihil significare *ferus*, *quamadmodum in oratione quae est equus ferus*.

\(^{180}\) in *Int.* 2, 15-18, p. 81. nam si secundum Aristotelem *equus ferus* oratio est, cur non aliae quoque quae nominibus verbisque constent, quamquam sint imperfectae sententiae, tamen orationes esse videantur?

\(^{181}\) in *Int.* 2, 31-2, pp. 81-82. quod si hoc est, et vox cuius partium aliquid separatum et per se significat, licet sit imperfectae sententiae, orationem tamen esse manifestum est.
an indefinite name as an *oratio*, or even as an *oratio imperfecta*, like 'equus ferus', because in 'not-man' there is only one name and every *oratio* is the compound of at least two significant elements.

(iv. 3) *The position of τι at 16b. 26*

The fact that Ackrill by himself has recognised that Aristotle probably could have seen in an indefinite name a name, and not a phrase,\(^\text{182}\) (i.e. not a not-single word) should not persuade us that Ackrill himself is not sure of his objection or that he reconsiders it, because the solution that he presents makes a distinction from a semantic aspect,\(^\text{183}\) but syntactically speaking, it maintains entirely his objection that Aristotle was unsuccessful in distinguishing an indefinite name from a phrase.

Ackrill's point is that, one way or another, the passage where Aristotle defines λόγος is ambiguous, and that this fact entails the question of whether an indefinite name could be, after all, a term not well-defined within the theoretical context of *PeriH*. Certainly, a proof of this ambiguity is already the fact that Boethius and Ackrill have translated Aristotle's definition of λόγος in the same manner, but they have interpreted it quite differently. The identical Greek seems to allow two different readings: (i) to take τι with τῶν μερῶν, which seems to be the alternative of Ackrill, and (ii) τι with σημαντικῶν, which seems to produce the alternative of Boethius' interpretation (i.e. the *integra definitio orationis*).

The ambiguity of the definition is due, as it seems, to the fact that there is no grammatical reason to think that one of these two interpretations should impose over the other. In fact, if one considers that Boethius reads from the same Greek as Ackrill (and there is no reason to think that Boethius had a different text for

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\(^\text{182}\) "Probably Aristotle thinks of it [an indefinite name] as a single word but thinks that it fails to name anything in the way in which an ordinary name does it; it stands for no definite kind of thing and can be applied to a wildly various range of objects. Cp. 19b. 19: 'for what it signifies is in a way one thing, but indefinite'". Cf. Ackrill (1963), pp. 117-118.

\(^\text{183}\) "Cp. 19b. 19: 'for what an indefinite name signifies is in a way one thing, but indefinite". Ackrill (1963), p. 118.
16b. 26-28), then, although it is clear that (i) 'this of which some of its parts are x', and (ii) 'this of which its parts are x' are not equivalent expressions, the position of τι in 16b. 26 is completely ambiguous, and one can correctly take τι with τῶν μερῶν or with σημαντικών. Besides, one is not obliged to take τι with τῶν μερῶν as *partitive genitive*, since a partitive genitive does not always depend on an indefinite pronoun (τι),\(^{184}\) and τι agrees perfectly well with σημαντικών. On the other hand, the fact that the modern translations on this point are divided into two groups is also a sign of this ambiguity: one group seems to take τι with σημαντικών, and the other takes τι with τῶν μερῶν.\(^{185}\)

It is worth noting that Aristotle seems to be unaware of this ambiguity when he defines λόγος at 16b. 26, for he does not consider it necessary to distinguish the notion of indefinite name from the definition of λόγος: he indeed does nothing to avoid a collision of these elements. It would be reasonable to expect that if he was thinking of λόγος in its widest sense (i.e. as a not-single word), he avoided an ambiguity. Aristotle's apparent unawareness of a conflict at 16b. 26-28 gives grounds for believing that Boethius' commentary interprets more faithfully than Ackrill Aristotle's definition of λόγος, but the point is not decided by this argument.

(iv. 4) *Ammonius' interpretation of λόγος*

An important element, and also more decisive support for Boethius' interpretation, comes from the commentary on *PeriH.* by Ammonius,\(^{186}\) who takes the definition as Ackrill does, but interprets it like Boethius. First of all, Ammonius' lemmata establishes the same text as our modern editions in respect of this passage. Ammonius reads λόγος δὲ ἐστὶ φωνή σημαντική, ὡς τῶν μερῶν

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\(^{185}\) For example, the translation of J. Tricot in *Aristote Organon*, vol i, p. 83, Paris 1946, says: "Le discours est un son vocal [possédant une signification conventionnelle], et dont chaque partie, prise séparément, présente une signification comme énumération et non comme affirmation [ou negation]." Clearly, J. Tricot has taken τι with σημαντικών, as Boethius. The expression 'dort chaque partie' reveals this similarity.

"The expression 'some part of which is significant in separation' applies only to the articulated spoken sound which exists according to our convention. And to have some significant part distinguishes the phrase (λόγος) from its perfect parts, the name and the verb, because none of those has some significant part, but some parts of the phrase, namely, the names and the verbs, are significant. And it is not said without qualification that the parts of the phrase are significant when they are taken by themselves, but 'some part of which', because of the negative particle in negations, and the articles and the conjunctions, as when I say 'the man is an animal', or 'while Socrates sits, Plato walks': these parts, in fact, are called parts of the phrase in a rather general sense (παρα γὰρ μέρη μὲν κοινότερον λέγεται τοῦ λόγου), but considered by themselves they are non-significant. And not only these parts, but also the parts of the names and the verbs, which also seem no less to be parts of the phrase which is formed by the name and the verb, are completely non-significant, as is often said."

In this passage, Ammonius seems to explain what is the meaning of what Boethius calls integra definitio orationis. He establishes that some of the parts of the λόγος are significant, i.e. the name and the verb, and the others (like the articles, the negative particle, etc.) are not. But the point is that these non-significant parts are said to be parts of the phrase in a rather general or non-strict sense (παρά γὰρ μέρη μὲν κοινότερον λέγεται τοῦ λόγου), but they are not significant by themselves. Thus, one can infer, if the

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187 cf. Ammonius, in Int. p. 58, 4-5.
188 Ammonius, in Int. p. 58, 24-p. 59, 8. τὸ γὰρ ὑδὲν τῶν μερῶν τοις σημαντικοῖς ἐστι κεχωρισμένον, μόνη πρόσετε τῇ ἐνάρασι φωνῇ κατὰ τὴν ἑμιτέραν συνθήκην ὑφισταμένην, αὐτῷ δὲ τὸ ἔχειν τοις σημαντικοῖς μέροις διαφέρει οἷς λόγοι τῶν αὐτοτελῶν αὐτοῦ μερῶν, ὑπόμοιος τε καὶ δήματος, διότι ἐπ' ἐκείνων οὐδετέρῳ ἢν τῷ μέρος σημαντικοῦ, τῷ δὲ λόγῳ μέρη πυκά, τὰ ὑπόμοια φημ debunk τα δήματα, σημαντικά ἐστιν. οἷς ἀπὸ γὰρ δὲ ἑστὶν τὰ μέρη τοῦ λόγου σημαντικά ἐνα καὶ ἑστὶν λαμβανόμεθα, ἀλλὰ πῶν μερῶν τι, αὐτὸ τὸ ἐν ταῖς ἀποφασαμένοις ἁρμάτων μόρον καὶ τὰ ἄρθρα καὶ τοὺς συνδέσμους, διὸν ὅταν ἐπὶ τῶν ἀναρριψάτων ἔφος ἐστὶν ἡ σωφροσύνη μὲν κάθεται, Πλατών ὃς περιπατεῖ ταῖς γὰρ μέρη μὲν κοινότερον λέγεται τοῦ λόγου, ἐστὶ δὲ ἁσμα καὶ ἑστὶαθανάτωμεν, καὶ ὅταν ταῖς μονάς, ἀλλὰ καὶ τὰ μέρη τῶν ὑπόμοιων καὶ τῶν δήματων, οὐδὲν ἤττον εἶναι δοκιμία μέρη καὶ τοῦ ἐν αὐτῶν συγκειμένων λόγου, παντελῶς ἐνα ἁσμα, καθάπερ ἑστὶατοι πολλάκις. (The expression "as is often said" can refer to p. 32, 25).
phrase is considered strictly, its parts are only the name and the verb, because they are significant by themselves (καθ’ εαυτό). Therefore, Ammonius approaches this passage as Ackrill does, that is, as containing a partitive genitive; and Ammonius even gives the same reasons for doing so: because some parts of the λόγος are significant (λόγου μέρη τύχα) while none of the parts of the name and verb is. Despite that, Ammonius takes care in recognizing two different levels of consideration in this distinction, because strictly speaking the real and complete parts of the phrase (he implies: μέρος αὐτοτέλον τοῦ λόγου) are only the name and the verb.\(^{189}\)

Ammonius considers this explanation of the expression 'some part of which' in Aristotle's definition of λόγος to be sufficient, because in his introductory remarks he has expressed his agreement with the thesis that Aristotle in PeriH. states that the name and the verb are the elements necessary to generate the simple (or categorical) proposition (ἡ ἀπλὴ ἀπόφασις),\(^{190}\) and that he does not consider it convenient to call, in a proper sense, that which is neither name nor verb 'parts of the phrase' (οὐδὲ κυρίως ἄξον μέρη τοῦ λόγου καλείν),\(^{191}\) just as the accessory parts of a ship are not called, in a proper sense, 'its parts', but the indispensable ones.\(^{192}\) Accordingly, Ammonius maintains here that this is why Aristotle says that the categorical proposition (λόγος ἀποφαντικός) is always composed of name and verb (συντίθεσθαι ἐς ὄνοματος καὶ ρήματος), and that these are the parts into which the proposition is resolved (διαλύσθαι).\(^{193}\) The thesis to which Ammonius adheres is

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\(^{189}\)Ibid., p. 58, 27.

\(^{190}\)cf. Ammonius, in Int. p. 11, 1-7.

\(^{191}\) Ammonius, in Int. p. 12, 20-24. ("But the parts of the phrase which are found neither in the place of the name nor in the place of the verb, even though they are posited in another way in propositions, and signify that the predicate belongs or does not belong to the subject, or when, how, or how often, or that they have any other relation to one another, he does not consider it convenient to call 'parts of the phrase' properly speaking (οὐδὲ κυρίως ἄξον μέρη τοῦ λόγου καλείν)."

\(^{192}\) Ibid., p. 12, 25-30.

\(^{193}\)Ibid., p. 14, 18-20. In order to ground his position, Ammonius also adds the observation that the denominations (ἡ προσηγορία) of the other parts of the phrase (the pronoun, the participle, the article, the prepositions, adverbs and conjunctions) relate to those of the name and the verb. So 'pronoun', for example, signifies literally in Greek 'instead of the name' ἀντωνόμα, etc. See the remaining examples in D. Blank's translation,
admittedly a Peripatetic one and, in accordance with it, he suggests that Aristotle does not mean 'some parts of the phrase are significant' because there are other parts of the phrase that are non-significant, but that Aristotle sometimes seems to admit (συγχωρεθείς δοκώντα) the non-significant ones as parts of the phrase, but this happens when he speaks in a rather general way (κοινώτερον).


194 Dionysius Thrax Scholia, p. 515, 19 ff. in GG I, 3, says that the Peripatetics are said to have maintained this doctrine and the simile of the ship: οἱ Περιπατητικοὶ διό μέρη λόγου ἐσοβείσαν εύλα, δόκησα καὶ ἥμα: τὰ δὲ ἄλλα οὐ λέγομεν εὐλα, μέρη λόγου, ἀλλὰ ἔνεκεν συνδέσεως καὶ κόλλησι παραλαμβάνεται, ἑσπερ γὰρ ἐν τοῖς πλοίοις μέρη λέγομεν εὐλα τοὺς τοίχους καὶ τὰ πηθώλα καὶ τὸ ὀρμενόν, τὴν δὲ πίσσαν, στυπέων, ἡλίου οὐ λέγομεν εὐλα μέρη τοῦ πλοίου, ἀλλὰ ένεκεν συνδέσεως καὶ κόλλης παραλαμβάνεται, οὕτω τὸ διόμα καὶ τὸ ρήμα μέρη ἐστὶ τοῦ λόγου, τὰ δὲ ἄλλα οὐ. Also Priscianus Institutiones Grammaticae (M. Hertz, Ed.), 1961, in Grammatici Latini (=GL), XI, p. 551) recounts in detail the simile of the ship and its parts. Here his report shows that the parts of the parts of the λόγος was a point of discussion between philosophers and grammarians, which is also suggested by Ammonius (in Int. p. 11, 1-7), and by the opinion that the Stoics maintained on this matter, namely, that the parts of the λόγος are five (cf. ibid., p. 517). According to S. Ebbesen (Porphyry's legacy to logic: a reconstruction, in Aristotle Transformed, R. Sorabji (Ed.), London 1990, pp. 156-7, and n. 42), "The glue-and-bolt simile was known as Peripatetic to Apollonius Dyscolus, Priscianus and in all probability to his source, the first-century BC grammarian Trypho as well." Ebbesen has also suggested that "Porphyry in his lost commentaries on the Categories and de Interpretatione no doubt used a time-honoured simile, comparing such connectives to glue and to the bolts and tar that hold the planks of a ship together." (Ibid, pp. 156-7). But perhaps not only the simile of the ship and its parts can confirm this Peripatetic doctrine. G. Nuchelmans (1973), p. 93, has also drawn attention to the fact that this radical attitude of refusing to admit other parts of the phrase than the name and the verb is also present in Dionysius Thrax (Scholia p. 516, 28-36), here the name and the verb are compared to the brain and the heart in the human body, and the other parts of the phrase to such parts as a hand or a foot: a man can live without a hand, but not without brain and heart. Similarly, Apollonius Dyscolus (De Syntaxi, p. 17, in GG, II, 2) demonstrates by means of the phrase "The same man, having slipped, fell down today" that name and verb are indispensable for the αὐτοτέλεια of the phrase, but the other parts are not. Nuchelmans (ibid., p. 93) has also drawn attention to Priscianus (Inst. Gramm., p. 54, 13-5), where some dialectici (=Peripatetics) are said to have maintained that only the name and the verb make a complete phrase (hae solae etiam per se coniunctae plenam faciunt orationem, alias partes syncategoremata, hoc est consignificantia appellabant). A passage in Stephanus (in Int. p. 43, 27) is worth mentioning, because here it is said that some πολαὶ maintained that the parts of the phrase (λόγος) are names (here he maintains the view that verbs are names).

195 Ibid., p. 15, 8-13.
It is clear that Boethius' interpretation of phrase as "vox significativa cuius partes (...)" agrees with Alexander of Aphrodisias, Porphyry and Syrianus, because when Boethius discusses the sense of Aristotle's expression "ut dictio, non ut affirmatio" (in the phrase's definition), he ascribes to Alexander (cf. in Int. 2, 21-23, p. 82 et passim), Porphyry (in Int. 2, 12-13, p. 87), and Syrianus (in Int. 2, 6-8, p. 88), the reading that he asserts as Aristotle's definition of phrase, namely, "vox significativa cuius partes (...)". So "all the commentators and philosophers" (cf. in Int. 2, 7, p. 16) agree with or, perhaps better, ground Boethius' interpretation of Aristotle's definition of λόγος, despite their differences in interpreting (in the same definition) "ut dictio, non ut affirmatio". Stephanus (in Int., p. 15, 14-p. 16, 18) does not especially comment on the sense of the expression in question, but the totality of his arguments clearly assumes that the parts of the phrase (λόγος) are only the name and the verb: (i) because the characteristic of having significant parts distinguishes the phrase from the name and the verb: their parts do not signify separately (p. 15, 14-23). And even, (ii) when he attempts to show that a phrase signifies by convention (θεσει) and not by nature (φύσει), he assumes that the parts of the phrase (λόγος) are the name and the verb: "Aristotle has shown by many reasons that the parts of the phrase, namely," —Stephanus explains—"the name and the verb, are by convention, and if the parts are by convention, it is clear that the whole is by convention." (ἐὰν πολλον γὰρ ἀποδείξειται τὰ μέρη αὐτοῦ, ὁ ἄνωματα φημι καὶ τὰ ὑμετάρτα θέσει εἶναι, εἶ δὲ τὰ μέρη θέσει, ὁτι οὖν ὅτι τὸ διὸν, (p. 16, 12-15). And even more, (iii) when he resumes Aristotle's definition of λόγος, in order to introduce that distinguishes the phrase from the proposition (ἀντιδιατέλει τοι αποφασισμένον λόγον ἐκ τῶν λόγων), he says that the parts of the phrase are something significant, and then he takes this definition as Boethius' interpretation does, that is, ti with σημαντικῶν: ἕκα γὰρ καὶ φωνὴ ἐστι καὶ σημαντικὴ καὶ τὸ μέρος κεχωρισμένον σημαντικῶν πυὸς ἐστιν. (p. 16, 16-18). The Anonymous Commentary accepts basically the assertions that Ammonius

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consistent interpretation inclined to see that all the parts of the phrase are significant parts.

(v) Boethius' position: the indefinite name is a well-defined term

The real problem that Ackrill introduces is whether Aristotle presents a sound relationship between the indefinite name and the phrase, but Boethius' and Ammonius' commentary seem to argue convincingly in favour of this compatibility. Accordingly, it seems possible to advance the idea that Boethius' commentary sustains a coherent and well-founded position on the nature of the indefinite name.

This follows not only from the passages of his commentary that we have analysed earlier, but also from every passage where Boethius refers to the nature of the indefinite name: here, the syntactical existence of an indefinite name seems to be based on a clear distinction of the elements that form this kind of name, and for that reason Boethius in many passages related to the nature of the indefinite name says that an indefinite name is a definite name together with the negative particle. In this sense, a short piece of syntactic reflection is developed by Boethius later in his second commentary.197

makes on the point of the definition of phrase. The commentary establishes some parts as significant, and others as non-significant. There is not a specification of these parts, but its general sense is, as in Ammonius, that Aristotle introduces this characteristic (i.e. ἡ τῶν μερῶν τι σημαντικῶν ἐστὶν κεχωρισμένον) because Aristotle means that not every part of the phrase is significant: only the name and the verb are significant, but not the syllables. (σημαντικῶν ἐστιν πάντα σημαντικά ἐστιν ἄλλα τινα, τὸ τε δύναμα καὶ τὸ ῥῆμα, ἀλλὰ κελαρία ὀνοματαμφότερον). There are no further elements implying the distinction of two levels of consideration introduced by Ammonius (i.e. 'properly speaking': κυρίως, and 'in a rather general sense': κοινωτέρον). Cf. Anonymous Commentary on Aristotle's De Interpretatione, p. 139-16, (Tarán, 1978).
197 in Int. 2, 22-4, pp. 260-1.
praeter verbum esse enuntiatio non potest, tamquam si diceret: nemo arbitretur infinitum nomen esse negationem nec nomen adfirmationem.

The context of this passage is given by the question of how to recognise an indefinite name when it occurs in a proposition, for example 'not-man' into 'a not-man walks'. According to Boethius, Aristotle says and systematically reiterates that there is no proposition without a verb in order to avoid the error of thinking that expressions like 'not-man' are negations or 'man', affirmations. In this passage, Boethius confirms his position that an indefinite name is syntactically determined by a definite name with a negative particle, exactly as occurs in the case of 'homo' and 'non' in the expression 'non homo'. Besides, in all relevant passages about the nature of the indefinite name, he says that the negative particle is 'non'.

(v. 1) The treatises on the categorical syllogism

The heading 'The treatises on the categorical syllogism' is the generic name used here to refer to the monographs Introductio ad syllogismos categoricos (ISC) and De syllogismo Categorico (DSC). The denomination follows J. Shiel, who calls these two mentioned monographs plus De Syllogismo Hypothetico. "The treatises on the syllogism" Admittedly, both the ISC and DSC present a summarised view of the subjects treated in PeriH. serving as an introduction to the doctrine of the categorical

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198 in Int. 2, 2-3, p. 261. praeter verbum enim affirmatio et negatio nulla potest unquam ratione constitui. And, in Int. 2, 15-18, p. 260: sed praeter haec [i.e. verba] aut praeter idem valentia, propositione nulla est. recte igitur dictum est praeter verba praedicativam propositionem non posse constitui.

199 in Int. 2, 19-20, p. 261: cui addita non particula totam qualitatem propositionis ex affirmativa in negativa commutet. It is worth noticing that at PeriH., 20a. 32 Aristotle uses the negative adverb μὴ to constitute examples of names which are indefinite.

200 cf. PL 64, pp. 761-832.

syllogisms developed by Aristotle in the Analytics.\textsuperscript{202} There seems to be agreement on the relation of both treatises,\textsuperscript{203} but whether they are or not the summary (breviarium) that Boethius promised at in \textit{Int.} 2, is still a matter of discussion.\textsuperscript{204}

In respect of our point, however, the theoretical agreement between the \textit{Treatises on the categorical syllogism} and the twin commentary on \textit{PeriH.} is patent. The material of \textit{DSC} confirms a perfectly clear and articulated distinction between phrase and indefinite name. Here, the nature of the indefinite name is


\textsuperscript{204} At \textit{in Int.} 2, 8-15, p. 251, Boethius says that he will do a summary of \textit{PeriH.} after the twin commentary on this book of Aristotle: huius enim libri post has gminas commentiones quoddam breviarium facimus, (...). Shiel (1990), p. 365, thinks that this breviarium announced here by Boethius corresponds to \textit{ISC} and \textit{DSC}. Shiel (\textit{ibid.}, p. 365) seems to ground convincingly his opinion based on the reasons that Porphyry himself seems to have written such an introduction (something that J. Bidez, as Shiel points out, had already noticed in his \textit{Vie de Porphyre}, Gand/Leipzig, 1913, p. 66), and that in these treatises "we find, as before, the views of the ancients (Theophrastus and Eudemus) followed by Porphyry's criticism". De Rijk (1964), p. 31, accepts this view, and even, he adds, "As a matter of fact Porphyre wrote such an introduction, as appears from Boethius' words \textit{In Isag.} I, 15, 7-13", where "he [Boethius] expressly mentions a work by Porphyry on categorical syllogisms". However, De Rijk (\textit{ibid.}, p. 38) rather thinks that "the breviarium promised by Boethius (...) is lost or —more likely because of the late date of \textit{Perihermeneias} II— that Boethius missed the opportunity to redeem his promise." De Rijk (\textit{ibid.}, p. 37) grounds his view on (i) his terminological inquiry, which would show that \textit{DSC} is earlier than \textit{in Int.} and \textit{in Int.} 2, and also on (ii) the fact that Boethius apparently promises a breviary on Aristotle' \textit{περὶ ἑρμηνείας} (\textit{huius enim libri}, p. 251, 8), not on the Stagirite's \textit{Prior Analytics}" (... "and both the De \textit{syll. categ.} and the \textit{Introductio} are meant by the author as an introduction to the doctrine of categorical propositions and \textit{syllogisms}" (e.g. at \textit{ISC}, p. 762 C. 11-D.2).
reconsidered and, accordingly, stated that there are certain spoken sounds (*voces*) which are significant (*designativae*) and according to convention (*secundum placitum*) and without time, like 'not-man', whose nature remains doubtful because its inclusion to the other elements defined in *PeriH.* is uncertain.\(^{205}\)

Sed quoniam sunt quaedam voces quae et designativae sunt, et secundum placitum et sine tempore, quarum dubia sit natura, ut est non homo —hoc enim significat quiddam et secundum placitum, impositum est enim— sed dubium est cui subdi possit, (...)).

Consequently, *DSC* rejects systematically the view that an indefinite name is a name,\(^{206}\) a verb\(^{207}\) and, what is more interesting for our purpose here, a phrase (*oratio*). *DSC* details its explanation of why an indefinite name is not a phrase through an argument following the tendency already commented on earlier: every phrase consists of names and verbs, and an indefinite name is formed of neither a name nor a verb.\(^{208}\) Accordingly, *DSC* confirms the view that the phrase's parts are always significant parts because they are the name and the verb.\(^{209}\)

Oratio est vox designativa ad placitum, cuius partes aliquid extra significant, ut dictio non ut affirmatio.

The treatise gives certain additional argument for grounding this difference: names and verbs are called *terms* by the logicians (*a dialecticis*) and the division of the phrase's parts must be made up to this point, and not up to the syllabes of names and verbs, because these are not significant.\(^{210}\)

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\(^{205}\)cf. *PL* 64, p. 795, C. 1-6. (Hyphens have been supplied in our reading).

\(^{206}\) *ibid.*, p. 795, C. 6-8. nomini enim non potest [subdi], omne enim nomen significat aliquid definitum, non homo autem quod definitum est perimit.

\(^{207}\) *ibid.*, p. 795, C. 12-14. sed multo magis esse non potest verbum, omne enim verbum cum tempore est, non homo vero sine tempore est.

\(^{208}\) *ibid.*, p. 795, C. 9-12. oratio vero dici non potest, omnis enim oratio ex nominibus et verbis constat, non homo autem neque ex nominibus constat neque ex verbis.

\(^{209}\) *ibid.*, p. 797, A. 3-5.

\(^{210}\) *ibid.*, p. 797, A. 10-15.
Termini vero orationis a dialecticis nominantur nomina et verba. Termini vero dicti sunt, quod usque ad verbum et nomen resolutio partium orationis fiat, ne quis orationem usque ad syllabas nomen vel verborum tentet resolvere, quae iam designativae non sunt.

In ISC, name, complex name, phrase, and the rest of the elements are defined in the same manner as it is done in the first and second commentary on PeriH. And even, in a way that recalls Ammonius' argument, it is maintained that the parts of a phrase are significant parts separately from the complete phrase, in contrast with names and verbs, whose parts are not.\(^\text{211}\) This shows that in ISC the possibility of taking an indefinite name as a phrase is also excluded and that, in general, Boethius, or the material that he had at his disposal, maintains a position consistent on the syntactic nature of the indefinite name.\(^\text{212}\)

Non homo enim vox seiuncta est ex negativa particula et homine, quae in eodem nomine separata nihil designat, significat enim non homo, vel equum, vel canem, vel quidquid (ut dictum est) non homo non fuerit. Sed quae est negativa, neque hominis, neque equi, neque ullius substantia significationem tenet. Item homo neque canem, neque quidquid homo non fuerit, significare potest; quocirca in ea voce quae est non homo partes nihil separatae significant eius rei quam tota vocis compositio designabat. Atque ideo nec in oratione quidem poni potest.

In this first passage, it is stated again that an indefinite name is constituted by a negative particle and a name. That is what occurs in 'not-man', in which 'not' is a negative particle and 'man' the name. The parts of an indefinite name, argues the text, do not signify separately what they signify in the name itself, and this is proved by analysing each part of this expression by itself. First, the complete expression 'not-man' signifies everything which is


\(^{212}\) PL 64, p. 764, B. 13-C. 9.
not a man, that is a horse, a dog, etc., as it has been stated in the preceding commentary on the *Perih.* However, in the negative particle there is no signification at all, that is, neither that of 'man', nor, in general, any signification which can be found in a substance. As to the other part, i.e. 'man', it is a significant substance, but it signifies, in general, nothing but man. The result of this analysis is that the signification of 'not-man' is neither in 'not', nor in 'man'; and therefore, the parts of the complete expression do not signify what is signified by the total expression which constitutes an indefinite name. However, if a phrase is defined by the difference of having significant parts when they are analysed separately, then an indefinite name cannot be a phrase. In other words, the definitions of indefinite name and phrase are independent and completely compatible. The second argument presented by Boethius confirms this analysis.\(^{214}\)

Si quis enim eam vocem quae est non homo orationem concedat, nihil aliud eam esse fatebitur quam negationem. Negatio autem omnis vera vel falsa est. Qui autem dicit non homo, neque veritatem nuntiat, neque mendacium. Praeterea ab omni negatione si quis negativum seungat adverbium, affirmatio relinquetur; ab ea autem voce quae est non homo, si quis auferit id quod est negativum adverbium, homo relinquetur, quod nondum est affirmatio. Quocirca si non homo haec vox negatio esse non potest, nihil autem aliud esse videretur si esset oratio, concludendum est negationem iunctam cum nomine orationem esse non posse.

This argument, which reasons *per absurdum*, had not been introduced before. It is worth noting that the same argument is present in Ammonius\(^ {215}\) and the *Anonymous Commentary*\(^ {216}\). According to the text, an indefinite name (e.g. 'not-man') is not a

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\(^{213}\) The signification of an indefinite name will be treated in detail in the next chapter. As to this argument, it suffices to count the signification of an indefinite name as everything which is not signified by the respective (definite) name.

\(^{214}\) *PL* 64, p. 764, C. 9-D. 5.


negation, because if admittedly every negative adverb\textsuperscript{217} attached to a negation transforms the negation into an affirmation, then the act of taking the negative adverb away from the indefinite name 'not-man' should transform it into an affirmation. But actually what results from this act is a name, namely, 'man', which is not an affirmation, but a name. Therefore, it must be concluded, continues the commentary, that 'not-man' is not a negation. Thus, since it is demonstrated that an indefinite name is not a negation, nor an affirmation either, it must be concluded finally that an indefinite name is not a phrase.

These two passages of \textit{ISC} introduce a general demonstration that an indefinite name is not a phrase in its full sense, because in the first argument the possibility of seeing in an indefinite name a phrase (\textit{oratio}) is discarded, and even an imperfect phrase (\textit{oratio imperfecta}), since in every indefinite name its parts cannot signify what they signify in the complete compound. And in the second argument, it is demonstrated that an indefinite name is neither a negation nor an affirmation. And given that according to \textit{in Int.} every phrase is either a perfect phrase (i.e. affirmation and negation), or an imperfect phrase,\textsuperscript{218} then what the text of \textit{ISC} does here is to discard absolutely the possibility of counting an indefinite name as a phrase in its more comprehensive sense.

Thus, the results show that the \textit{Treatises on categorical syllogism} establishes together with the first and second commentary on \textit{PeriH.} a consistent interpretation of the syntactic nature of indefinite names. This is patent in the fact that the

\textsuperscript{217} To call the negative particle 'negative adverb' (\textit{negativum adverbiurn}), like here, is not an exception to the usage of the first and second commentary on \textit{PeriH.} (cf. e.g. \textit{in Int.} 2, 16 ff., p. 145). However, this is the first time that the negative particle forming an indefinite name is called 'negativum adverbiurn'. Probably, the fact does not have any significance, unless there is terminological difference between \textit{in Int.} and the 'Treatises on the categorical syllogism'. Surely, this difference could also be added to those detected by L.M. De Rijk. See this chronological inquiry into Boethius' works in \textit{On the Chronology of Boethius' works on Logic I, II}; \textit{in Vivarium}, vol. ii, n° 1 & 2, 1964.

\textsuperscript{218} Cf. \textit{in Int.} 2, 2-5, p. 16. orationes vel imperfectae vel perfectae cuius plures esse partes supra iam docuit, inter quas perfectae orationis species enuntiatio. On the other hand, he also has stated that the species of an \textit{enuntiatio} (i.e. proposition) are affirmation and negation: huius autem duae sunt species, una affectio, altera negatio. \textit{(in Int.} 18-9, p. 35).
distinction between phrase, name, and indefinite name is perfectly clear and articulated. So from the point of view of the analyses by Boethius and all the ancient commentators of *PeriH.,* there is no possibility that Aristotle maintained a definition of λόγος open to the syntactic contradiction that Ackrill suggests.
1. 2 Semantics

(i) The text

In his comments on *PeriH.*, Boethius develops a sound explanation of the signification of the indefinite name. This explanation, which is one of the most extended and detailed of those which are extant,\(^\text{219}\) belongs to the tradition of commentaries which equated the account that Aristotle gave of the signification of the indefinite verb with that of the signification of the indefinite name. As a result, Aristotle appears to explain the semantic characteristics of the indefinite verb and name by means of the same terms, namely ὅτι ὄμως ἔφ' ὄτουν ὑπάρχει καὶ ὄντος καὶ μὴ ὄντος (16b. 15):\(^\text{220}\)

\[\text{16a } 29\]

\[\delta' \ οὐκ \ ἄνθρωπος \ οὐκ \ ὄνομα· \ οὐ \ μὴν \ οὐδὲ \ κέιται \ ὄνομα \ ὅτι \ δὲ \ καλέν \ αὐτό, \ -οὔτε \ γάρ \ λόγος \ οὔτε \ ἀπόφασις \ ἑσπερ- \-άλλ' \ ἐστώ \ ὄνομα \ ἀφριστον.\]

\[30 \ κέιται + \ γε \ α: [\text{T}] \ 32 \ ἀφριστον + (ex 16b. 15) \ δτι \ ὄμως . . . \ μη \ \] ὄντος \ α: a*\text{c} \\

\(^{219}\) Not only in respect of the signification of indefinite names, but also in respect of the theme of indefinite names in general, the explanations by Boethius and Ammonius are the most complete and detailed. There are, however, some important developments in Ammonius that Boethius does not know, whose relevance does not allow us to believe that they could have been dismissed by Boethius. However, the reverse is also true. Some examples are symptomatic: at *in Int.* pp. 181-186, 10-17, (on *PeriH.* 20a. 20-23), Ammonius attributes to Proclus an important logical law, the so-called 'canon of Proclus', but nothing of this is known by Boethius. (Literal attribution of this law to Proclus in *Stephanus* *in Int.* p. 46, 25; and p. 49, 24; and also Al-Farabi's *in Int.* p. 133, 1-2. Cf. also the translation by William of Moerbeke of Ammonius' commentary: "magister autem noster et instructor Proclus regulas nobis valde artificiales tradidit.": Ammonius *Commentaire sur le Peri Herméneias.* Edition Critique et Etude sur L' utilization du Commentaire dans l'œuvre de Saint Thomas, G. Verbeke (Ed.), Louvain-Paris, 1961, p. 337). Similarly, Boethius (*in Int.* 2, 32-33, pp. 62-3) compares the way in which an indefinite name is not an absolute or simple name to the way in which a dead man is said not to be a man: this is not in Ammonius. See further differences at Part I, 1.2, (vi.4); 3., (iv); 4., (iii.3), (c); 5., (ii); also Part II, 1., A., (ii.5); C., (iv); 2., (i). See also n. 678.

\(^{220}\) *Aristotelis Categoriae et liber de Interpretatione*, (1949), p. 50.
16b 11 τὸ δὲ οὖχ ὑπαίτει καὶ τὸ οὐ κάμνει οὐ δήμα λέγω·
προσημαίνει μὲν γὰρ χρόνον καὶ ἀεὶ κατὰ τὸν ὑπάρχῃ,
τῇ διαφορᾷ δὲ δύομα οὐ κέται· ἀλλ’ ἔστω ἀόριστον δήμα,
15 ὅτι ὁμοίως ἐφ’ ὕπωνυ ὑπάρχει καὶ δυτος καὶ μὴ δυτος.

(ii) A textual problem: the reading of 16a. 32

The apparatus criticus shows that the reading ὅτι ὁμοίως ἐφ’ ὕπωνυ ὑπάρχει καὶ δυτος καὶ μὴ δυτος, which, according to our more modern editions, is a characteristic that Aristotle gave literally only to the indefinite verb in 16b. 15, is also documented for the case of the indefinite name in the lemma of the commentary by Ammonius, the recensio Ammoniana, and MS C (Codex Parisinus Coislinianus 330). The critical edition of Aristotle's Opera by I. Bekker, which takes into account MS C, has included this reading of 16b. 15 at 16a. 32 too. However, the edition of Th. Waitz, which was edited some fourteen years after that of Bekker, has omitted this mentioned reading for 16a. 32. Waitz argued that the introduction of the lectio at 16a. 32 was a negligence explainable by the proximity of both these lectiones in the text, but it is obvious that the lectio should not appear at 16a. 32, in relation to the indefinite names. Waitz's explanation is

221 The recensio Ammoniana is the sample that the recentiores auctores mostly have used to work on PeriH. As a result, the lectio which we mentioned appears in all specimena translationum and recensiones that L. Minio-Paluello has consigned in AL.

222 This codex contains the complete Organon of Aristotle in the traditional order of its books, and it is also preceded by the Isagoge of Porphyry. This codex is written in its totality by two hands datable in the XI century. In general, this codex differs from the codices n and B, which are those preferred by Minio-Paluello in the Oxford edition of PeriH. (=OCT), (cf. E. Montanari (1988), vol. i, p. 57).


deficient in this point if we consider that Ammonius and Boethius
devoted detailed commentaries on the signification of the
indefinite name based on the characteristic expressed in the *lectio*.
On the other hand, this very fact alluded to by Waitz is not
considered among the reasons that Minio Paluello considers in
maintaining the text at 16b. 32. Rather, Minio Paluello reaches a
similar result based on his own editorial criterion, namely, that
even though it is not possible to determine accurately the relation
among the testimonies because of their contamination—in which
case one should include also Ammonius' commentary—the codices
n and B represent the more ancient and more pure tradition
among all direct testimonies and they offer in many places the
best *lectio*\(^{225}\) especially when they are in accordance.\(^{226}\)

To find a satisfactory explanation of this textual problem is
not intended by our present consideration, but merely to
contribute to a further consideration about the textual constitution
of *PeriH.*, at least in this point of indefinite names and verbs, by
drawing attention to new elements to be taken into account. The
point is that if one considers the ancient commentaries, those of
Ammonius and Boethius, one will find that these commentators
develop detailed considerations about the signification of the
indefinite name as *if* Aristotle maintained the *lectio* of 16b. 15 for
16a. 32, so that indefinite names and indefinite verbs are
qualified in their signification by the same characteristic of being
significant of what exists and what does not exist. The point is
even more curious if we consider that the lemmata of both
commentaries by Boethius—though not that of Ammonius—do not
mention this reading for 16a. 32, but Boethius comments on it, *as
if* the reading were present in the lemma. This fact, certainly, puts
into question the genuineness of the lemmata of Boethius' commentary.

The facts show that the tradition of commentaries is not
entirely congruent with the tradition of MSS, and the evidence of
the ancient commentaries in this respect entails that the *doctrinal

\(^{225}\) cf. L. Minio-Paluello, *Aristotelis Categoriae et liber de Interpretatione*,
reasons of the commentaries have also a place in the textual constitution of the ancient texts, especially in passages where uncertainty influences decisions.

(iii) The indefinite signification of the indefinite name

The fact is that Boethius presents a comprehensive account of the signification of indefinite names and verbs based on this reading, i.e. on their essential characteristic of being significant (or predicated) indifferently of anything whether existent or non-existent. This account includes a reflection on this signification itself, its extent and way of signifying. The corresponding explanation starts to be established already from the first commentary:

\[
\text{at vero [non homo] nomen non est. omne enim nomen unam rem significat definitam, ut cum dicimus \textit{homo}, substantiam significat nec quamlibet, sed rationalem atque mortalem. eodem modo et cetera nomina. qui vero dicit \textit{non homo}, hominem quidem tollit, quid autem illa significatione velit ostendere, non definit. potest enim quod homo non est et equus esse et canis et lapis et cetera quaecumque homo non fuerint.}
\]

In Boethius' commentary, the semantic analysis is generated by the comparison between name and indefinite name. According to this analysis, the expression 'not-man' cannot be considered as a name because every name has a defined signification, and the proof of this is that every name signifies a determined thing (\textit{nomen unam rem definitam significat}), for example 'man'. When one says 'man', argues the commentary, one signifies a substance, and not any (\textit{quamlibet}) substance, but that which has the characteristics of rationality and mortality. And this happens with every name (cetera nomina). Conversely, when one says 'not-man' what is signified is anything which is not a man, because 'not-man' excludes man (\textit{hominem quidem tollit}), so what is meant by this signification is not defined.

\footnote{cf. \textit{in Int.} 11-19, p. 52}
What is meant by the expression 'not-man', adds the commentary, can be a horse, a dog, and anything which is not a man \((cetera quacumque homo non fuerint)\), and in the following passage this is confirmed by appealing to the effect produced in him who hears and understands an expression like 'not-man':

\[
quare quoniam id quod definite significare potest autem in eo negativa particula, quid vero significare debeat definite non dicit, sed multa atque infinita unusquisque auditor intellegit: dicatur, inquit, nomen infinitum. hoc enim quod dicimus \textit{non homo} tam multa significat quam multa sunt quae a definitio hominis disiunguntur.
\]

Certainly, to ask for a definite signification of this kind of expression is only possible if one takes the negative particle away, otherwise the expression signifies, as Boethius points out, nothing definite, and thus whoever hears the expression \((unusquisque auditor)\) understands many and even indefinite things \((multa atque infinita)\). Now, as the commentary remarks, this is a reason why Aristotle calls this kind of expression 'indefinite name'. Immediately, Boethius adds a more exact formulation of this indefinite meaning which characterises the indefinite name, namely, what 'not-man' signifies is as many things as have a different \textit{definition} to that of 'man'.

\begin{flushright}
(iv) \textit{The extension of an indefinite signification}
\end{flushright}

The semantic observations which Boethius makes here will be developed in greater detail in his second commentary. These explanatory notes will show that Boethius' commentary maintains a systematic account of this matter, which is a sign of doctrinal continuity in his two commentaries.\(^{229}\) One of these remarks is introduced by means of a question: who can say that an

\(^{228}\)cf. \textit{in Int.} 19-25, p. 52.

\(^{229}\) Let us recall that, in his second commentary, at the beginning of his Fourth Book, Boethius says that the subtleties and more difficult points are left for his second exposition. Cf. \textit{in Int.} 2, 2-4, p. 251. "(...) quod in prima editione altitudinis et subtilitatis omiseram secunda commentatione complerem."
expression like 'not-man' is a name, given that every name, proper or common (appelativum), means something definite?¹²³⁰

nomen vero esse quis dicat, cum omne nomen sive proprium sive sit appellativum definite significet? cum enim dico Ciceron, unam personam unamque substantiam nominavi et cum dico homo, quod est nomen appellativum, definitam significavi substantiam. cum vero dico non homo, significo quidem quiddam, id quod homo non est, sed hoc infinitum.

To be precise, when one says 'Cicero' one has denominated a person and a substance, and when one says 'man', which is a common name, one has denominated a definite substance. But when one says 'not-man', one means a certain object (quiddam), namely, that which is not man, but this is indefinite (infinitum).

Once this is settled, the commentary introduces Aristotle's phrase at 16b. 15, namely, ὅτι ὁμοιός ἐφ᾽ ὅτου ὑπάρχει καὶ ὄντος καὶ μὴ ὄντος, which further elucidates the indefinite signification of an indefinite name:²³¹

potest enim et canis significari et equus et lapis et quicumque homo non fuerit. et aequaliter dicitur vel in eo quod est vel in eo quod non est. si quis enim de Scylla quod non est dicat non homo, significat quiddam quod in substantia atque in rerum natura non permanet. si quis autem vel de lapide vel de ligno vel de aliis quae sunt rebus dicat non homo, idem tam idem quid significabit et semper praeter id quod nominat huiusmodi vocabuli significatio est. sublato enim homine quidquid praeter hominem est hoc significat non homo, quod a nomine plurimum differt. omne enim nomen (ut dictum est) definite id significat quod nominatur nec similiter et de eo quod est et quod non est dicitur.

According to Boethius' commentary, that which is not a man can signify a dog, a horse and a stone and whatever is not a man, so that 'not-man' is said similarly (aequaliter, ὁμοιός) both of what exists and does not exist (et aequaliter dicitur vel in eo quod est

²³⁰ Cf. in Int. 2, 30-5, pp. 61-2.
²³¹ in Int. 2, 5-19, p. 62.
vel in eo quod non est). Thus, if anyone says of Scylla, who does not exist, 'not-man', this means a certain object that neither has place in substance nor in nature. And, if someone says 'not-man' of a stone or a log or anything which actually exists (in re), then, similarly, he also will mean something, and the signification of this kind of term is always the exception to that which the word names (et semper praeter id quod nominat huiusmodi vocabuli significatio est). So, when the signification of man is excluded, anything except a man is what 'a not-man' signifies, which differs very much from the signification of a name, for every name signifies that which it names definitely, and it is not significant both of that which is existent and that which is not existent.

232 Or, in other words, 'a certain object that neither has a real referent nor a place in nature'. Boethius at in Int. 2, 28-30, p. 21 states, in general, the following non-convertible order: a thing (res) precedes its signification (intellectus); and a signification precedes its spoken sound (vox); and a spoken sound precedes its letters or written marks (litterae). ("praecedit autem res intellectum, intellectus vero vocem, vox litteras, sed hoc converti non potest."). When he explains the relationship between 'thing' and 'signification' (ibid., 34-36, pp. 21-2), he specifies that a thing is not always the substrate of a signification, i.e. there are significations which have no real referents ("nec intellectui quoque subiecta res semper est, sunt enim sine re ulla subiecta, ut quos centaurus vel chimaeras poetae finxerunt. horum enim sunt intellectus quibus subiecta nulla substantia est."). The examples that he gives are the things that the poets have created, like centaurs and chimeras. (Even though occurrences of mythical monsters are a common characteristic of Greek and Latin poetry, the expression poetae finxerunt can be a special allusion to Homer II. 6. 179 ff., and Vergil Aen. 6. 280-289, where a certain 'existence' and 'nature' is attributed to those imaginary creatures). J. Magee (Boethius on Signification and Mind, Leiden 1989) has treated this order in Boethius' commentary in greater detail. See especially pp. 76-84. At in Cat. 229 B-D (PL 64, ad Cat. 7b. 24-7), Boethius attributes to chimeras and other objects whose existence is simultaneous with their knowledge (et haec simul habent esse et sciri), the property of being existent only in the imaginative capacity of the mind (sola imaginatione subsistunt). Accordingly, Boethius states that the knowledge and the essence of this kind of object are not separable, i.e. they are not objective realities (et est eorum scientia cum eorumdem essentia coniuncta). Boethius clarifies that this object that the mind creates and the imagination finds (et quidquid sibi animus fingit, vel imaginatione reperit: 229 D f.) neither has a real referent (in substantia non permanet) nor exists in substance and truth (in substantia atque veritate constitutum non sit). Accordingly, it is not said to be capable of being known (posse sciri) and, in general, it is concluded that there is no science of these things that are only subsistent in the imagination (229D ff.). The point is clearly contrasted to the knowledge which is constituted from things that are subsistent and we find in nature ("namque in pluribus subsistentibus rebus scientias accipimus. Prius enim rebus constitutis et quasi praepositis scientiae ratio sequitur.", ibid., 229 B-C).
According to this passage, an indefinite name is significant too, but not as the name is, because the indefinite name can be significant of what does not exist, and the name, by contrast, is not significant of things which do not exist, but always of things which are existent and have a place in nature (*rerum natura*), as in the case of the proper name, which names (*nominare*) a person, for example, Cicero, or the common name, which signifies (*significare*) a definite substance.

(v) *Quoniam unum quidem significat, sed infinitum: 19b. 9.*

In the preceding passages, Boethius' commentary gives us a sufficiently clear idea of the semantic nature of the indefinite name. However, an explanation in connection with the phrase of Aristotle at the beginning of Chapter 10: *τὸ γὰρ οὐκ ἄνθρωπος ὄνομα μὲν οὐ λέγω ἄλλα ἀόριστον ὄνομα, —ἐν γὰρ πως σημαίνει ἄριστον,—(...) is also provided. Through this explanation, the commentary intends to make more clearly the point of how an indefinite name signifies what it signifies, and how this signification is different from that of a definite name:

> quod autem dixit [i.e. Aristotle] *non homo enim nomen quidem non dico, sed infinitum nomen*, huiusmodi est: nomen, inquit, omnia quidem definita significat, *non homo* vero quamvis unum quodlibet eorum designare possit, quae homines non sunt, tamen quid designet infinitum est et dubium. nam cum multa sint quae homines non sunt, et unum quodlibet eorum significare possit, quid significet ignoratur.

According to this passage, Aristotle has defined the name as an expression that signifies definite things. In contrast, an indefinite name, e.g. 'not-man', although it could denote (*designare*) some of the things which are not a man (*unum quodlibet eorum*), what it,

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233 Cf. *Perih.* 19b. 8-9. ("For I do not call 'not-man' a name but an indefinite name —for what it signifies is in a way one thing, but indefinite."; Ackrill's translation). Apparently, the phrase of 19b. 9—*ἐν γὰρ πως σημαίνει ἄριστον*—is considered by Boethius as a subtle point, one which is worth analysing in his second commentary, for he does not mention it in his first exposition. 234 in *Int.* 18-25, p. 127.
in fact, denotes is something indefinite and indetermined (*infinitum et dubium*). As the commentary clarifies immediately, the things denoted by means of an indefinite name are many (*multa*), and although it could signify (*significare possit*) one of these things, what signifies is (in fact) unknown (*ignoratur*).

As Boethius observes, Aristotle himself gives a deeper insight into the nature of the indefinite names when providing a reason for his statement of 19b. 8-9: "I do not call 'not-man' a name but an indefinite name", he immediately adds (1. 9): "for what it signifies is in a way one thing, but indefinite". In connection with this, Boethius goes on to say:

> commemorat quoque quid sit innominatum237 se supra dixisse, quoniam quod diceremus *non homo* nomen quidem Aristoteles non diceret, sed quod nomen simpliciter non vocaret hoc addito infinito nomen diceret infinitum, idcirco quoniam unum quidem significat, sed infinitum.238 *non homo* enim quod significationem eius quod

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236 in *Int*. 2, 8-17, p. 259.

237 The name *'innominatum'* i.e. τὸ ἀδιάφορον, is the other name that Aristotle gives to the indefinite name. Cf. *PeriH.*, 19b. 5-6 and 8-9: In Ackrill's translation, τὸ ἀδιάφορον, i.e *innominatum* has been translated by 'not-name': "Now an affirmation signifies something about something this last being either a name or a 'not-name.'" His translation suggests correctly the unknown aspect of every indefinite name, but Aristotle, according to Boethius, suggests even more by means of this name: τὸ ἀδιάφορον is not a genuine expression of Aristotle, but that by which the ancient authors (*veteres*) called terms like 'not-man'. For example, at in *Int*. 9-14, p. 127, Boethius says: subiectum autem illud aut nomen est aut quod apud veteres quidem fuit innominatum, ab Aristotele vero infinitum nomen vocatum est. prius enim dictum est, quod homo esset, non homo vero innominatum quidem apud antiquos, sed nunc infinitum nomen. In Boethius' opinion, this name is appropriate to the nature of what it names and, in fact, Aristotle himself uses it, because it is that which cancels the determination of the name (innominatum autem est quod propositum nomen subruit, ut est *non homo*. (...) atque ideo et innominatum vocavit. in *Int*. 2, 1-4, p. 259). (See details at Part I, 3., (iv) *Antiquiores*).

238 As this phrase shows, Boethius is not aware of the variant (19b. 9) ἐν γὰρ πως σημαίνει καὶ τὸ ἀδριστόν. He takes, like Ackrill, the Greek as meaning 'because the indefinite name signifies one thing, but this thing is indefinite'. But the variant is not the best reading either. Aristotle in fact would not say 'for the indefinite name also signifies in a way a thing', for in this reading he does not distinguish the indefinite name from the definite one, and so there will be no reason to make a distinction between one and the other, as he did in Chapter 2 (16a. 29: "'Not-man' is not a name.
According to this passage, Aristotle's brief remark of Chapter 10 entails that expressions like 'not-man' cannot be denominated absolute names (simpliciter), that is, merely names, but indefinite names, i.e. names with the adjective 'indefinite' (infinitum). The reason is that an indefinite name actually means one thing (unum), but this thing is indefinite (infinitum). As Boethius clarifies, an indefinite name like 'not-man' is one thing (unum est), namely, that which cancels (tollit) the signification of that which we call 'man', and removing one signification by itself (unam per se significationem subripiens), many meanings are left for the minds of those who understand it (quae intellegentium sensibus relinquuntur).

By means of this reflection, Boethius seems to explain in more detail what he meant when, in his first commentary, he said that the signification of an indefinite name is indefinite and indetermined (infinitum et dubium). The reason, if one can paraphrase what is provided now by the commentary, is that the indefinite name signifies—as the definite name— one thing, but this thing is —contrarily to the definite name— supressed and cancelled, and for this reason, Boethius could add, the signification of an indefinite name leaves many things (existent or non-existent) to the minds of the persons who understand.

(vi) Is there an incompatibility between the definition of name and the notion of indefinite name?

E. Montanari\(^{239}\) is right to make a point of the relationship between the notion of indefinite name and the definition of simple name, in that the simple name "designerebbe un unico individuo o un' unica sostanza, circonstanze che manifestamente non si danno...

nel 'nomme indefinito'.\textsuperscript{240} Pertinently, he asks for the exact difference between a name and an indefinite name because, as he observes, if the simple name is characterized by its capacity of denoting a single and definite object, how can it involve the notion of indefiniteness given by the indefinite name?\textsuperscript{241}

Montanari has involved in this question (a) an exegetical approach of Stephanus, Olympiodorus and Probus, which is intended to give a new elaboration of the definition of name in order to exclude from it the notion of indefinite name, which is, in his opinion, already visible in Boethius' commentary (at \textit{in Int. 2}, 25, p. 62).\textsuperscript{242} Equally, but in order to solve this question, Montanari has brought in (b) the point of the inflections of the name and verb (πτώσεις ὄνοματος, ῥήματος), which Aristotle mentions at \textit{PeriH.} 16b. 1 and 16b. 17 respectively; and also (c) the term διαφορά, which is used by Aristotle (16b. 14) to refer to the difference between an definite and indefinite verb.

The complete account of the point presented by this modern scholar as well as the applicability of his solution will be examined in the following pages.

\textit{(vi. 1) Montanari's interpretation}

According to Montanari (1988), p. 161, there exists the same aporia between the name's cases and the name (also the verb's cases and the verb) as between the indefinite name and the name. But, since Aristotle introduces (at 16b. 4) the term διαφορά, he provides a clue to solve this aporia. Accordingly, Montanari (\textit{ibid.}, p. 235) goes on to state that "gli indefiniti e i casi si pongono, rispetto al nome e al verbo, in un rapporto come da specie a genere, arricchiti ciascuno delle caratteristiche che gli sono proprie." Thus, Montanari's interpretation is that an indefinite

\textsuperscript{241} \textit{Ibid.}, p. 154.
\textsuperscript{242} We have postponed the discussion of this particular point to our Part I, 3., (iii) \textit{Is there a modification of the name's definition by the antiqui?} This deferral does not affect either the cogency or the persuasive force of Montanari's argument to be treated here, but we summarize his complete argument in this later discussion.
name and a name have a genus-species relationship. But, we ask, is διάφορα a real clue to our problem? Did Aristotle really take the indefinite name to be a species of the genus 'name'?

It is already surprising that Ammonius' comment on the term διάφορα does not introduce this term in an explicit sense of resolving the problem that Montanari puts forward. Even more, the almost absolute silence of Boethius' commentary on this concept is curious. Montanari thinks of this word as an interpretative key of the theme of the indefinite terms (name and verb), but certainly when Ammonius takes this word into account,243 he only indicates that Aristotle says τῇ δὲ διάφορα δύναμι οὐ καίτα,244 to denominate the difference (ἐτερότης) between an indefinite and a definite verb 'διάφορα':245

οταν δὲ λέγη τῇ δὲ διάφορα δύναμι οὐ καίτα, διάφοραν καλεῖ τήν ἐτερότητα τοῦ ἀφώτου ῥήματος πρὸς τὸ ἁρμιμένον.

The situation is similar in Boethius' commentary, which adds the obvious remarks that Aristotle called 'does not run' and 'does not work' a 'difference', starting from 'runs' and 'works':246

differentiam autem vocavit [Aristotle] id quod dicitur non currit et non laborat ab eo quod est currit et laborat.

In his comments, Montanari should have noticed that Ammonius and Boethius did not take διάφορα as a clue to our problem, nor the indefinite name to be a species of the genus 'name'. The same must be said in respect of the verb and the indefinite verb, and the inflections of the name and those of the verb. But more important, Montanari should have noticed that his solution does

243 cf. Amm. in Int. p. 51, 30 ff.
246 in Int. 21-23, p. 59. A similar remark is made by Boethius for the case of the indefinite name at in Int. 25-4, pp. 52-3 (the passage has been quoted at Part I, 3., (iv) Antiquiores).
not work, because if between an indefinite name and a name there would be a genus-species difference, then the aspect of indefiniteness should be a specific difference of the genus 'name' and, in this case, as Aristotle says at Met. 1058b. 1 ff. the difference should appear in the definition (ἐν τῷ λόγῳ) of the thing, as an essential attribute.\textsuperscript{247} Let us take some examples. In the well-known definition of man, namely, 'a rational animal', 'rational' is admittedly its specific difference, which appears in its λόγος or definition. Similarly, let us take the genus 'vox'; then, 'significativa' is a species of this genus, that is, "an otherness of the genus" (Met. 1058a. 6); and thus: 'secundum placitum' a second specific difference, and 'sine tempore' a third one, and 'cuius nulla pars est significativa separata' a fourth one.\textsuperscript{248} Accordingly, if an indefinite name is a species of name, the difference of 'indefiniteness' would be a further specification of the genus 'vox' and the difference in question should appear in the definition of name. Of course, this is not what happens, for Aristotle certainly \textit{does not include} the aspect of indefiniteness in the definition of name, and he even \textit{puts} the notion of indefinite name (and verb) \textit{aside}, and a similar situation is evident for the inflections of the

\textsuperscript{247} Montanari (1988), vol. ii, pp. 208-9, arrives at his conclusion after disregarding a species-species or genus-genus difference. However, at Met. 1057b. 37-1058a. 5, Aristotle clarifies what he understands by a genus-species difference: "For by genus I mean that one identical thing which is predicated of both and is differentiated in no merely accidental way, whether conceived as matter or otherwise. For not only must the common nature attach to the different things, e.g. not only must both be animals, but this very animal must also be different for each (e.g. in the one case horse, in the other man), and therefore this common nature is specifically different for the two things. One then will be in virtue of its own nature one sort of animal, and the other another, e.g. one a horse and the other a man." After that, (b. 1 ff.), as P. Pellegrin has also noticed (\textit{Aristotle's Classification of Animals}, 1986, p. 67), Aristotle asks why one contrariety makes things different in species and another does not, and he adds: "e.g. 'with feet' and 'with wings' do, but whiteness and blackness do not" (1058a. 36-7). Aristotle answers: (1958b. 1) "(...) one element is formula and other is matter, contrarieties which are in the formula (ἐν τῷ λόγῳ) make a difference in species, but those which are in the compound material thing do not make one." That is why, says Aristotle, "Nor do a brazen and a wooden circle differ in species; and if a brazen triangle and a wooden circle differ in species, it is not because of the matter, but because there is a contrariety in the formula (ἐν τῷ λόγῳ)." (1058b. 14, see also 18).

\textsuperscript{248} Admittedly, these differences are ordered as species to genus. At \textit{in Int.}, p. 30, 7-8, Ammonius says that sound (ὁ φῶς) differs from spoken sound (τῆς φωνῆς) as genus (γένος) from species (ἐἴδος).
name and the verb: they are excluded from the definition of name (and verb).

The earlier argument poses serious difficulties for Montanari's interpretation. However, it is also possible to advance a further argument to demonstrate that the mentioned relation cannot be a genus-species one. The reasoning takes the point made by Aristotle at *Top.* 123a. 35, namely, that "Every genus is predicated of its species in its proper sense" (πᾶν γὰρ γένος κυρίως κατὰ τῶν εἴδων κατηγορεῖται). What Aristotle means is that 'animal' in the definition of man, i.e. 'a rational animal' (where 'animal' is the genus' and 'rational' the species) is predicated in its proper sense, univocally, so that the animal that forms the definition of man and the animal which is present in a horse (for example) is the same animal. Now, if between a name and an indefinite name there is a genus-species relationship, then an indefinite name is a name and 'name' is univocally predicated of an indefinite name. But this consequence imports a contradiction, because Aristotle expressly says that an indefinite name is not a name (16a. 29; 19b. 8-9; and, for the indefinite verb, 16b. 11). Therefore, between a name and an indefinite name there cannot be a genus-species relationship.249 Besides, what Aristotle says at *Top.* 123a. 35 is equivalent to saying that the genus and the species are synonymous. Indeed, this is said by Aristotle himself some lines earlier (συμώνυμον γὰρ τὸ γένος καὶ τὸ εἴδος: *Top.* 123a. 29), and what he implies is that the genus and the species have not only a common name, but also a common definition, as he clarifies at *Cat.* 1a. 6-11, and where he illustrates the point by an example: "A man and an ox are animals. Each of these is called by a common name, 'animal', and the definition of being is also the same, for if

249 A similar proof can be obtained from *Cat.* 3a. 33-3b. 9: "And the primary substances admit the definition of the species and of the genera, and the species admits that of the genus; for everything said of what is predicated will be said of the subject also." According to this passage, one should conclude that the notion of indefinite name admits the definition of name, if —as Montanari proposes— the indefinite name is a species of name. But, again, Aristotle explicitly refuses this admission, because he says that the indefinite name is not a name. The passage, in fact, excludes the possibility of a genus-species relation because it does not seem possible to say of any primary substance that it is an indefinite name (species) and a name (genus) in the same manner as one can say it of a primary substance like Socrates (for example): he is a man (species) and an animal (genus).
one is to give the definition of each—what being an animal is for each of them—one will give the same definition (τὸν ἀὑτὸν λόγον)." Again, how can one say that between a name and an indefinite name there is a genus-species relationship, if Aristotle denies their synonymy?

Now, if the difference between a name and an indefinite name is not one of genus to species, how should one understand it? What exact kind of relationship should be formulated between an indefinite name and a definite one?

(vi. 2) Boethius' position

Boethius' commentary seems to contain a real clue to clarify our problem:

sed haec huiusmodi vox [sc. the indefinite name] et designativa est et ad placitum et sine tempore et (ut dictum est) partes eius extra nihil designant.

In this passage, Boethius mentions that the genus of an indefinite name is common to the definite and simple name. He continues:

quare dubia apud antiquos sententia fuit, utrum nomen hoc non dicerent, an hoc aliqua adiectione nominis definitioni subicerent.

Some antiqui, says the passage, maintained a doubt about the nature of the indefinite name because, as we could interpret it, its genus is the same as that of the name. Hence, an uncertainty arose: whether the indefinite name cannot be called 'name' or whether it can, though with qualification (aliaqua adiectione). Boethius goes on to divide these antiqui in two groups:

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251 in Int. 2, 19-21, p. 62.
252 in Int. 2, 21-23, p. 62.
253 Later, we have given a detailed discussion of the identity of these antiqui, and we come back to some particular points of this discussion. See Part I, 3., (ii) Antiqui.
254 in Int. 2, 24-31, p. 62.
et qui hoc [sc. the indefinite name] a nomine separabant, ita nomen definitione claudabant dicentes: nomen esse vocem designativam secundum placitum sine tempore circumscriptae significationis, cuius partes extra nihil designarent, ut quoniam non homo rem circumscriptam non significaret a nomine separaretur. alii vero non eodem modo, sed dicebant quidem esse nomen, sed non simpliciter.

One group (qui) restrained (claudabant) the definition of name in order to exclude from it the notion of indefinite name by emphasising that every name has a delimited signification (circumscriptae significationis). But, on the contrary, the other group (alii) did not take this in the same way (non eodem modo), but accepted the indefinite name to be a name, though not absolutely (esse nomen sed non simpliciter).

At this moment, we have come to the crucial point, because how, to be exact, should one interpret that the indefinite name is a name but not absolutely? In other words, how does the expression 'not to be absolutely a name' explain the exact relationship between a name and an indefinite name? Boethius continues:255

quadam namque adiectione sub nomine positi posse putabant hoc modo, ut sicut homo mortuus non dicitur simpliciter homo, sed homo mortuus, ita quoque et nomen hoc, quod nihil definitum designaret, non diceretur simpliciter nomen, sed nomen infinitum. cuius sententiae Aristoteles auctor est, qui se hoc ei vocabulum autum aut inventisse.

The exact relationship between an indefinite name and a name is like that maintained between a dead man and a man. Aristotle, as the passage indicates, is the author not only of this example, but also of the opinion (sententia) that an indefinite name is to a name as a dead man is to man. In fact, at PeriH. 21a. 21-23, Aristotle mentions this example.256 Here, however, Aristotle does not explain what kind of relationship there is between a dead man

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256 See Boethius’ explanation of this passage at Part 1, 2.2, (viii) Existential import of singular propositions and indefinite verbs. See also Ammonius on this passage at ibid., (viii.2) Ammonius on 21a. 25-33.
and a man, but in a passage of *Meteorology*, he makes the point clearly: this is a *homonymous* relation.257

"All the homogeneous bodies consist of the elements described [i.e. earth and water], as matter, but their essential nature is determined by their definition (τὸ λόγον). This fact is always clearer in the case of the later products, of those, in fact, that are instruments, as it were, and have an end: it is clearer, for instance, that a dead man is a man only in name (ὁ νεκρὸς ἀνθρώπως ὁμωνύμως). And so the hand of a dead man, too, (καὶ χεῖρ τελευτήσαντος ὁμωνύμως) will in the same way be a hand in name only, just as stone flutes might still be called flutes: for these members, too, are instruments of a kind. But in the case of flesh and bone the fact is not so clear to see, and in that of fire and water even less. For the end is least obvious there where matter predominates most. If you takes the extremes, matter is pure matter and essence is pure definition (ὅ μὲν οὐδὲν ἄλλο παρ' αὐτὴν, ἡ ἐ' ὀνόματι ὁδέεν ἄλλο ὁ λόγος); but the bodies intermediate between the two are related to each in proportion as they are near to either. For each of these elements has an end and is not water or fire in any and every condition of itself, just as flesh is not flesh nor viscera viscera, and the same is true in a higher degree with face and hand. What a thing is is always determined (ἀρσεμένα) by its function (τὸ όργανον): a thing really is itself when it can perform its function; an eye, for instance, when it can see. When a thing cannot do so it is that thing only in name (ὁμωνύμως), like a dead eye (ὁ τεθνεώς) or one made of stone (ὁμωνύμως), just as a wooden saw is no more a saw than one in a picture. The same, then, is true of flesh, except that its function is less clear than that of the tongue. So, too, with fire (...) For we know the cause of a thing and its definition (πά σημα) when we know the material or the formal (τὸν λόγον) or, better both the material and the formal conditions of its generation and destruction, and the efficient cause of it."

If the clue provided by Boethius' commentary is true, then—as this passage shows—Aristotle conceived the relationship between an indefinite name and a name as one of homonymy. An

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indefinite name is a name only in its denomination, because "what a thing is" —as Aristotle says here— "is always determined by its function: a thing really is itself when it can perform its function." But an indefinite name cannot perform the function of a name, because its function is to signify one determined thing, and that cannot be made by an indefinite name. Therefore, as a dead eye is an eye only homonymously, so an indefinite name is homonymously a name.

But what sense does it make for Aristotle to include in Perih. names which are not real but homonymous names? Boethius' commentary can also give us a satisfactory answer to this question.

(vi. 3) The 'integra nominis definitio'

Despite the great difference between a simple name and an indefinite one, Aristotle does not abandon further analysis of the semantic nature of the indefinite names but, as is evident, he takes into account these indefinite expressions after he defines the simple name and gives, if very concisely, some characteristics of them. Why does this occur? Boethius' commentary gives a reason for it, and he even develops all the relevant explanations on the nature of the indefinite name (and verb) in connection with this reason.

After Boethius discusses the nature of the indefinite name and states its main syntactic and semantic aspects, as we have seen, he also treats the name's cases and points out that the name differs from the case of the name, for the name together with 'is' or 'is not' makes a sentence (enuntiatio) either true or false, while the case does not. He asks about the pertinence of all this discussion:

sed quorsum istuc?

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258 In Int., 8-11, p. 55. ergo differt nomen a casu, quod nomen quidem cum est, aut non est iunctum vel verum vel falsum facit. casus vero nec verum dicit neque mentitur.
259 In Int., 12, p. 55.
The question actually means this: 'What is the sense of introducing the name's cases and the indefinite name after Aristotle has defined the name?' The answer is the following:

Aristotle would introduce a further analysis of the nature of the indefinite name and the name's cases in order to complete his own previously given definition of name, so that he gets the strict definition of the nature of the name (*integerrima definitio*). The answer supposes that Aristotle's initial definition of name is incomplete, or better non-strict. But what does Boethius mean? What Boethius means is that the initial definition of name (and verb) is not absolutely specified, and one ought to include in it the remaining differences provided by the analysis of the indefinite name and the name's cases that Aristotle introduces later. This becomes clear from the fact that Boethius has introduced an *integra definitio* of name (and verb) after commenting on the nature of the indefinite name (and verb) and the name's cases:

In this *integra nominis definitio*, the phrases 'definitum aliquid significans' and 'cum est aut non est faciens enuntiationem' exclude respectively the indefinite name and the name's cases from the definition of name. Therefore, what Boethius means is that one ought to interpret Aristotle's text as if he introduced, after the analysis of the indefinite name (and verb) and the name's case, the restrictive or strict definition of name (and verb) to show that it neither includes indefinite names nor the oblique cases of the name. In other words, Aristotle would give an initial

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260 *in Int.*, 12-14, p. 55.
261 *in Int.*, 14-20, p. 55. In the second commentary, *(in Int. 2, 22-28, p. 65)*, Boethius gives a similar definition, and he adds that this definition is the *integra definitio*. (See similar case for the verb's definition; cf. *in Int.* 25-4, pp. 61-2; and also here Part I, 2.1, (i.).)
non-restrictive definition of name (and verb) in order to clarify
the nature of the indefinite name (and verb) and the indirect
cases of the name, but the aim of this analytic procedure would be
the strict and synthetic definition that Boethius provides at the
end of his respective comments on the nature of the name and
verb.

Boethius confirms this view when he introduces his
comments on the indefinite name and verb both in his first and in
his second commentary:\textsuperscript{262}

\begin{quote}
Nunc disserit qualia esse arbitrari oportet, quae cum sub definitionem
quidem nominis cadant, integra tamen nomina non esse videantur.
unde fit ut his diligentissime distributis integerrima nominis definitio
concludatur.
\end{quote}

According to him, when Aristotle discusses about the indefinite
name and the name's cases he deals with the question of whether
these expressions can or cannot be put under the definition of
name, even though they do not seem to be complete names
\textit{(integra nomina)}. As the passage indicates, the most strict
definition of name arises from the analysis of its constitutive or
specific parts \textit{(distributis)}, so that this analytical procedure would
produce an accurate definition of name, since it would
discriminate, one can infer, which are its specific differences and
which are not. In the second commentary this is confirmed:\textsuperscript{263}

\begin{quote}
Superius omnia quaequumque extra nomen essent praedictis
adictionibus a nomine separavit. nunc vero quoniam sunt quaedam
quae sub definitionem quidem nominis cadant, videantur tamen a
nome discrepant, de his disserit, ut quid esse nomen integre
videatur expediat.
\end{quote}

Through his definition of name, Aristotle has put all the things
that are not a name aside, because what he has done is to specify

\textsuperscript{262} in \textit{Int.} 24-28, p. 51. ("Now [Aristotle] discusses what kinds of thing one
should consider under the definition of name, though they do not seem to
be a name in their entirety. So that the strictest definition of name is
accurately inferred from its constitutive parts.").

\textsuperscript{263} in \textit{Int.} 2, 8-13, p. 61.
through differences (*praedictis adiectionibus*), starting from the genus 'sound' (*sonus*), the nature of the name.\(^{264}\) In this process, the passage implies, he does not only get a definition, but also he excludes many things. (Let us recall that the process of defining proceeds by dividing contrarieties starting from a genus that works like matter, and a branch of the division is always left aside, e.g. starting from \(\phiωνή\) (genus), we have the dichotomous division: \(στηματική\) and \(δοξιος\), but \(δοξιος\) is left aside; then, \(\phiωνή\) \(στηματική\): \(κατά\ \ συνθήκην\) and \(κατά\ \ φύσιν\), but \(κατά\ \ φύσιν\) is not considered; etc.). But now, after that, Aristotle discusses, according to this passage, certain things that fall under the definition of name, though they differ from the name; Aristotle does so, adds Boethius, in order to explain (*expedit*) what the name manifests (*videatur*) in its entirety (*integre*).

Perhaps we usually consider the definition of name at 16a. 19, and verb at 16b. 6, to be complete definitions, for Aristotle specifies strictly their natures and also because they are the only definitions of these elements that he gives in *PeriH.*. However, what Boethius maintains is that the definitions in question are not absolutely specified yet, for they need to include two differences more to exclude the indefinite name and the indirect cases of the name. Only after that one gets the *integra nominis definitio*. Thus, Boethius' position is actually opposite to that sustained by Montanari, because while he affirms that the indefinite names (and verbs and the name's cases) ought to be specifically included in the definition of name, Boethius maintains that they ought to be specifically excluded. However, if our analysis here is correct, Montanari's position cannot be established from Aristotle, because—as we said—Aristotle contemplates the specific attributes to be part of the \(λόγος\) of the thing in definition, and because every genus is predicated of its species in its proper sense.

It is a pity that Al-Farabi does not reveal details of his belief or establish his opinion, because he is the only commentator

\(^{264}\) cf. *in Int.* 2, 1-2, p. 53. *Omnis definitio generis constitutione formatur, differentiarum vero compositione perficitur.* Then Boethius adds: *prius eius genus sumpsit dicens nomen esset vocem, idcirco scilicet ut hoc quod dicimus nomen ab aliis, quae non voces sed tantum soni sunt, separaret. (...) quare quia nomen vocem monstravit, ab aliis quae voces non sunt, sed tantum soni, hanc orationis partem separavit atque distribuit. et vocem quidem nominis velut genus sumpsit.* (*in Int.* 2, 21-25, p. 53).
that could agree with Montanari's position.\textsuperscript{265} Al-Farabi's position probably is not more than the expression of his belief, because in his commentary there is no trace of a discussion of this matter, nor does he strive to extend the point in a further explanation. Besides, his opinion seems to be a mere spontaneous reaction on this matter, because he does not refer, as usual, to "the commentators" on this point, nor—as it will be shown now—do Ammonius and Stephanus maintain this position.

(vi. 4) \textit{Ammonius' position}

It is clear that Ammonius knows the exegetical idea of a restricted and a non-restricted definition of name and verb developed by Boethius' commentary, because he refers to this idea as a traditional interpretation of \textit{PeriH.}\textsuperscript{266} However, Ammonius' position is not one of passive acceptance of this traditional view, but he adds his own interpretation on it by establishing that Aristotle gives many senses of name and verb in his treatise. It is also clear that Ammonius knows this exegesis, because he criticises Herminus' conception that Aristotle's initial definitions of name and verb are incomplete (\(\epsilon\lambda\alpha\mu\mu\eta\varsigma\)).\textsuperscript{267} Boethius' interpretation could be a reworking of Herminus' opinion by Alexander and Porphyry, if Herminus had not already advanced this interpretation in its full Boethian form. It is worth noting that Boethius' interpretation (or, as we say, perhaps Herminus' exegesis) comes back later in the development made on this topic by Stephanus \textit{in Int.}\textsuperscript{268} who makes his own interpretation of

\textsuperscript{265} Cf. Al-Farabi \textit{in Int.} p. 28 (= \textit{Al-Farabi's Commentary and Short treatise on Aristotle's De Interpretatione}, F.W. Zimmermann, Oxford 1991).

\textsuperscript{266} To introduce his own interpretation of the definitions of name and verb, Ammonius mentions the definitions of what he calls 'the proper name and verb' (\(\kappa\varphi\alpha\nu\sigma\omega\gamma\varsigma\)). So at \textit{in Int.} p. 45, 7-12; and p. 52, 25-27. He accepts these strict definitions as part of a traditional teaching (\(\kappa\alpha\tau\alpha\ \tau\eta\nu \nu\nu \pi\alpha\rho\delta\delta\sigma\omega\nu\nu\); \textit{in Int.} p. 45, 9), but he adds his wider interpretation that Aristotle uses 'name' and 'verb' in many senses in \textit{PeriH.}. We have first treated Ammonius' interpretation of verb, and later his interpretation of name (for this, see Part I, 3., (iii) \textit{Is there a modification of the name's definition by the antiqui?}).

\textsuperscript{267} Cf. Ammonius, \textit{in Int.} p. 52, 27-32. And see next note.

\textsuperscript{268} Cf. Stephanus \textit{in Int.} p. 11, 23-31; and also p. 12, 1-4. And see next note.
Ammonius and the traditional exegetical line. We will come back to Stephanus' development later.²⁶⁹

When Ammonius discusses the difference (διαφορά) between verb and its cases (πτώσεις ῥήματος), and he decides, as Boethius does, that "the proper verb (κυρίως ῥήμα) is that which is said in present tense (ἐνεστώς) and signifies something definite",²⁷⁰ he asks why Aristotle did not add these differences (τὰς διαφορὰς: the cases of the verb and the indefinite verb) to his initial definition of verb (16b. 6):²⁷¹

"But if someone should wonder here too why Aristotle did not add these distinctions to the definition of the verb from the beginning, we shall not say, as did Herminus, that the definition given at the beginning was incomplete²⁷², but rather that the Philosopher also uses several senses of 'verb', and that the definition given at the beginning belongs to one sense, while the Philosopher describes another sense by means of the present additions."

It is worth noting that Ammonius does not imply that Herminus' opinion is wrong, but that it is not more comprehensive than what he maintains. This is clear from the fact that immediately after this passage Ammonius puts forward three senses of 'verb' and one of them (the second) is that described by Herminus.²⁷³ Accordingly, (1.) Aristotle would say 'verb' as in his initial definition (16b. 6). According to this sense, Ammonius remarks, both the verb and the indefinite verb will be verbs. Then, (2.) the sense that would exclude indefinite verbs and the verb's inflections. Finally, (3.) that according to which every predicate is

²⁶⁹ See Part I, 3.,(iii).
²⁷⁰ Ammonius, in Int. p. 52, 25-27.
²⁷² D. Blank (1996), p. 60, translates here ἐλλημίας by 'deficient'. He does not explain this rendering, which represents an exception to his usual 'incomplete' given before and after. But 'deficient' here seems wrong. It is already difficult to believe that some ancient commentators think of deficient definitions in Aristotle, and probably 'a deficient definition' would mean 'a wrong definition'. But more important, if Boethius' commentary, through the development of integra definitio, follows in some way Herminus' exegetical line, this ἐλλημίας must be 'incomplete' here too.
²⁷³ Cf. in Int. p. 52, 32 - p. 53, 30.
said to be a verb. On behalf of this sense, Ammonius provides the proof that Aristotle at 16a. 13-15 says: "Thus names and verbs by themselves—for instance 'man' or 'white' when nothing further is added—are like the thoughts that are neither true or false."274

But how can Ammonius sustain this first sense, i.e. one in which the definite signification of a verb (or name) includes the indefinite aspect of an indefinite verb (or name)? Ammonius does not develop this in a strict relation with the verb, but he makes this point in his comments on the indefinite name. According to him, Aristotle does not consider it correct (διδIOC) to call expressions like 'not-man' absolute names (άπλως άνώματα), because the name is significant of one thing (δώτι τό μέν άνωμα μάς ἐστι φύσεως σημαντικῶν); in this sense, Ammonius continues, an indefinite name, e.g. 'not-man', is said of everything except a man: it is said, in effect, of the horse, the dog, the goat-stag and the hippocentaur, and absolutely of everything either existent or non-existent.275

The conclusion that Ammonius derives from this analysis is a positive one, namely, that Aristotle permits us to call these indefinite expressions, as a whole term, 'indefinite names'.276 Ammonius' justification of his own interpretation is the following:277

274 This third sense emphasised by Ammonius would confirm Ackrill's observation that "The original meaning of the word translated 'verb' is simply 'what is said'", cf. Ackrill (1963), p. 118. (However, at 20a. 31, 'not-just' is not given as indefinite verb: see Part I, 1.2, (vii) Indefinite names and truth). As Ammonius observes, this third sense is not without problems: actually it conflicts with the doctrine of the conversion of categorical propositions, and even, as he notices, with 20b. 1 ff. If we take 'a man is pale', 'pale' is a verb and 'paleness' is correctly predicated of 'man' and called naturally (κατά φύσιν) a 'verb'. But in the converse 'something pale is a man', 'man' would be a verb: this predication, says Ammonius, is unnatural (παρὰ φύσιν). (Cf. in Int., p. 53, 9-30).

275 Ammonius, in Int. p. 41, 31-33. τὸ γάρ οὐκ άνθρωπος ἐπ' άνθρωπον μὲν οὐ λέγεται μόνον, λέγεται δὲ ἐπὶ ήππου καὶ κυνός καὶ ἐπὶ τραγελάρου καὶ πάντων ἀπλῶς δύτων τε καὶ μῆ δύτων.

276 Ammonius, in Int. p. 42, 1. άδα ταῦτα τὸ άλον τούτο δόριστα άνώματα κελεύει αὐτός προσαγορεύεσθαι. ("Because of this Aristotle permits us to call these expressions, as a whole term, 'indefinite names'").

277 Ammonius, in Int. p. 42, 2-8. άνώματα μὲν, διότι, ὅπερ ἐν τοῖς έξεσι ρηθέσθαι περὶ αὐτῶν, ἐν πώς σημαίνει καὶ ταῦτα, τὸ παρὰ τὸ ύπερσημεῖον ἄπαν ὡς ἐν, οἷον τὸ οὐκ άνθρωπος τὸ παρά τὸ άνθρωπον ἄπαν ὡς ἐν κατ' αὐτό τούτο, καθ' ἐν πάντων κυνόν π. ἐξαι τὸ μῆ εἶναι ἄπειρον κατ' αὑτῶν καὶ ἡ καθ' ἐν πάντων κυνόν καθ' ἐν πάντων ἀπλώς δύτων καὶ πάντων δύτων
"On the one hand, they are names, because, as it will be said in respect of them later, they also signify one thing in some way: everything excluding what is defined [is taken] as one thing, as in the case of 'not-man', everything excluding man [is taken] as one thing by itself, since all these things have something in common, namely, not to be a man. On the other hand, they are indefinite, because what is signified through them does not signify the existence of a thing, as habitually names do, but a nonexistence, which equally fits in well with being and not-being."

In this passage, Ammonius indicates a general reason why an indefinite name must be considered a name, namely, Aristotle's phrase of 19b. 19. In fact, the way in which an indefinite name signifies what it signifies gives it its denomination of 'name'. Ammonius is explicit in pointing out that the unknown content of an indefinite name is taken by itself as one thing —and this is already a reason to consider it a name— because all the things that can be denoted by this indefinite name have something in common, namely, not to be what is defined by the corresponding simple name. Therefore, its content would be an undetermined unity, or a unity with many possible meanings, but a unity, and this fact would make it possible to apply to the indefinite name, the denomination 'name'. Now, for Ammonius the difference between a name and an indefinite name also lies in the way in which the indefinite name signifies what it signifies, because they do not signify, says Ammonius, the existence of a thing, as is the usual way with definite names, but its non-existence.

(vii) Indefinite names and truth

There is a last passage in Chapter 10 of PeriH., in which Aristotle makes another approach to the signification of the names which are indefinite. This passage has been introduced by Aristotle after he has finished his remarks on the nature of the

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278 Ammonius refers to his comments on Aristotle's expression at Chapter 10 (19b. 9): "for what it [i.e. the indefinite name] signifies is in a way one thing, but indefinite". Cf. Amm. in Int. p. 156, 23-28.
indefinite name, and exactly in the middle of his presentation of some logical relations among propositions that contain indefinite names and verbs. Even though this postposition seems to be inopportune—and in fact it has been interpreted by Ackrill as "a footnote on indefinite terms"—if one considers the systematic semantic development on indefinite names as Boethius follows it, Aristotle is also bringing out a further consequence about the signification of indefinite names in this short remark:

20a 31 Al. 8è kara ta áfrmata ántikeimena ónomata kai rémata, ólon étí toû mē ánthropou kai mē dikaios, óster apofásis áneu ónomatos kai rématos déxaen òn éinai. Oûk elai 8è ólei gáor ònhítheián ánánklei òi fêúseota tîn apofásin, ò de' elían ouk ánthropou oudeîn múllon toû ánthropou álλa kai ἵππον ἡλιθευκε τῑ ò fêústata, òdî mē τῑ προστεθή.

35 toû + elíntos ΔΣΤ 36 prius τι om. Λα

This passage has been translated by Boethius thus:

Illae vero secundum infinita oppositae nomina vel verba, ut in eo quod est non homo vel non iustus, quasi negationes sine nomine vel verbo esse videbuntur, sed non sunt; semper enim vel veram vel falsam necesse est negationem, qui vero dixit non homo, nihil magis de homine, sed etiam minus verus fuit vel falsus, si non aliquid addatur.

Ackrill's translation, however, here is different:

20a 31. Names and verbs that are indefinite (and thereby opposite), such as 'not-man' and 'not-just', might be thought to be negations without a name and a verb. But they are not. For a negation must always be true or false; but one who says 'not-man'—without

281 Al. II.1, 10, (20a. 31-36).
According to Boethius, Aristotle here is referring to the oppositions between names and indefinite names, and not, as Ackrill's translation takes it, to the indefinite names and verbs. According to Boethius, Aristotle here says that "these [expressions] which are opposite (contrajacentes, ἀπτικευμένα) to indefinite names and verbs, as in this which is 'not-man' and 'not-just', would seem to be negations without name or verb." Ackrill's translation seems to misunderstand Aristotle here because the subject of the sentence is 'the oppositions between definite and indefinite names and verbs', and not, as Ackrill's takes it, 'the indefinite names and verbs'.

In fact, by means of his translation Ackrill is led to conclude, paradoxically, that Aristotle gives 'not-just' as an indefinite verb. But this is not so. This example, according to Boethius, illustrates one of the two terms that take place in the opposition (the other is 'just'), and the relevant point is their truth or falsity when they are opposite to one another as 'man' is opposite to 'not-man', and 'just' to 'not-just'.

Now, according to Boethius, Aristotle discusses whether there is or is not a certain opposition between a name and an indefinite name, for if one took an indefinite name, like 'not-man', or 'not-just', and opposed it to 'man', or 'just', there will be, apparently, an opposition. But, as Boethius has already demonstrated, according to Aristotle, indefinite and simple names do not signify anything true or false. Now, as a consequence of this, remarks Boethius, it does not follow only that a definite name is neither true nor false, but also "that indefinite

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284 Cf. in Int. 2, 16-23, p. 336.
285 As we showed above (see 1.1, (ii) Indefinite name and negation), Boethius demonstrates that an indefinite name is not a negation, because of the absence of a verb. But he implicitly demonstrates that a definite or simple name, either single or complex, does not signify anything true or false either, for the conditio sine qua non of truth and falsity is the proximity of a verb, at least the verb 'to be'. Aristotle is explicit on this concern in his introductory remarks (16a. 9-16a. 18).
expressions show less (demonstrant) truth or falsity". The argument does not need a further explanation, so it seems appropriate just to quote it:

"[We do not say that] simple names signify something true or false, what we say is that indefinite expressions (dictiones) show less truth or falsity than the simple [ones]. Thus, although a simple name or verb means (designet) nothing true or false, however it proposes something definite, as in the case of man, which is a certain definite [thing] and a species. But he who says 'not-man', deletes (interimit), certainly, the present species (praesentem speciem), and leads us to understand other indefinite things (alias infinitas), although by himself he posits nothing. And for this reason, although definite names and verbs by themselves cannot be true or false, except when they come together with another [name or verb], indefinite names and verbs contains far less truth or falsity, because they do not even posit what they mean, but what they exclude (perimunt), and thus they establish nothing different in itself in respect of meaning (nihil autem per se aliud in significatione constituunt): finally, the signification of truth or falsity is nearer to the definite [names and verbs] (postremo propinquius ad veritatis vel falsitatis finita intellectus). Therefore, the expression of an indefinite name is less true or false than that of any simple and definite word (vocabuli)."

286 in Int. 2, 8, p. 338.
287 in Int. 2, 7-25, p. 338. non quod simplicia verum aliquid falsumve significant, idcirco dicimus infinitas dictiones simplicibus minus verum falsumve monstrare, sed quod quamquam nihil verum vel falsum designet simplex nomen aut verbum, tamen definitum quiddam proponit, ut in eo quod est homo finitum quiddam est et una species, is vero qui dicit non homo, praesentem quidem speciem interimit, infinitas tamen alias dat intellegere ipse nihil ponens. quocirca quamquam finita verba vel nomina per se vera vel falsa esse non possint nisi cum alius iuncta sint, tamen longe minus veritatis aut falsitatis capacia sunt nomina infinita vel verba, quae nec hoc ipsum quidem quod significat ponunt, sed illum quidem perimunt, nihil autem per se aliud in significatione constituunt: postremo propinquius ad veritatis vel falsitatis finita intellectus. minus igitur vera vel falsa est dictio nominis infiniti quam alicuius simplicis et finiti vocabuli.
288 The sense of the text is clear, but the Latin sentence is difficult. Given the preceding argumentation, one expects finita as subject, but propinquius here is a comparative adjective predicated of intellectus. Meiser indicates (p. 541, Index rerum et verborum) that, in general, propinque translates σοφικός, so at AL II.1, 5, 17a 14: "neque enim eo quod propinque dicuntur unum erit." Propinquius works perfectly well as magis,
2. The Indefinite Verb
2.1 Syntax

(i) Aristotle's definition of verb and his intention

It is not a secret that Ackrill has criticised seriously the notion of indefinite verb that Aristotle maintains in *PeriH.* The impression produced by his comment is that Aristotle has simply failed in attempting to give a consistent account of the nature of this kind of expression. However, Boethius maintains a very
different view. First of all, as we have seen, Boethius says that Aristotle's intention in *PeriH.* is to give the complete definitions of name and verb. In our present case, this will imply to consider whether the indefinite verb falls under the definition of verb. As Boethius remarks in the following passage, this was what Aristotle did when he treated the nature of name and now, with regard to the indefinite verb, he reiterates the same purpose:  

Sicut in nomine fecit, ita quoque in verbo ad integram definitionem verbi proprietatemque contendit.

Accordingly, since the aim is to define strictly the nature of the verb and its function, Aristotle will proceed consequently to consider the nature of expressions like υἱαίνει and οὐ κάμνει, and to give an account of them:  

16b 11 τὸ δὲ υἱαίνει καὶ τὸ οὐ κάμνει οὐ δῆμα λέγων προσημαίνει μὲν γὰρ χρόνον καὶ οὐκ κατὰ τὸν ύπάρχειν, τῇ διαφορᾷ δὲ ὄνομα οὐ κάται· ἀλλ' ἔστω οὐριστὸν δῆμα, ὃτι ὁμοίως ἔφ' ὅτου οὐ ύπάρχει καὶ δύτος καὶ μὴ δύτος.

13 δὲ διαφορὰ [T] 

In his translation and lemmata Boethius says:

uses at 16b. 11, i.e. 'does not recover', 'does not all'. (*Ibid.*, pp. 120-1). In order to deal with these objections the last two of them will be considered as syntactical objections, while the first objection is a semantic one. They are to be introduced in the appropriate context.

291 in *Int.* 8-10, p. 59.

292 Aristotelis *Categoriae et liber de Interpretatione*, op. cit., p. 50.

293 cf. *AL* II.1, 3 (16 b. 12-16). The corresponding lemmata at in *Int.* 4-7, p. 59; and 3-4, p. 60. Also in *Int.* 2, 23-28, p. 69. A brief remark about Boethius' translation of these examples of indefinite verbs given by Aristotle must be made. Does Boethius translate literally υἱαίνει and οὐ κάμνει by *non currit* and *non laborat* respectively? It does not seem so. William of Moerbeke (cf. Verbeke ed., 1961, p. 90) translates from Ammonius' lemma (cf. Amm. in *Int.* p. 147) these Greek indefinite verbs by *non sanat* and *non laborat* respectively. Certainly, the occurrence of *non currit* in Boethius' text is puzzling. It is not a current translation of υἱαίνει. Nothing is indicated by the apparatus in *AL* and *CCT*. Can have this any significance? The ancient commentators seem to have taken these examples as spontaneous creations of Aristotle's mind. However, Montanari (1988), vol.
16b11 'Non currit' vero et 'non laborat' non verbum dico; consignificat quidem tempus et semper de aliquo est, differentiae autem huic nomen non est positum; sed sit infinitum verbum, quoniam similitur in quolibet est vel quod est vel quod non est.

ii, pp. 206-7, notices that while Aristotle uses for the indefinite name only one example, here he uses two. Reasonably, he thinks that this fact does not alter the substantial identity of both passages (p. 206). But he thinks that Aristotle seeks out a paradigmatic function by means of this double example: Aristotle would suggest that οὐχ υγαίνει does not correspond to κάμνει, nor οὐκ κάμνει to υγαίνει, because the indefinite verb is not equivalent to its antonym. According to Montanari, this is accepted by the Anonymous Comm. (p. 8, 11. Taran, 1978), and Al-Farabi's in Int. (cf. p. 29, 17-21, Zimmermann). It is true that these two commentaries take the indefiniteness of an indefinite term in this sense; in Al-Farabi's commentary, besides, it is clear why: because he identifies indefinite term with privation, so that non-vider, as Al-Farabi illustrates, signifies the same as caecuit. Now, Montanari has attempted to reject this view; however his argument is objectionable. He states that 'non-sta in salute' does not corresponds to 'è malato', but it only excludes 'stare in salute', so that it can correspond to all the rest (pp. 206-7). But what does 'all the rest' imply here? Montanari's analysis assumes rightly that the indefinite verb always corresponds to all the rest of what is defined by the corresponding simple term; however, according to Aristotle (Cat. 11b. 38-12a. 25), sometimes the privation corresponds and is equivalent to the indefinite term, namely, when the term in question denotes a quality of the substance that inheres necessarily to it. This is confirmed by Ackrill (1963, p. 143), and W. Cavini (La Negazione di Frase nella Logica Greca, 1985, pp. 19-20). Now, in the examples used by Aristotle, if they finally denote health and sickness (at least they are taken so by Ackrill (1963), Edghill (1928), and Montanari (1988)), then Montanari's remark is wrong, because Aristotle says that "sickness and health naturally occur in animals' bodies and it is indeed necessary for one or the other to belong to an animal's body, either sickness or health." (Cat. 11b. 38 ff.) Therefore, if the semantic content of υγαίνει and κάμνει indicates straightforwardly 'sickness' and 'health' (certainly something difficult to detect in isolated examples), then οὐχ υγαίνει will be the antonym of κάμνει and οὐκ κάμνει of υγαίνει. In this sense, there is not a paradigmatic function in the examples given by Aristotle, unless one accepts that this function is to remind us that sometimes an indefinite verb (insofar as it is indefinite) coincides with its privation. Cf. also Part II, 1, A. (ii.5) Porphyry's and Ammonius expositions.
verb signifies in a certain way (*quemadmodum*) something indefinite:294

ait [Aristoteles] enim *non currit* non esse verbum et idcirco quod verbum omne finitum aliquid designat *non currit* autem quemadmodum infinitum sit paulo post demonstrabitur. quod neque oratio est.

Now, how the indefinite verb is indefinite will be demonstrated later (*paulo post demonstrabitur*), because the commentary will make first some points in explanation of its syntactic coherence.295

(ii) *The indefinite verb as a tota imperfecta sententia*

To fulfill this task, Boethius' plan is similar to that put into practice for commenting on the nature of indefinite name, that is, to determine whether the expression in question can be distinguished from the other elements that Aristotle defines in *PeriH*. Our expression is now *'non currit'*, i.e. 'does not run' and, in general, 'does not x', (where x is a simple and definite verb), and what Boethius intends is to show that it differs both from a phrase and a negation:296

in hoc enim quod dicitur *non currit* neque duo verba sunt neque duo nomina neque nomen et verbum, quae sola possunt iungere orationem. at vero negatio non est, etenim tota imperfecta sententia est.

This unique remark, which is found in the first commentary, distinguishes an indefinite verb from a phrase by means of the following argument: in an indefinite verb, there occur neither two verbs nor two names nor a name and a verb. Now, since these are

294 *in Int.* 10-13, p. 59.
295 Therefore, the expression *paulo post demonstrabitur* refers to the semantic considerations that the commentary gives us. They will be treated later in Part I, 2.2. Semantics.
296 *in Int.* 13-17, p. 59
the totality of combinations that produce a phrase (*quae sola possunt iungere orationem*), the commentary concludes correctly that an indefinite verb cannot be a phrase. The argument is remarkably effective, if one takes into account what has been stated earlier about the nature of phrase.\(^{297}\) Now, the indefinite verb is not a negative statement (*negatio*) either, adds the commentary, because it is a *tota imperfecta sententia*.

The expression *tota imperfecta sententia* requires not only a translation, but also a clarification that permits us to understand why Boethius sees in it a reason sufficient to ground the distinction in question: indeed, he could have demonstrated that an indefinite verb is not a negative statement by saying simply that if an indefinite verb is not a phrase, then it is not a negative statement, given that every negative statement is a species of phrase.\(^{298}\) Despite this, Boethius seems to prefer the mentioned formula. One could expect that the formula in question involves a more intrinsic reason, and this is precisely the case: Boethius has defined two species of phrase, namely, perfect and imperfect,\(^{299}\) and he has given as an example of imperfect phrase expressions like 'wild horse' (*equus ferus*), or 'to walk and say', i.e. spoken sounds compounded either by just names or just verbs, in which the sense is not complete.\(^{300}\) Now, when Boethius considers a phrase, and refers to its sense, he uses the expression 'sententia', and thus he says that a phrase compounded by just names or just verbs, that is, an imperfect phrase, does not have, as in the case of the enuntiatio, a *plenam sententiam*, that is, a full sense, or a complete thought:\(^{301}\)

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enuntiatio namque est perfectus orationis intellectus in quem veritas aut falsitas cadit. si quis ergo dicat *Catonis est*, nondum plenam sententiam est. quid enim sit *Catonis* non diciur.

\(^{297}\)See above: 1.1. (iii) *Indefinite name and λόγος*, and (iv. 2) *Boethius' interpretation of λόγος*.


\(^{299}\)cf. above (iv. 2) *Boethius' interpretation of λόγος*; see there in *Int.* 2, 28-32, pp. 80-81; see also in *Int.* 2, 2-5, p. 16.

\(^{300}\) Cf. in *Int.* 2, 28-32, pp. 80-1.

\(^{301}\) in *Int.* 2, 30-3, pp. 63-4.
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This is also clear in another passages; for example, when he refers to the difference between a complex word and a phrase, he says:

\[ \text{in eo quod est equiferus nihil significat ferus, quemadmodum in oratione quae est equus ferus. namque equus ferus vox composita ex nominibus est, sed sententiam non habet plenam et ille [i.e. Aristotle] ait quemadmodum in oratione quae est equus ferus.} \]

Accordingly, Boethius says that an indefinite verb is not a negative statement because a negative statement, as an *enuntiatio*, requires a complete sense, and in an indefinite verb no complete sense is present. Thus, he stresses, by means of this apparently puzzling expression, that an indefinite verb is not a negative statement, because it is not even an *imperfecta oratio*, i.e. a compound of names or a compound of verbs, which does not have a complete meaning (*plenus intellectus*), but an expression with a sense completely imperfect (*tota imperfecta sententia*), i.e. an expression whose characteristics are not even sufficient for being considered as an imperfect phrase, as the following will further show.

Our translation of 'sententia' as 'sense' is confirmed by G. Nuchelmans, who observes that "Boethius employs the word 'sententia', 'sensus' and 'intellectus' for the thought or meaning which is expressed by an *oratione*." As far as I see," he adds, "Boethius never uses *sententia* for the linguistic expression; it always means the thought expressed in contrast with the words expressing it." The translation in question seems to work...

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305 G. Nuchelmans, (1973), p. 125. Nuchelmans has grounded correctly his observation from a passage in the first commentary where Boethius states that "the words are conventional instruments to make known (prodere, proferre, demonstrare) one's thought (sensa, sententia)." (*Ibid.*, p. 125). Boethius here, in fact, says: "ita etiam [i.e. ut oculi instrumenta quidem sunt videndi] oratio rerum naturalium supellex est atque instrumentum id est sententiaram, quare ipsa quoque est naturalis. *Aristoteles* autem dicit non secundum naturam esse orationem, sed secundum placitum. quocirca nec esse orationem supellectilem naturalem, quod enim dicit *non sicut instrumentum*, non dicit non per hoc instrumentum sensa proferri, sed
consistently in the earlier passages referred to, and also in the following: when Boethius refers to the name's inflections, he says that each of these inflections, when nothing else is added to them, is a *trunca atque imperfecta sententia*:  

\[ \text{casus vero } \textit{neq} \text{uerum dicit neque mentitum.} \]  

Boethius uses this expression because a name together with a verb makes a proposition, that is, a sentence (*enuntiatio*) true or false, while expressions like *Catonis, Catonem* or any other inflection of the name do not.  

Even more, as the passage adds, the name's inflection gives a mutilated sense (*trunca sententia*), and also an incomplete one (*inperfecta sententia*), if nothing else is added. Indeed, if a name is added to an inflection, an imperfect phrase will be formed: e.g. 'vita Catonis', 'the life of Cato'; and if a verb is added, there is not yet a complete sense (*plenam sententiam*), as he said earlier:  

\[ \text{si quis ergo dicat } \textit{Catonis est, nondum plena sententia est.} \]  

Accordingly, one can say that in an indefinite verb, e.g. 'does not run', there is not only an *inperfecta sententia*, that is, an incomplete sense, as in the case of the imperfect phrase, (e.g. 'the life of Cato'), but also a *trunca et imperfecta sententia*, because in an indefinite verb has been not made any sense yet, and the act of judgement (that by which a negative statement would be formed in this case) has been not completed, for something to which the predicate 'does not run' belongs is not present.  

The earlier passage explains why Boethius uses the expression *tota imperfecta sententia* as an intrinsic reason to state that an indefinite verb is not a negation: because it is not even an  

\[ \text{tantum rem esse orationem secundum positionem, per quam proprias sententias demonstremus.} \]  

*In Int. 7-15, p. 70.*  

\[ \text{cf. in Int. 11-12, p. 55.} \]  

*In Int. 2, 8-11, p. 55. ergo differt nomen casu, quod nomen quidem cum est aut non est iunctum aut verum aut falsum facit, casus vero } \textit{neq} \text{uerum dicit [sc. Aristotle: 16a. 32 ff.]} \textit{neque mentitum.} \]  

*In Int. 2, 2-3, p. 64. See also here above.*
inperfecta oratio. However, it imports another problem, namely, why does not Boethius use the expression trunca atque inperfecta sententia for the indefinite verb? In other words, what is added in the expression tota inperfecta sententia? A reason why in an indefinite verb there is also a tota inperfecta sententia can be provided from his earlier comments on PeriH. 20a. 36, where Aristotle says: "but one who says 'not-man' —without anything else— has no more said something true or false (indeed rather less so) than one who says 'man'". Indeed, if—as Boethius comments on this point— "indefinite expressions (dictiones) show less truth or falsity than the simple ones", then one can infer that a reason for calling an indefinite verb a 'tota inperfecta sententia' is its added incapacity to signify something determined, something that an inperfecta sententia can, and a trunca sententia in some way can as well. Thus, given that the indefinite verb differs from a phrase and also from an inflection, Boethius defines this difference as a tota inperfecta sententia.

The above suggests that the indefinite verb exists as such, and that even though its being is not more than a tota inperfecta sententia, it maintains an existence, safe, from a syntactic perspective. Probably, then, one does not need to suppose that the indefinite verb is a well-defined expression, as Ackrill seems to do when he starts his comments on its nature, but simply to start from it as one would start from an elementary and primitive notion of a theory. But even so, why does not Aristotle take a more simple path and say that the indefinite verb does not exist and only the definite verb and the negative particle? Why does not he say simply, as Ackrill does, that "'does not recover' is a sentence-fragment, containing an ordinary verb together with the negative particle that will make the sentence a negative one"? Is really the indefinite verb a misnomer as Ackrill remarks? Probably, Aristotle does not fail to understand that an indefinite verb like υγάλω contains two terms and not one: but what is

309 cf. in Int. 2, 8-10, p. 338; and above 1.2 (vii) Indefinite names and truth.
310 cf. Ackrill (1963), p. 120. The introductory statement of Ackrill: "An indefinite name, then, appears to be an expression consisting of negative particle and verb", is not a conclusion derived from his previous words. Rather it seems to be a point that he grants to Aristotle in order to introduce his further criticism.
his purpose in maintaining expressions like that as an elementary expression? The following reflections contained in Boethius' commentary will clarify the answer to these questions.

(iii) **Indefinite verb and negation**

The second commentary presents an entirely new perspective concerning the syntax of the indefinite verb. Boethius develops what apparently was a doctrine already in Alexander of Aphrodisias and "many other [Peripatetics]". According to Boethius, indefinite verbs are ambiguous because they can be perceived as indefinite verbs or as definite verbs with a negative particle:

\[(...) infinita verba ambugui intellectus sunt, an infinita videantur an cum negatione finita.\]

As the commentary implies, the syntactic structure of an indefinite verb is equal to that of a negation when they are compounding a proposition. In fact, by the expression 'non ambulat', i.e. 'does not walk', we mean both a negation and an indefinite verb:

\[id enim quod dicimus non ambulat et infinitum verbum et negatio, sed per se quidem si dicatur simplex sine aliquibus aliis adiectionibus infinitum verbum est; sin vero cum nomine aut cum infinito nomine proferatur, non iam verbum infinitum, sed negatio accipitur: (...)\]

Consequently, if we want to distinguish a negation from an indefinite verb, we have to observe if the expression construed with a verb and a negation (e.g. 'non ambulat', 'does not walk')

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311 As we will explain later (Part I, 5., (c) Alexander's testimony), Boethius refers to Alexander of Aphrodisias as one (or perhaps the chief) of many other Peripatetics (ceteri complures) that affirm that there are no indefinite verbs in affirmations (cf. in Int. 2, 8-16, p. 317). The point is confirmed by Ammonius who refers to Alexander as the commentator who considered this matter (cf. in Int. p. 157, 9-24).

312 in Int. 2, 4-5, p. 262.

313 in Int. 2, 6-9, p. 261
comes alone or in conjunction with a subject, as the passage points out, there is an indefinite verb when it occurs without any subject (sine aliquibus aliis adiectionibus), but if there is a subject present, either a name or an indefinite name (cum nomine aut cum infinito nomine proferatur), there will be present not an indefinite verb, but a negation, i.e. a negative statement.

In Boethius' opinion, Aristotle knew (noverat) that an indefinite verb can be understood both as a negation and an indefinite verb:314


A proof of this, the commentary adds, is that he, correctly, did not make any difference between propositions, starting from indefinite verbs.315

quare recte nullam differentiam propositionum de infinitis verbis fecit.

Aristotle, in fact, distinguished indefinite names from definite ones in propositions, but he did not observe a consequent difference between indefinite verbs and definite ones, "because he knew that the indefinite name keeps the quality of the proposition in which is found, (...) but verbs that are indefinite, when they compound a proposition, do not make an affirmation, but they state a negation (perficere negationem)".316

sed quoniam noverat nomen quidem infinitum conservare propositionem quam invenisset, ut si in adfirmativa diceretur adfirmativam servaret enuntiationem, ut est non homo ambulat, si in negativam, ut est non homo non ambulat, verba vero quae sunt infinita iuncta in propositione non adfirmationem, sed perficere negationem.

314 in Int. 2, 4-6, p. 261.
315 Cf. in Int. 2, 21-22, p. 261.
316 cf. in Int. 2, 11-17, p. 258.
Therefore, the commentary remarks, when Aristotle, in what is our beginning of Chapter 10, divided the simplest of the categorical propositions, namely, those with two terms (subject and predicate, e.g. 'homo ambulat', 'a man walks') by considering whether their subject is definite or indefinite, and when he generated corresponding propositions from these elements, he kept tacit (reticuit) these indefinite verbs in this division, because they constitute properly the quality of the proposition, that is, the negation, rather than affirmations with indefinite verb:

idcirco de his reticuit, quod hae magis quae ex verbo infinito sunt ad unam qualitatem pertinent propositionis id est ad negativam.

Despite this syntactic similitude, the point is clear for Boethius: indefinite verbs are indefinite if they are isolated:

infinita enim verba tunc sunt infinita, cum sola sunt.

So, if they occur with a name or an indefinite name, they are not indefinite verbs any more, but definite, though they must be understood with a negation in every proposition (which results — by the same reasoning— in a negative).

si vero cum infinito nomine iungantur aut nomine, non infinita verba iam sunt, sed finita, cum negatione tamen in tota propositione intelleguntur.

In this point, we could reiterate our earlier question: why does Aristotle maintain the indefinite verb as a syntactic unity?

317 Boethius' commentary here refers to the initial paragraph of Chapter 10 (19b. 5-18) where —according to the commentary— Aristotle divides or classifies the simplest of the categorical propositions or those with two terms and intends to calculate their number. Cf. in Int. 2, 3-8, p. 258; and in Int. 2, 16-23, p. 251; (see also later Part I, 4., (iii. 1) The classification of categorical propositions).
318 in Int. 2, 18-20, p. 259. ("He [sc. Aristotle] kept silence about these [i.e. the indefinite verbs], for these [propositions] which are [construed] with indefinite verb belong rather to one [of the] qualities of the propositions, namely, the negative one.").
319 in Int. 2, 22-23, p. 261.
The following passage shows that Aristotle would accept that the negative particle, indirectly, states the negation, but not without attaching it to the verb, that is, not without forming first an indefinite verb: \(^{321}\)

\[
\text{ut non negativa particula cum ambulat iuncta infinitum verbum efficiat non ambulat, sed in propositione quae est homo non ambulat hominem non ambulare designet.}
\]

So, the answer of the commentary seems to be this: because it is not directly the negative particle that states the negation, but the indefinite verb: \(^{322}\)

\[
\text{semper enim fit ex infinito verbo negatio}
\]

The point is confirmed by Boethius' report on Alexander of Aphrodisias, where the indefinite verb is said to state the negation just as the verb 'to be' (\textit{verbum est}) does: \(^{323}\)

\[
\text{et hoc quidem Alexander Aphrodisius arbitratur ceterique complures. idcirco enim aiunt non posse fieri ex infinito verbo adfirmationem, quoniam sicut verbum est infinitum verbum mox totam perficiet negationem, sic etiam verba quae in sese conplectuntur verbum est non facient infinitam adfirmationem, sed potius negationem.}
\]

The passage establishes a strict parallel between the verb 'to be' and the other verbs, which are said to contain the verb 'to be' (\textit{verba quae in sese conplectuntur verbum est}). When the verb which contains the verb 'to be' states the negation, it acts like 'is not', i.e. like the negation of the verb 'to be'. The passage, then, implies that the verb 'to be' functions as any other verb when it states a negation, and that this mechanism of negation is not stated by the sole negative particle, but by the indefinite verb, in either of its two forms.

\(^{321}\) \textit{in Int. 2, 9-14, p. 261.}  
\(^{322}\) \textit{in Int. 2, 20-21, p. 258.}  
\(^{323}\) \textit{in Int. 2, 8-16, p. 317.} This passage has been also treated at Part I, 5., (c) Alexander's testimony.
Thus, the indefinite verb seems to be required, as a syntactic unity, by the constitution of the negation. But now: Why does Aristotle adopt this mechanism? Boethius' answer seems to be the following: this mechanism is the only unequivocal one. And this is the reason why Aristotle would consider convenient (placet) to attach the negative particle to verbs, even though this mechanism could introduce the mentioned ambiguity that the indefinite verb appears either as indefinite verb or definite with a negation:\(^{324}\)

\[
\text{sed quoniam Aristotelli placet verbis negationes oportere coniungī, infinīta magis verba ambigui intellexitus sunt, an infinīta videantur, an cum negatione finita.}
\]

In fact, the commentary adds, if one adopts the Stoic system, and one attaches the negative particle to the name, then an ambiguity will follow:\(^{325}\)

\[
\text{si ergo, quemadmodum Stoici volunt, ad nomina negationes ponerentur, ut esset, non homo ambulat negatio, ambiguum esse posset, cum dicimus non homo an infinitum nomen esset, an vero finitum cum negatione conjunctum.}
\]

In the concern of constituting a negation, the Stoics lead us to an expression like non homo ambulat, because they attach, in Boethius' opinion, the negative particle to the name. This practice could be ambiguous, remarks the commentary, because here non homo could be both an indefinite name and a definite name with a negation. Probably, then, what the commentary implies is that in the first case the proposition will be an affirmation, while in the second a negation.

Naturally, one could disagree with Boethius' interpretation of the Stoic negation,\(^{326}\) but the point in his commentary is

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\(^{324}\) cf. in Int. 2, 2-5, p. 262.

\(^{325}\) In Int. 2, 26-2, pp. 261-2. Details of this system are given in Part I, 5., (b) The Stoics and Peripatetics on negation.

\(^{326}\) We have discussed this interpretation at Part I, 5., (b) The Stoics and Peripatetics on negation. By now, one should bear in mind that the disagreement between the Stoics and Boethius' position takes into account
properly to show that the Peripatetic system of negation is not ambiguous. In this system, the indefinite verb is essential, because, as the commentary implies, through its existence, Aristotle would avoid an misplacement of the negative particle, so that its role in the constitution of the negation could explain why Aristotle maintains its existence as a syntactic unity.

Boethius' interpretation, based probably on certain development by Alexander of Aphrodisias and ceteri complures on Peripatetic negation, is an interpretation of what Aristotle knew (noverat) but left implicit (reticuit) in PeriH. Boethius seems to be aware of this, for the commentary suggests finally that Aristotle in PeriH. makes only a difference between names and indefinite names in propositions, and not one between verbs and indefinite verbs, because he was referring to the whole, that is, names, indefinite names, on the one hand, and verbs, on the other hand, and here, in the compound of these elements, that which is said to be by itself an indefinite verb is a negation.327

atque ideo hic solam differentiam nominum et infinitorum nominum in propositionibus dedit, non etiam infinitorum verborum, idcirco quod de coniunctis loquebatur, scilicet de nominibus vel infinitis nominibus atque verbis, in qua coniunctione id quod per se infinitum verbum dicitur negatio est. neque enim oportet sicut omnis propositio aut ex finito nomine aut ex infinito constat, id quoque aut ex finito verbo, aut infinito constare.

(iv) Ackrill's criticism: is the indefinite verb a misnomer?

Now, one of the criticisms that Ackrill has advanced has a direct relation to the point that Boethius' commentary explains here. According to Ackrill, Aristotle "evidently realizes that in 'a man does not recover' the 'not' does not turn the verb into

the simplest of the categorical proposition, that consisting of two terms, subject and predicate, as it is expressed in Greek or in Latin language, i.e. propositions like: ἄφθατος ἐκβάλε, homo ambulat. Here, as is clear, there are only two ways of stating a syntactic mechanism of negation: either the negative particle with the subject or with the predicate (which always is a verb here).

327 cf. in Int. 2, 9-14, p. 262.
something indefinite, but turns the whole sentence into a negative one, one which denies something definite, not one which affirms something indefinite."\textsuperscript{328} This is, in fact, the chief reason that Ackrill maintains to consider that the expression 'indefinite verb', which Aristotle introduces, is a misnomer.\textsuperscript{329}

Boethius recognises this problem that Ackrill observes. However, the answer of the commentary is simply that there do not exist indefinite verbs in propositions, although always (\textit{quotiens}) something similar is put, which is a definite verb, so that the negation together with it deprives and destroys the complete proposition:\textsuperscript{330}

\begin{quote}
infinitum enim verbum in propositionibus non est, sed quotiens aliquid (ut dictum est) tale ponitur, finitum quidem verbum est, sed illi iuncta negatio totam propositionem privat ac destruit.
\end{quote}

Thus, it is necessary that an indefinite verb together with a subject makes a negation, but an indefinite name together with a verb does not necessarily make a negation. In fact, 'a not-man walks' is an affirmation, not a negation, as the commentary also remarks.\textsuperscript{331} Thus, in the proposition 'a man does not walk', 'to walk' is denied of a man, not —on the contrary— predicated of him. Hence, it is a negation rather than an affirmation. Certainly, remarks the commentary, if it were an affirmation, i.e. if the verb were indefinite, then something would be predicated of something, but here rather something is excluded from something, and consequently there is not an indefinite verb here, but a negation:\textsuperscript{332}

\begin{quote}
\textsuperscript{328} Cf. Ackrill (1963), p. 120.
\textsuperscript{329} \textit{Ibid.} p. 120.
\textsuperscript{330}in \textit{Int.} 2, 17-21, p. 262. The concrete meanings of the verbs 'privo' and 'destruo' make their translation difficult in this context. The alternative 'it separates and deconstructs' could be also derived from \textit{TLL} and \textit{OLD}. 'Destrue' (opposite to 'construo') is sometimes used to express deconstruction of what was construed (\textit{quod structum erat}). Cf. \textit{TLL}. As to 'privo', it should correspond to \textit{ἀναφέρω} (cf. Amm. \textit{in Int.} p. 87, 14 ff.: \textit{ἀναφέρω} τὴν κατάφοσην), and so 'to separate' could be a translation. The concrete meaning in Ammonius (\textit{ibid.}) relates to D. Thrax \textit{Scholia in Artem}, p. 516, 28-36. (Cf. also above \textit{1.1}, (iv) \textit{Ammonius' interpretation of λόγος}).
\textsuperscript{331}in \textit{Int.} 2, 21-25, p. 262.
\textsuperscript{332}in \textit{Int.} 2, 31-6, pp. 262-3.
\end{quote}
qui enim dicit *homo non ambulat*, ambulationem ab homine tollit, non de homine praedicat. quare negatio potius quam adfirmatio est. si enim adfirmatio esset, id est si verbum esset infinitum, aliquid de aliquo praedicaret. nunc autem aliquid ab aliquo tollit: non est igitur verbum infinitum, sed potius negatio, quotiens in tota sumitur propositione.

This distinction is not applied by Ackrill, and the origin of his doubt arises from here. He says that "'does not recover' is a sentence-fragment, containing an ordinary verb together with the negative particle that will make the sentence a negative one", but, according to Boethius' interpretation, what is really found in 'does not recover' is an indefinite verb, because this is such when it is isolated, and it will transform the proposition in which it is predicated into a negative statement, i.e. into a definite verb which is separated from the subject by the negation. Thus, according to Boethius, an indefinite verb is not a misnomer, as Ackrill concludes.

(v) Predication and proposition: the genesis of a negation

In respect of the syntax of the indefinite verb, there is a question whose solution deserves an attentive analysis. There are two affirmations in Boethius' commentary —indeed no more than the expression of what Aristotle entails in *PeriH*— which apparently generate a contradiction. These two statements are:

(a) there are no indefinite verbs in propositions, and
(b) "the indefinite verbs are predicated indifferently of anything whether existent or non existent."

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333 *Ibid.*, p. 120.
334 This is the consequence that Boethius' commentary has drawn from 19b. 10-11 (ἐστιν πάσα κατάφως ἡ ἐν οὐκόμως καὶ ρήματος ἡ ἐν διάφορον οὐκόμως καὶ ρήματος. "So every affirmation will contain either a name and a verb or an indefinite name and a verb.").
335 This is literally stated of the indefinite verb by Aristotle at 16b. 15 (ὅτι ὁμοίως ἐφ' ὁτοιοῖν ὑπάρχα καὶ ὑπός καὶ μὴ ὑπός; "because they hold indifferently of anything whether existent or non-existent", in Ackrill's translation).
Aristotle contradicts himself in maintaining (a) and (b), because while (a) does not accept the predication of indefinite verbs, (b) does. E. Montanari has presented this problem as one arising from the very centre of Aristotle's treatment of the indefinite verbs in *PeriH.*, and after his analysis, he has pointed out that "si dovrà quindi concludere —nonostante le gravi incertezze che la situazione comporta— che 'il verbo indefinito' non può entrare in un' enunciazione, e che ὅπως ἐφ' ὑπάρχει καὶ ἐν τοιούτῳ μὴ ἐν τοιούτῳ deve essere inteso in modo più vago, e non strettamente proposizionale. In altri termini, il 'verbo indefinito', proprio a causa della sua palese artificiosità, non è abilitato a far di un' enunciazione ordinaria". 336

According to our analysis, however, there are no reasons to rest content with the conclusion that Aristotle would maintain a vague theory about the indefinite verbs in *PeriH.*, and there is no reason even to think that (a) and (b) are in contradiction. The respective solution is already implicit in Boethius' explanation of the syntactic nature of the indefinite verb. As we will show, Montanari has payed attention to the wrong passages of Boethius' and Ammonius' commentary to try to solve this presumed conflict, and his pessimistic conclusion that there exists an 'open question' in Aristotle's, Boethius' and Ammonius' reflections on the nature of the indefinite verb follows that wrong selection.

In his analysis, Montanari notices first that while the indefinite name takes importance again in Chapter 10 of *PeriH.*, the indefinite verb does not appear any longer, and apparently does not play any role. Hence, he gives to the indefinite verb an added qualification, which he must maintain, namely, that this kind of verb is an artificial element. This qualification, which is not far from what Ackrill also believes, puts Aristotle in an awkward position: to have multiplied the elements and basic concepts more than it was necessary. On this basis, Montanari is right to ask, emphatically, for the sense and purpose that Aristotle had to introduce the notions of indefinite name and verb, since

they, in his view, seem to maintain rather an artificial and hidden unity.337

Boethius' commentary, as we have seen earlier, states that the indefinite verb exists as such only when it is isolated, that is, only when no subject, whether definite or indefinite, is attached to it. Now, since the indefinite verb does not really exist in propositions, but rather we face here negations and affirmations, the obvious question is what is the role of the indefinite verb. Boethius answers this question directly: the role of the indefinite verb is to state (perficere) the negation. The answer eliminates, certainly, every suspicion of an artificial role. Indeed, what Boethius tells us is that the indefinite verb is essential to produce a negation, and that in the process of generating a negation—a point which is more related to PeriH. than what is usually realized—the indefinite verb, and not the negative particle plus a definite verb, plays directly the constitutive role. The result of this generation is, certainly, not an affirmation with an indefinite verb, (i.e. the affirmation of an indefinite action), as Boethius' commentary remarks, but a definite verb with a negative particle (i.e. the negation of a definite action). Thus, the thing is that, according to what Boethius tells us, Aristotle explains the syntactic constitution of the negation by means of the indefinite verb.

In this context, the indefinite verb is all the contrary to an artificial device of surreptitious nature. However, this is not all. At the same time, the analysis of Boethius' commentary shows the existence of two clearly distinguishable levels: (i) the level of the predication, and (ii) the level of the proposition. Both are, of course, two 'moments' of the same process of constituting a negation, but they are irreducible one to another as much as the indefinite verb and the negation are. Now, to recognize these two levels implies the dissolution of Montanari's aporia, since the indefinite verb can be predicated and, at the same time, not appear in a proposition. All this will depend on the level of consideration: certainly the predication of an indefinite verb is a

337 Cf. Montanari (1988), vol. ii, p. 155. "Artificiosa e surretizia" is said of the linguistic unity of indefinite name. We take this formula as applicable to the case of indefinite verbs, since they receive —also in Montanari's view— an analogous treatment in so far as they are indefinite.
condition *sine qua non* of a negation, and therefore, the existence of an indefinite verb takes place from its isolated position until it constitutes a negation by being attached to a subject; so that the negation or the negative proposition takes place as a final product, indeed as sense or reading of the resultant proposition. In other words, the stage of predication (i) 'a man + does not walk', does not contradict the propositional or resultant stage (ii) 'a man does not walk'.

Now, Montanari has proposed (a) and (b) as irreconcilable points in Aristotle's exposition of the nature of the indefinite verb at *PeriH*. He also has suggested that Boethius and Ammonius have attempted a precision in (b), i.e in the phrase ὅτι ὁμοίως ἐφ' ὁτοιοῦν ὑπάρχει καὶ ὑπότος καὶ μὴ ὑπότος, in order to resolve this presumed contradiction, but this precision, in his view, has not been sufficient, so that the problem still remains. The precision in question is that Aristotle would say ὑπάρχει in (b) in the sense of true predication. It is a remarkable fact, however, that neither Ammonius nor Boethius make a point of the relationship existing between (a) and (b). Even more, both commentators introduce the precision alluded to by Montanari without mentioning that, by means of it, (a) and (b) become compatible. And even less convincingly, Montanari says that if the interpretation given by Boethius and Ammonius of (b) were correct, then one should conclude that the indefinite verb can be present only in true propositions. However, if this interpretation were correct, Montanari argues, then (i) one should conclude, absurdly, that the indefinite verb can be present in a proposition, but it will be impossible to distinguish it from a negation. And this is not all, he thinks, because if we accept that the indefinite verb can be

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338 Besides, that the distinction between predication and proposition is not *ad hoc*, but rather one which became clear for medieval logicians, is a clear point from G. Nuchelmans *The semantics of propositions* (in *The Cambridge History of Later Medieval Philosophy*, Cambridge 1982, p. 197). As Nuchelmans expresses "Most medievals were aware of a distinction between a *complexio* in the sense of mere predication, without any assertive (or other) force, and a *complexio* which is accompanied by an act of judging or asserting that it is so." He adds, to ground his observation, that "Abelard considered mere predication as the common element in different speech acts; and from the beginning of the twelve century it was customary to distinguish between an act of merely putting a predicative combination before the mind and an act of judging that that combination is the case in reality." (*Ibid.*, p. 197).
present only in affirmations, then (ii) we will also come to an absurd consequence, since here there would be no way of forming an affirmation with indefinite verb, since 'subject + ὑγαίνει' is an affirmation, 'subject + οὐκ ὑγαίνει' a negation, and 'subject + οὐκ οὐκ-ὑγαίνει' is a nonsense which does not correspond to the negation of the affirmation 'subject + οὐκ-ὑγαίνει', because this last expression would be a negation.

But this is unapplicable to the ancient commentators. It is true that both Boethius and Ammonius take (b) in the sense of a true, and even veridical predication. We have given, in fact, the same interpretation of the passage in question, but that precision is far from being one striving to resolve the conflict between (a) and (b), and even is far from being a syntactical remark.\textsuperscript{339} As we will show later,\textsuperscript{340} what Ammonius and Boethius explain in this respect is that an indefinite verb can be predicated of what is real (e.g. a man) and of what is unreal (e.g. a chimera); and in both cases the predication can produce a true and veridical proposition, and not only a proposition having a sense. In these ancient commentators, the remark is frankly semantic, and, as we said earlier, in the development of this remark there is no implication concerning the relationship between (a) and (b).

All these misinterpretations can be avoided if we follow Alexander of Aphrodisias,\textsuperscript{341} Ammonius and Boethius, who state clearly that the indefinite verb exists only when is isolated, and that there are no indefinite verbs in propositions. Montanari has payed attention to the wrong passage: to make a distinction between 'predication' and 'proposition' is the right way to interpret the condensed remarks of Aristotle about the nature of the indefinite verb and negation in \textit{PeriH}..

2. 2 Semantics

(i) The definite and indefinite verb: similitude and difference

In the text where Aristotle alludes to the notion of indefinite verb, namely:

Its definition creates a serious doubt (maximam dubitationem), because it is the same (idem) as that of the definite verb, namely, a significative spoken sound (vox designativa), by convention (secundum placitum), which is predicated of something else (de altero praedicatur), and with a temporal connotation (consignificat tempus). The difference, however, between these two kinds of verb is perceived (perspicitur), as the commentary points out, only in this (hoc solo): that one verb is definite and the other indefinite:

alioquin maximam dubitationem facit huius praedicamenti similitudo, quod ipsum quidem praedicamentum vox est designativa secundum

342 The translation that Boethius has made of these words, which are similar to that of his lemmata of the first and second commentary, runs:

'Non currit' vero et 'non laborat' non verbum dico; consignificat quidem tempus et semper de aliquo est, differentiae autem nomen non est positum; sed sit infinitum verbum, quoniam similiter in quolibet est vel quod est vel quod non est.

343 Details about the historical aspect of this doubt are given in Part I, 3., Antiqui et antiquiores.
344 in Int. 26-1, pp. 59-60.
placitum et de altero praedicitur et consignificat tempus, idem scilicet quod verbum quod est currit. sed hoc solo differre perspicitur, quod illum finitum verbum est, hoc infinitum.

And given this only difference, the commentary will advance a further consideration of why this verb is indefinite:345

cur autem hoc infinitum est continua oratione persequitur.

According to this, the difference between a definite and an indefinite verb is that the indefinite holds indifferently (aeque) of anything whether existent or non-existent:346

infinitum, inquit, verbum est, quoniam cum de altero semper praedicitur (non currit enim de altero dicitur), tamen aeque vel de subsistente re vel de non subsistente praedicari potest, ut in eo quod est homo non currit.

As the commentary explains in a following remark, this difference not only indicates this (nec solum hoc), but also (sed illum etiam) that a definite verb, like 'runs' (currit), signifies definitely (definite) what it signifies:347

nec solum hoc, sed illum etiam, quod qui dicit currit rem quam quisque faciat definite significat, cum vero dicit non currit, ipsum quidem cursum videtur auferre, sed utrum sedeat, an iaceat, an ambulet, an quid aliud faciat non relinquit.

Indeed, when one says 'does not run' (non currit), the action of the verb (cursum, in this example) is seen to be excluded (videtur auferre), but any other action is not left aside (non relinquit).

As other textual parallels can show, the difference between the definite and indefinite verb is similar to that expressed in the case of the name and the indefinite name.348 Thus, these passages

345 in Int., 1-2, p. 60. In MSS: continuo ratione and continua ratione.
346 in Int. 5-9, p. 60.
347 in Int., 18-22, p. 60.
348 For example: in Int. 11-15, p. 52. omne enim nomen unam rem significat definitam nec quamlibet, ut cum dicimus homo, substantiam significat nec
of the first commentary come to confirm not only the existence of a common genus for the definite and the indefinite verb, but also that the phrase of 16b. 15, namely, ὡς ὀμοιὸς ἐφ' ὄντων ὑπάρχει καὶ ἄντως καὶ μὴ ἄντως, stands for the specific difference of the indefinite verb, and so for the difference by which the indefinite verb is excluded from the integra definitio verbi, which—as is clear from these texts—imports the aspect of definite signification.349

(ii) "What is excluded is definite but what is posited is indefinite"

According to the commentary, an indefinite verb like 'does not run' is called (dicitur) 'indefinite' because it is predicated (praedicatur) both of things that exist and have a place in the nature of things (subsistit atque est in rebus), and of things that neither exist nor will be able to exist (neque est neque esse poterit): 350

ergo id quod est non currit et de ea re quae subsistit atque est in rebus dicitur et de ea quae neque est neque esse poterit praedicatur; quare infinitum verbum dicatur.

The commentary adds that these things which are existent and non-existent are indetermined (infinita sunt), and the verb is called 'indefinite' because it is predicated of all of them (de his omnibus): 351

quamlibet, sed rationalem atque mortalem, eodem modo et cetera nomina. And also in Int. 2, 16-19, p. 62. omne enim nomen (ut dictum est) definite id significat quod nominatur nec similiter et de eo quod est et quod non est dicitur. Cf. also above 1.2, (iv) The extension of an indefinite signification.

349 in Int. 26-1, pp. 61-2. ergo integra definitio verbi: verbum est vox significativa secundum placitum cum tempore, cuius nulla pars extra significativa est separata, definitum aliquid significans, presentis significationis tenens.

350 in Int. 14-17, p. 60.

351 in Int. 22-26, p. 60.
quare quoniam et ea quae sunt et ea quae non sunt infinita sunt et de
his omnibus praedicatur quoniamque id quod tollit finitum est, quid
vero ponat infinitum, propter haec verbum vocabitur infinitum.

This remark is also similar to one made in the case of the
indefinite name, but now, as the passage shows, a further and
more precise point is added: the denomination 'indefinite' is given
not only because the indefinite verb is predicated of existent and
non-existent things, which are indetermined, but also because in
the signification of every indefinite verb what is excluded (tollit)
is definite but what is posited (ponat) is indetermined.

This particular point here mentioned by Boethius' commentary resolves a second objection that Ackrill has
advanced, namely, "It does not seem helpful to call such an
expression indefinite, for it is not a sign that something indefinite
holds of something but a sign that something definite does not
hold." This objection maintains that there is no special reason
for calling the indefinite verb 'indefinite', because here the case —
as Ackrill correctly observes — is that something definite does not
hold, and not that something indefinite holds. Ackrill's remark is
again perspicacious. However, as Boethius' commentary points out,
the special reason for this denomination considers the indefinite
verb in its isolated position, and here an indefinite verb signifies
its content in such a way that it not only excludes something
which is definite, but also, at the same time, it posits something,
which is indefinite. Now, the particular denomination of the
indefinite verb is taken from this aspect which is posited, not

352 cf. in Int. 21-23, p. 52. sed multa atque infinita unusquisque auditor
intelligit: dicatur, inquit nomen infinitum. Cf. also above 1.2, (iii) The
indefinite signification of the indefinite name.

353 Besides, the same aspect has been referred to earlier by Boethius to
explain that names and verbs are largely less capable of truth or falsity (cf.
in Int. 2, 8-25, p. 338, and also above 1.2, (vii) Indefinite names and truth).
In that passage, he explains that this characteristic is due to the fact that
"they do not even either posit what they mean, but what they exclude
(perimunt)" (ibid., 19-21, p. 338). In this sense, Boethius here emphasises
that in 'not-man' the present species (i.e. 'man') is deleted, and we are
given to understand something indefinite, which by itself posits nothing
(ibid., 14-15, p. 338).

354 cf. Ackrill (1963), p. 120.
from that which is excluded, and for that reason the indefinite verb is denominated 'indefinite'.

(iii) Does a chimera run? the ontological context

After these preliminary remarks, the task of commenting on Aristotle's phrase of 16b. 15: δι' ὄμως ἐφ' ὄτουου ὑπάρχε καὶ δύτος καὶ μὴ δύτος is undertaken. The commentary starts by indicating that Aristotle has observed that the indefinite verb is always predicated of something else, and this is illustrated by means of an example: 'does not run'. Certainly, this indefinite verb is said of something else. However, as the commentary observes, the indefinite verb can be indifferently predicated (aeque praedicare potest) of things that exist and things that do not exist—as in the case of a man (who is existent) and a chimera (which does not exist and does not have any real subsistence). Therefore, 'does not run' is said of things that actually exist, and also of things that do not exist and will not be able to exist (poterit).355

Infinitum, inquit, [sc. Aristotle] verbum est, quoniam cum de altero semper praedicetur (non currit enim de altero dicitur), tamen aeque vel de subsistente re vel de non subsistente praedicari potest, ut in eo quod est homo non currit. homo res est subsistens: ergo dicitur id quod est non currit de homine id est de re subsistente. rursus dicimus chimera non currit. chimera vero non est nec omnino subsistit et potest de ea vere dici, quoniam non currit. quod enim omnino non est, et non currit. ergo id quod est non currit et de ea re quae subsistit atque est in rebus dicitur et de ea quae neque est neque esse poterit praedicatur;

The point made by the commentary is that 'does not run', which is an indefinite verb, can be truly said (potest vere dici) both of things that do not exist, like a chimera, and things whose existence is real, like a man. Accordingly, what seems to be here excluded is the possibility of a true predication of a definite verb, like 'run', of

355 in Int. 5-17, p. 60.
something that does not exist because the proposition which is resultant, namely, 'a chimera runs', cannot be true.

Therefore, in order to distinguish definite from indefinite verbs, Boethius' commentary seems to assume that the predication of a definite verb cannot be true of everything, whether existent or non-existent, while the predication of an indefinite verb can be true of existing things and non-existing things. In other terms, things that are existent, e.g. man, can be predicative subjects of indefinite and definite verbs, but things that are non-existent cannot be truly predicative subjects of definite verbs, because in such an affirmation there would be an ontological incompatibility, which would produce the falsity of the corresponding proposition. Hence, the same point seems to be expressed more clearly if the verb 'to be' is taken with an existential meaning. In this case, while it can be true to say 'a man is', and 'a man is not', and even 'a chimera is not', because this last proposition can also be true, it cannot be true to say 'a chimera is', because this proposition is false. Let us retain, therefore, this result in two equivalent principles:

(a) What does not exist cannot be truly a grammatical subject of a definite verb.
(b) What does not exist can be truly a grammatical subject of an indefinite verb.

(iv) Truth and predication of the indefinite verb

In the second commentary the signification of the indefinite verb is presented through a comparison equating the signification of the indefinite verb to its previous explanatory notes on the signification of the indefinite name.\textsuperscript{356} This comparison shows that an indefinite name and an indefinite verb, inasmuch they hold an indefinite signification, are determined by the same characteristic, namely, the formula at 16b. 15: \(\text{o} \text{i omoiouv } \text{e} \text{p} \text{' } \text{o} \text{to} \text{no} \text{uv } \text{upar} \text{che} \text{a } \text{kai}

\textsuperscript{356} On signification of indefinite names and \textit{quoniam similiter in quolibet est, et quod est et quod non est}, see \textit{in Int. 2}, 5-19, pp. 61-62; and also above 1.2, (iv) \textit{The extension of an indefinite signification}. 08
Accordingly, that which is a not-man can be a centaur, a horse and, in general, any other thing that is existent or is not-existent. The same, as the commentary points out, should be applied to indefinite verbs: 'does not run' or 'does not work', which are by themselves indefinite verbs, can be predicated of what is existent and what is not-existent.358

Quemadmodum dixit in nomine non homo nomen non esse, idcirco quod multis aliis conveniret, quae homines non essent, quoniamque id quod diceret auferret nihilque definitum in eadem predicacione relinquaret (quod enim non homo est potest esse et centaurus, potest esse et equus et alia quae vel sunt vel non sunt atque ideo infinitum nomen vocatum est): ita quoque etiam in verbo quod est non currit vel non laborat infinitum quoque ipsum est, quoniam non solum de eo quod est verum est, sed etiam de eo quod non est praedicari potest.

However, in the last line of this quoted passage, this manifest comparison is altered by introducing a small but very significant phrase qualifying the predication of the indefinite verbs, namely, verum est (quod praedicari potest). Certainly, the commentary had not mentioned this phrase for the case of the indefinite name, so that the word 'truth' had been excluded from the treatment of the signification of the indefinite name. It must be recalled, however, that Boethius has also mentioned a similar formula in his comments on the signification of the indefinite verb in his first commentary.359 Why does this occur? As a matter of fact, all that Aristotle says about the signification of the indefinite verbs is that they hold indifferently of anything whether existent or non-

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357 It must be recalled, besides, that Boethius' commentary extends the expression of 16b. 15 (quoniam similiter in quolibet est, et quod est et quod non est) to indefinite names. As we mentioned earlier (cf. above 1.2, (ii) A textual problem: the reading of 16a. 32), this is something that does not occur (literally, at least) in our OCT and Th. Waitz's edition. In the second commentary (see especially in Int. 2, 29-6, pp. 69-70), it is clear, besides, that Boethius took this formula (16b. 15) as an essential characteristic not only of the predication of indefinite verbs, but also of the signification of the indefinite names.

358 In Int. 2, 29-6, pp. 69-70.

359 Cf. in Int., 5-17, p. 60 (i.e. the passage quoted above at Part I, 2.2, (iii) Does a chimera run? the ontological context. See especially 12-14: "rursus dicimus chimæra non currit. chimæra vero non est nec omnino subsistit et potest de ea vere dici, quoniam non currit.").
existent (i.e. 16b. 15), Boethius, however, considers it appropriate to remark that their predication holds in respect of truth. How can this be interpreted? A rather general explanation of his remark rests on the fact that the predication is stated by the presence of a verb, so that a proposition can be true or false only by this presence. Consequently, verbs add truth or falsity to the predication and now, in this moment of the commentary, not earlier, it is convenient to introduce this truth criterion. Certainly, names have signification, but they by themselves are not true or false.\footnote{As Aristotle says at PeriH. 16a. 14-17. Cf also in Int. 1-9, p. 44; and in Int. 2, 9-15, pp. 44-5; and see also above 1.1, (ii) \textit{Indefinite name and negation.}}

However, a more specific explanation of that comment would be related to the fact that Boethius here maintains the same ontological context of the first commentary, according to which it is \textit{false} to predicate a definite verb of things that do not exist. Therefore, by means of this allusion to the notion of truth, the commentary would imply that what Aristotle says through the formula \textit{quoniam similiter in quolibet est, et quod est, et quod non est},\footnote{The expression \textit{quoniam similiter in quolibet est, et quod est, et quod non est} is the Boethian translation of the Aristotelian formula \textit{δι ποιώς εφ' ὑπάρχει καὶ δῦνος καὶ μὴ δῦνος}, which Aristotle says of indefinite verbs for differentiate them from definite ones. Cf. PeriH., 16b. 15.} ought to be taken in respect of truth and falsity involved in predications containing an indefinite verb. Accordingly, the exact reason why the criterion of a true predication in respect of indefinite verbs is introduced could be expressed thus: the sense of Aristotle’s phrase of 16b. 15 \textit{δι ποιώς εφ' ὑπάρχει καὶ δῦνος καὶ μὴ δῦνος} requires a clarification. So, the real purpose of the introduction of a truth criterion in the comments on the signification of the indefinite verb would be to express accurately the sense of this phrase in Aristotle’s text, and improve his exposition of indefinite verbs.
At 16b. 15, Aristotle distinguishes the definite verb from the indefinite one because the former, contrarily to the latter, cannot be predicated indifferently of anything whether existent or non-existent. However, as a matter of fact, Aristotle does not indicate in what sense 'to be predicated indifferently' is said here. It is reasonable to think, however, that Aristotle refers to either the sense of the resultant proposition or to its correspondence with reality, i.e. its truthfulness, which are quite different things.

Accordingly, when Boethius' commentary introduces the phrase verum est (quod praedicare potest), the point would be to remark that ὁμοιόμορφος at 16b. 15 is said by Aristotle in the sense of 'with the same truth', and in order to exclude another interpretation, because this criterion is the only one that properly distinguishes the predication of an indefinite verb from that of a definite one. A proof of this can be the following: (1) if one takes the indefinite verb 'does not run', and the definite 'run', and predicates them of a thing that exists and a thing that does not exist, for example a man and a chimera, the following predications will be constituted:

(i) a man + runs  (ii) a chimaera + runs
(iii) a man + does not run  (iv) a chimaera + does not run.

One can observe that in (iii) and (iv), the indefinite verb 'does not run' has been predicated both of things that exist and things that do not exist. On the other hand, in the proposition (i) a definite verb is predicated of a thing which exists, and has a definite nature, i.e. man; and in (ii) a definite verb has been predicated of a subject that does not exist in re. Now, (2) it is clear that these four propositions make sense, but not all can be true, because the predication of a definite verb of a thing which does not exist —i.e. (ii)— produces a false proposition, namely, 'a chimera runs', while the remaining three resultant propositions can certainly be true.

Strictly speaking, this result is sufficient to show that the 'sense criterion' does not distinguish an indefinite verb from a
definite one. So, if one does not accept that ἐμοίως is said in the
sense of a veridical predication, Aristotle's phrase of 16b. 15
would lose its complete force, and it would be impossible by this
means to distinguish an indefinite verb from a definite one.
Therefore, Boethius' commentary seems to imply by means of its
allusion to 'verum est' and 'vere dicit' that Aristotle distinguished
the signification of the indefinite verb from that of the definite
one, by assuming that the predication of the indefinite one holds
in respect of truth and falsity, and not in respect of some possible
sense.

(v. 1) Ammonius' Interpretation of ἐμοίως (16b. 15)

In relation to the point discussed here, the commentary of
Ammonius confirms that ἐμοίως at 16b. 15 ought be taken as
implying a true predication, because he devotes room to this point
in his corresponding explanation of Aristotle's text:

"For [Aristotle] considers appropriate to put a name to this, he will call
it 'indefinite verb', because it indifferently, he says, holds of
anything, whether existent or non-existent, by taking the expression
'to hold' in the sense of 'to be predicated in a truthful way': indeed,
while nothing prohibits one from predicating too something of what
does not exist in truth, as if this does not belong to that, and as if this
does not belong to that by nature, as when I say 'the hippocentaur
does not recover or does not ail', it is impossible, however, that
something belongs [by nature] to what does not exist."

Ammonius observes clearly that 16b. 15 has to be explained
and improved, and he gives this explanation concisely: the
difference between an indefinite and a definite verb is concerned
with the truthfulness of the resultant propositions, and not with
their possible sense. In fact, his expression: "by taking the

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362 Amm. in Int., p. 52, 10-16. εἰσπέρ αὐτὸς ὄνομα αὐτῷ πιθέμενος ἐμοίως αὐτῷ
καλεῖν ἀόρατον ἢμα, ὅτι ἐμοίως, φησίν, [i.e. Aristotle] ἐφ' ὅσιων ὑπάρχει, καὶ
ὄντος καὶ μὴ ὄντος, τῷ ὑπάρχειν αὐτῷ τοῦ ὀνόματος κατηγοροῖσθαι λαμβανόν-
κατηγοροῦσα καὶ γερὸν ἄλλος τι καὶ τοῦ μὴ ὄντος ὡς μὴ ὑπάρχον αὐτῷ ποτὲ πεφικὸς
ὑπάρχειν οὐδεν καλλίει, οἷον ὅταν ἐπι' ὅ ῥημάτων σώμα ἢ ἡ ὑπάρχειν, ἢ ὅταν ἐπι-
ὑπάρχειν ὃ τῷ μὴ ὄντος ὑπάρχον.
expression 'to hold' in the sense of 'to be predicated in a truthful way'\textsuperscript{363}, indicates it clearly. Let us notice, besides, that Ammonius does not say that it is impossible to predicate truly something of what does not exist—rather, he opens this possibility through indefinite verbs; what Ammonius actually considers impossible is the thesis that what is predicated of what does not exist belongs by nature to it.

(vi) Boethius' final answer on signification of the indefinite verb

Even though the elements that Boethius' commentary provides are enough to build up a self-contained explanation about the signification of the indefinite verb, one can also presume that this explanation contained even more details, because the text discussing this topic finishes with a lacuna.\textsuperscript{364}

\textsuperscript{363} To allude to D. Blank's translation (1996), pp. 59-60, seems to be appropriate here, because he has taken the preposition of genitive διν at p. 52, 12, in another sense, namely, 'instead of'. His translation consequently turns out quite differently from our version. Blank says: 'Hence, giving it a name himself, he decides to call it an 'indefinite verb', 'since', he says, 'it belongs to anything in the same way, whether existing or not existing', using 'to belong' (huparkhein) instead of 'to be truly predicated'. For nothing prevents something being truly predicated even of what is not, as not belonging to it or not being such as to belong <to it>—as when I say 'The hippocentaur is not healthy' or '... is not ill'—but it is impossible for something to belong to what is not.' The translation by J. Lallot and F. Ildefonse (Commentaire du Peri Hermeneias: Préambule et chapitres I à V (p. 1-81, 2 Busse). In Archives et Documents de la Société d'Histoire et d'Epistémologie des Sciences du Langage, Séconde Série 7, 1992) takes διν in our sense, which shows that there is no compelling reason to take here this preposition by 'instead of'. But more important, according to our argument, "using 'to belong' instead of 'to be truly predicated'" would not work here. Besides, it is already odd that Ammonius appears to be substituting something that does not occur in the text ('to be truly predicated') for something that occurs ('to belong'); this would imply that Ammonius rejects the expression 'to be truly predicated', but this expression has not appeared in any part of PeriH. Similarly, what Ammonius says later is precisely that he accepts that something is truly predicated of a non-existent subject (let us say a chimera), if this is taken as not belonging to it (e.g. 'a chimera does not run'); therefore, he does not exclude the expression 'to be truly predicated', so that he cannot say "using 'to belong' instead of 'to be truly predicated'", but "using 'to belong' in the sense of' to be truly predicated'". Cf. also William of Moerbeke's translation (Verbeke (ed.), 1961, p. 100).

\textsuperscript{364}cf. in Int. 2, 15, p. 70. The lacuna misses the final reply of the assumption that a definite verb can also be predicated indifferently of everything whether existent or non-existent. Probably, it contained, as the
This lacuna appears at the moment at which Boethius' commentary is supposing the objection that a definite verb can also be predicated indifferently of what exists and what does not exist, and one could assume, according to the standard structure of Boethius' commentary on PeriH, that the lost part of the text included an argument against this objection. Boethius says:

\[\text{sed forte aliquis hoc quoque in verbis finitis esse contendat. possum namque dicere equus currit, hippocentaurus currit et de ea re scilicet quae est de ea quae non est. * * * }\]

If the commentary rejected the hypothesis assumed, the final position on the signification of indefinite verbs must be not only that the definite verb cannot be predicated indifferently of things which are non-existent, (certainly something already stated), but also—since the commentary would imply that the predication of an indefinite verb must be understood in respect of truth—that if a definite verb is predicated of things which are non-existent, the resultant proposition will be false or lacking in truthfulness.

This conclusion agrees with all the earlier passages already referred to, and also with what is immediately previous to the lacuna:

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similar passage of the first commentary, an exposition on the verb’s cases and some points concerned with the integra definitio verbi.

\[\text{365} \text{According to J. Marenbon, "Boethius' typical devices to introduce a hypothetical opponent were to say 'sed fortasse quis dicat'". After which he sometimes introduced his answer by saying 'We reply' (respondemusveis). Cf. J. Marenbon, Medieval Latin Commentaries, before c. 1150 AD, in Glosses and Commentaries on Aristotelian Logical Texts, in Warburg Institute Surveys and Texts XXIII, The Warburg Institute, University of London, 1993.}\]

\[\text{366} \text{in Int. 2, 12-15, p. 70: "(However, someone could argue, perhaps, that this is also [possible] in the definite verbs. And so I could say 'the horse runs', 'the hippocentaur runs', namely, both of one thing that exists and of other that does not exist * * * ").}\]

\[\text{367} \text{above, 2.2 (i) The definite and indefinite verb: similitude and difference. (References there).}\]

\[\text{368} \text{in Int. 2, 3-12, p. 70: "(...) the verb itself is called indefinite, since it not only can be truly predicated of that which is existent, but also of that which is non-existent. And so I can say 'a man does not run' and this 'does not run' that I say I predicate of a thing which exists, i.e. the man; again I can say 'Scylla does not run' although Scylla does not exist: therefore, it is correct to predicate this 'does not run' that I say both of that thing which is existent and of that thing which is nothing.".}\]
(...) infinitum quoque ipsum est [sc. non currit vel non laborat], quoniam non solum de eo quod est verum est, sed etiam de eo quod non est praedicare potest. possum namque dicere homo non currit et id quod aio non currit de ea re quae est praedico id est de homine, possum rursus dicere Scylla non currit, sed Scylla non est: igitur hoc quod dico non currit et de ea re quae est valet et de ea quae nihil est praedicari.

Accordingly, although the mentioned lacuna deprives us of much textual evidence, the remaining material furnishes support for accepting that Boethius' commentary would argue, in the lost respondemus, on behalf of a clear and strong difference between an indefinite and definite verb based on the fact that the indefinite verb, contrarily to the definite one, produces true propositions when it is predicated of things that do not exist. And that, here too, as in the case of the indefinite name, 16b. 15 would be the specific difference of the indefinite verbs, namely, that by which the indefinite verb must be excluded from the strict definition of verb.369

369 According to this, it seems to be possible to give a reconstruction of this lost passage, (at least as much as the commentary itself can give us an analogous material). The essential content of this reply should contain the rejection of the hypothesis that a definite verb can also be truly predicated of existent and non-existent things. As we have explained, although it is actually true to say 'a horse runs', it is impossible —if we use the same criterion of true predication— to say 'a hippocentaur runs', because a hippocentaur does not exist, and really does not run. In the same sense, although it is possible to say truly 'a chimera does not run', because it does not exist in truth, it is not possible to accept, as a true proposition, 'a chimaera runs', because it does not exist in re. So Boethius says (in Int. 2, 12-15, p. 70):

sed forte aliquis hoc quoque in verbis finitis esse contendat. possum namque dicere equus currit, hippocentaurus currit, et de ea re scilicet quae est et de ea quae non est. * * *

and, after that, the lost passage probably contained (at least) something similar to this:

sed hippocentaurus non est subsistens res. et id quod est currit de hippocentahu ro non vere dico, quoniam hippocentaurus non currit nec omnino subsistit. ergo non verum est quod praedicari eo quod est currit de eo quod est hippocentaurus potest.

It is worth comparing this plausible text to that of the first commentary mentioned above, namely, in Int., 5-17, p. 60 [infinitum verbum] (...) aequ vel de subsistente re vel de non subsistente praedicari potest, ut in eo quod est homo non currit. homo res est subsistens: ergo dicitur id quod est non
The third objection that Ackrill has advanced in his comments on the nature of the indefinite verb refers in a certain way to our concern here. According to him, "Aristotle could not have said that an indefinite verb holds indifferently of anything whether existent or not; for if Socrates does not exist at all he cannot have even an indefinite characteristic." 370

The context of this objection is complex, because — on the one hand — the general complaint of Ackrill is that Aristotle calls at 20a. 31 'not-just' an indefinite verb. On the other hand, it assumes that Aristotle\[\textit{at}^{\text{Cat. 13b. 27-35}},\] entails that a negative consequence always follows from something which does not exist, as in the expression 'if Socrates does not exist, then he is not sick'. According to these antecedents, Ackrill says that one cannot maintain that an indefinite verb is an expression which, combined with a subject-term, makes an affirmative sentence with a negative predicate, as 'is not-wise' in 'Socrates is not-wise', because in this case, Aristotle would have not said that an indefinite verb holds indifferently of anything whether existent or not, since, as the passage in Cat. entails, one should state always a negative consequence of a subject which does not exist, so that a predicate as 'is not-just', which is an affirmation, would be impossible of a non-existent subject.

Boethius' interpretation rejects the basis of Ackrill's objection, and, in particular, Ackrill's belief that Aristotle considers 'not-just' as an indefinite verb. 371 Besides, according to

\[\text{currit de homine id est de re subsistente. rursus dicimus chimaera non currit. chimaera vero non est nec omnino subsistit et potest de ea vere dici, quoniam non currit. quod enim omnino non est, et non currit. ergo id quod est non currit et de ea quae neque est neque esse poterit praedicatur; quare infinitum verbum dicatur. And see also in Int. 2, 16-19, p. 62: omne enim nomen (ut dictum est) definite id significat quod nominatur nec similiter et de eo quod est et quod non est dicitur.}\]

370 cf. Ackrill (1963), p. 120.

371 Ackrill thinks that an indefinite is a misnomer because, as we said above, expressions like 'does not recover', which Aristotle presents as indefinite verbs, are not more than definite verbs being denied. Boethius' commentary rejects this opinion, by distinguishing an indefinite verb from a negation, and these arguments were presented above (see above 2.1, (iii) Indefinite verb and negation). However, in a final criticism of
the interpretation that Boethius has given, the passage of Cat. 13b. 27-35, which Ackrill mentions, is entirely coherent with the words of Aristotle in PeriH.. In fact, Aristotle here states that an indefinite verb can be correctly predicated of things that are not-existent, e.g. 'a chimera + does not exist'. According to this, if Socrates does not exist at all, as Aristotle says at Cat. 13b. 27-35, then —as is said in PeriH.—it is also correct to predicate of him an indefinite verb, which will transform the predication into a negative statement, so that Socrates, as a thing which does not exist, will be truly a grammatical subject of a negative statement, as Aristotle establishes in a general way in the passage of Cat. that Ackrill alludes to.

(viii) Existential import of singular propositions and indefinite verbs

The earlier discussion shows that the (a)-and-(b) principle mentioned at the end of (iii) represents the ontological context where, or the conditions under which, the simple affirmation and negation can be true or false. Remarkably, this principle agrees with Cat. 13b. 27-35, where many modern scholars have seen Aristotle's notion of indefinite verb, Ackrill has presented an objection against anyone who thinks—or defends—that an indefinite verb can consist of expressions like 'not-just'; in fact, —Ackrill thinks— this is Aristotle's own example at PeriH., 20a. 31. This opinion of Ackrill has also been rejected by Boethius' commentary above (see above 1.2, (vii) Indefinite names and truth): at 20a. 31 Aristotle does not present 'not-just' like an indefinite verb, but like an example of one of the opposites having place between 'just' and 'not-just'. In these circumstances, to think of 'not-just' as an indefinite verb is unjustified. By the same reason, it is also unjustified to think that "one might entertain the possibility that by 'indefinite verb' he [Aristotle] means (...) an expression which combined with a subject-term, makes an affirmative sentence with a negative predicate (like 'Socrates is not-wise' at 20a. 26)". (ibid., p. 120): again, Aristotle at 20a. 31 does not call expressions like 'is not-wise' 'indefinite verbs'. (A further argument to reject the belief that expressions like 'not-just' or 'is not-walking' are indefinite verbs can be drawn from the fact that the indefinite verb states the negation (cf. above 2.1, (iii); cf. also the exhaustive division of all the categorical propositions demonstrating this affirmation at Part I, 4., (iii. 1) The classification of categorical propositions).

the clearest evidence that Aristotle maintains what is called 'Existential Import of Singular Propositions'. The passage in question implies that the simple singular affirmative proposition is true only if the subject denoted by the grammatical subject of the proposition exists, and that this condition does not apply to the negative. Aristotle, indeed, says:

"But with an affirmation and negation one will always be false and the other true whether he exists or not. For take 'Socrates is sick' and 'Socrates is not sick': if he exists it is clear that one or the other of them will be true or false, and equally if he does not; for if he does not exist 'he is sick' is false but 'he is not sick' true."

Our claim that this passage agrees with the (a)-and-(b) principle becomes manifest by means of the already stated reason that the indefinite verb states the negation. As Boethius has explained, the indefinite verbs 'non ambulat' and 'non est' state respectively the negations 'Homo non ambulat' and 'Homo iustus non est' in the propositions 'Homo ambulat' and 'Homo iustus est'. Accordingly, (a) will be equivalent to:

(a') What does not exist cannot be truly a grammatical subject of an affirmation.

And (b) to:

(b') What does not exist can be truly a grammatical subject of a negation.

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376 See above 2.1, (iii) Indefinite verb and negation.
Now, this is precisely what is said at Cat. 13b. 27-35, for here is implied, as a general principle, that if an object does not exist, then the affirmation containing this not-existent object as grammatical subject is false, but the negation —according to (b')— is true. It is therefore clear that Cat. 13b. 27-35, i.e. the principle of existential import of the singular propositions, is a particular instance of the (a)-and-(b) principle. Or, in other terms, Cat. 13b. 27-35 is a consequence of what is implied by PeriH. 16b. 15 (i.e. the indefinite verb is indefinite ὅποιος ἢ ὁποῖον ὑπάρχει καὶ ὄντος καὶ μὴ ὄντος).

The above receives a confirmation from the fact that the substitution of 'chimera', or any other inexisten t item, for 'Socrates' (when the bearer of this term is said to be not-existent), in the mentioned passage of Cat., keeps the truth value of the propositions and the sense of the entire passage. Some lines before the quoted passage, Aristotle asserts that if Socrates does not exist at all (μὴ ὄντος ὄνως), then the privative proposition 'Socrates is blind' and its contradictory 'Socrates has sight' are both false, but the simple negation 'Socrates is not sick' is true, and the simple affirmation 'Socrates is sick' is false. And he says that the privations are false, for the privations, according to An. Pr. I, 46 51b. 25-27, always suppose something, while the negations do not. Thus 'Socrates has sight' supposes a subject capable of seeing, and also 'Socrates is blind'; however, if Socrates does not exist, both are false, and only 'Socrates is not sick', i.e. the simple negation, is true, because 'is not sick' does not suppose anything. In the same manner, one can substitute 'chimera' for

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377 i.e. at Cat. 13b. 20-26. "As for possession and privation, if he does not exist at all neither is true, while not always one or the other is true if he does. For 'Socrates has sight' is opposed to 'Socrates is blind' as possession to privation; and if he exists it is not necessary for one or the other to be true or false (since until the time when it is natural for him to have it both are false), while if Socrates does not exist at all then again both are false, both 'he has sight' and 'he is blind'."

378 i.e., "Nor is to be not-equal the same as not to be equal; for there is something underlying the one, viz. that which is not-equal, and this is the unequal, but there is nothing underlying the other." (A.J. Jenkinson translation. The Revised Oxford Translation, J. Barnes (Ed.), Oxford 1991). See also next note.

379 At Met. 1004a. 16, Aristotle also explains the difference between privation and negation: the negation, but not the privation, is absence of what is denied. Cf. also Part I, 3., (iv) Antiquiores.
'Socrates' and these propositions will keep their truth value: 'A chimera has sight' and 'A chimera is blind' are both false, because the chimera does not exist and the privations suppose a subject capable of seeing. So the case coincides to 'Socrates is blind' and 'Socrates has sight' when Socrates does not exist at all. Equally, 'A chimera is sick' is false because the affirmation supposes a subject which exists (and the chimera does not exist), and it is false like 'Socrates is sick' when Socrates does not exist at all. 'A chimera is not sick' is true like 'Socrates is not sick' when Socrates does not exist at all. The reason is that the simple negation, differently from the privation and the simple affirmation, does not suppose anything, so it does not matter if the subject is existent or non-existent.

The substitution above confirms that what is called 'existential import of singular propositions' is based on Aristotle's concept of negation. And so, since we have shown above that this concept is based on the indefinite verb, (because the indefinite verb states the negation), it follows that what is called 'existential import of singular propositions' is based on Aristotle's concept of indefinite verb.

Now, M. V. Wedin is right to consider seriously the problem raised by Ackrill of how this view of Cat can be reconciled with PeriH. 21a. 25-28, for in this last passage Aristotle paradoxically denies the implication "'Homer is a poet', then 'Homer exists'". At PeriH. 21a. 25-28, Aristotle indeed says:

"For example, Homer is something (say, a poet). Does it follow that he is? No, for the 'is' is predicated accidentally of Homer; for it is because he is a poet, not in its own right, that the 'is' is predicated of Homer."

It is amply accepted that this text does not produce only an apparent contradiction with the doctrine of existential import of Cat., but a real one. In fact, if we go on to accept that Aristotle

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380 We will come back to this proposition later.
383 Ackrill translation.
384 W. Jacobs, however, (1979), pp. 282-300, argues that the problem is rather apparent, and primarily due both to a general misinterpretation of
at Cat. 13b. 27-35, as M. Thompson expresses it, "clearly suggests that any affirmation about a singular subject implies that the subject exists, while a negative statement about such a subject cannot have this implication", then "Aristotle seems to contradict what he says here [at PeriH. 21a. 25-28] by arguing that 'Homer is a poet' does not imply 'Homer is'". And so, in relation to the issue that concerns us, if PeriH. 21a. 25-28 denies Cat. 13b. 27-35, then it also denies our (a)-and-(b) principle.

The fact that the arguments presented by Wedin (1978) and Dancy (1983) to solve this contradiction are not alike, seems to imply that we have not, at the moment, a unanimous solution for the mentioned conflict, though the general suggestion implied by these papers (namely, that the passages can be reconciled because they properly deal with different problems) has gained acceptance with some of the most recent scholars. For Wedin, in the passage of Homer, Aristotle's concern is the non-

the contexts in which the passages in question occur, and mistranslations of these passages. He refers constantly to the essays by R.M. Dancy (1975), Appendix ii; and M. Thompson (1968), whose positions Jacobs summarizes in his n. 6, pp. 297-8. Jacobs makes a point to present the problem of the existential import of singular propositions in terms of whether or not Aristotle accepted a possible referential failure of the subject of an assertion. Jacobs answers in the negative. His argument is that for Aristotle affirmation and denial indicate relationships holding between actual things, so that every Aristotelian assertion has existential import. So "Should the subject of a sentence fail to refer, the sentence will be neither true nor false and hence will not be an assertion." (p. 286). Through a well-known example (see P. T. Strawson On Referring, in Mind, 59, 1950, pp. 320-244), Jacobs illustrates that the sentence 'The present king of France is bald' would not be an assertion for Aristotle (ibid.). On this assumption, Jacobs takes the passage referring to Homer as an indication by Aristotle that "Since being a poet is not part of Homer's essence, 'Homer is a poet' is a contingent truth (p. 286), so that Aristotle here "Rather than asking whether 'Homer exists' follows from 'Homer is a poet', this passage merely notes that because being a poet is an accident of Homer, 'Homer is a poet' may be true or false." (p. 289). The passage in Cat. (13b. 12-5), thinks Jacobs, can also be read in a strict essential way without implying Socrates' existence, "Whereas previous translators have understood all these phrases in terms of Socrates' existence" (p. 293). Therefore, in his view, Aristotle here would be noting that necessarily one of the pairs of contraries, sick or be well, must apply to Socrates' being, while neither to Socrates' not being, for in this case Socrates is not capable of receiving them, so both assertions here would be false. (The article contains an Appendix with critical assessment of Michael Wedin's article here cited).

386 So W. Cavini (1985), p. 38. Cavini thinks that both Wedin and Dancy coincide in a general position: the passages can be reconciled because they are independent, so that PeriH. 21a. 25-28 deals with another problem.
decomposition of the predicate. Aristotle would block the move from 'Smith is a good cobbler' to 'Smith is good', just as he blocked it from 'Homer is a poet' to 'Homer is'. The similarity—he argues—between 'is' in 'Homer is a poet' and 'good' in 'Smith is a good cobbler' is exact, so that when Aristotle blocks this inference "he is concerned not with [the principle of existential import of singular sentences] at all but only with the fact that the predicate in the first sentence is not subject to the decomposition principle. To say this is just to say that 'is' has no significance independent of its occurrence in the original phrase 'is a poet'." (p. 187).

R. M. Dancy's position is also reasonable: Aristotle at PeriH. 21a. 25-8 is not denying that 'Homer is' follows from 'Homer is a poet'. In Dancy's view, if it is possible to conclude by simplification 'Homer is' from 'Homer is a man' (and here 'is' in the first sentence is a καθ' ὁρμό 'is', i.e. a by-virtue-of itself 'is'), then 'is' in 'Homer is a poet' is a κατὰ συμβασικός 'is', an accidental one, and here a simplification cannot be performed. So Aristotle here is simply saying that 'Homer is a poet' is not an essential predication and its 'is' is not καθ' ὁρμό, so that "the predicate may not be cancelled by simplification to yield 'is' ἀπλῶς, the existential 'is'." (pp. 427-8). "This may, at first sight, seem unnecessary" (p. 428), he observes, but without this, he points out, there would be an inconsistency, while to sustain his argument one only needs the concession that poets are men.

The mentioned attempts have, on the other hand, two common elements to be noticed: firstly, to leave to one side —due

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389 Ibid., p. 426. He adds here "It is extremely difficult to see how that could be denied." Dancy finds his position similar to that of M. Thompson (1968), for whom the 'is' in 'Homer is' is taken in the substantive sense of the word and thus means the same as 'is a substance'. So what Aristotle denies in the passage is that 'Homer is a substance' follows from 'Homer is a poet', but he actually would allow us to conclude (from 'Homer is a poet') that 'Homer exists'. And given that in Cat. Aristotle refers to existence or non-existence of Socrates, the passages are not in contradiction. Thompson does take into account the last part of the passage and, in accordance with his position, he takes it as follows: "'Homer exists' does follow from 'Homer is a poet' since if Homer did not exist, i.e. if he were simply nonbeing, it would not be true to say that he is anything." (p. 56).
perhaps to its obscure sense—the last part of the passage referring to Homer (PeriH. 21a. 32-33), and second, to disregard what the ancient commentators say about this part of the text. However, as we will show, the ancient commentaries contain an explanation of this passage able to give us a more integral solution than those which have been attempted for the mentioned problem. In the last part of the mentioned passage of PeriH. (i.e. 21a. 32-33), Aristotle says:

τὸ δὲ μὴ ὅν, ὅτι δοξαστὼν, οὐκ ἄληθες εἶπεν ἂν τι. δόξα γὰρ αὐτοῦ οὐκ ἔστω ὅπι ἔστω, ἀλλ’ ὅπι οὖκ ἔστω.

Boethius, by commenting precisely on this passage, shows certain elements suggesting that a solution for this conflict was latent in his commentary, whether or not he or his source was conscious of this textual conflict. First of all, Aristotle, in Boethius' rendering, here says:

Quod autem non est, quoniam opinabile est, non est verum dicere esse aliquid; opinatio enim eius non est quoniam est, sed quoniam non est.

And on this Boethius comments:

quidam volentes id quod non est aliquo modo esse monstrare tali utebantur syllogismo: quod opinabile est, est; quod autem non est, opinabile est; concludebant quod non est igitur est docentes ea quae essent scibilia potius, non opinabilia esse, quod autem non est opinioni tantum subiacere, nulla etiam scientia claudi. quod Aristoteles hoc modo discutit: ait enim: non idcirco est opinabile, quoniam est, sed

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390 This last point is usually justified by the admission that the ancient commentators were unaware of the mentioned conflict. In particular, Wedin (1978), p. 179, says that in Ammonius' in Int., p. 211 (ad PeriH. 21a. 25-28) there are no traces of a conflict between this text and Cat. 13b. 26-35. From here, he infers that the ancient commentators were unconscious of such a textual conflict, so that he includes implicitly Boethius' commentary.

391 In Ackrill's translation: "It is not true to say that what is not, since it is thought about, is something that is; for what is thought about it is not that it is, but that it is not."

392 in Int. 6-20, p. 166.
According to Boethius, *PeriH.* 21a. 32-3 is Aristotle's reply to a syllogism produced by some men (*quidam*) intending to demonstrate (*volentes demonstrare*) that what is not existent is, in a way (*aliquo modo*), existent. Although Boethius does not make a direct relation, it will be clear that the syllogism intends to refute the negative conditional that Aristotle infers from the example of Homer. Those men, then, claim that 'Homer exists' follows from 'Homer is a poet'. As Boethius clarifies, Aristotle rejects the conclusion of this syllogism, because he does not agree with the major premiss. Here, it is affirmed that "Quod opinabile est, est", to which Aristotle opposes "Quod autem non est, quoniam opinabile est, non est verum dicere esse aliquid", and even more: "Opinatio enim eius non est quoniam est, sed quoniam non est". And this is so, Boethius explains, because "Non idcirco est opinabile, quoniam est, sed idcirco est opinabile, quoniam non est". So, Aristotle corrects this syllogism in its essential error: to accept as existent and able to be known (*scibilis*) what is not-existent and only opinable (*opinabilis*). That is why Boethius thinks it convenient to add to this diagnosis that those men, through this syllogism, concluded in this way "by showing (*docentes*) that these things which would be knowable are, rather (*potius*), opinable", i.e. that they reasoned as if *scibia* were the same as *opinabilia*; and that is why Boethius rectifies it immediately and goes on to say that "however, what is not existent (*quod autem non est*) has its reality only in opinion (*opinioni tantum subiacere*), and it involves no knowledge (*nulla scientia claudi*)".  

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393 In the second commentary, the statement in question forms the minor premiss, but the conclusion is the same. Clearly, then, Boethius transposes the premisses in the second commentary.

394 Aristotle, therefore, maintains that (i) if something is existent, then it is knowable (*ἐπιστήμη, scibilis*); and (ii) if something is not-existent, then it is only opinable (*ὀπισθόν, opinabilis*) and not-knowable. In (i), however, there is room to imply, with *An. Post.* I, 33, 88b. 30-89b. 9, that (i.1) if something is existent, then it can also be opinable; because here Aristotle states that "A knower and an opiner will follow the same path through the middle terms until they come to the immediates. Hence since the former knows, the opiner knows too. For just as you can opine the fact, so too can
Therefore, according to Boethius, what Aristotle implies here is that (i) what does not exist cannot be said to exist under any aspect, but that does not mean that the verb 'to be' cannot be applied to what does not exist, because in a purely predicative sense, it is used to express that what does not exist is opinable (σοφαστόν, opinabilis). Therefore, the verb 'to be' can be predicated of what is not-existent and opinable, if it is predicated secundum accidens (i.e. non simpliciter) and qua opinable. This is already clear from Boethius' last remark in the passage above: "Sed hoc quod non est, est quidem quiddam, sed est non per se, sed opinabile." The same idea is clear from what Boethius immediately adds:

et quemadmodum Homerus est quidem quiddam id est poeta, non tamen est per se, ita id quod non est, est quidem alicquid id est opinabile vel ignorabile, non tamen est per se alicquid in natura.

Equally, (ii) Boethius does not discuss if the predication of what is opinable qua opinable can be true or false, because he accepts this you opine the reason why —and this is the middle term." (ibid., 89a, 15). It is clear, however that "It is not possible to opine and to understand the same thing at the same time." (ibid., 89a, 39-40). The proper sense of 'knowable' is understandable by scientific reasoning, i.e. by knowing its cause, which is the middle term in a scientific syllogism (An. Post. 89b, 37-90a, 1; 90a, 7-23). Hence, all that is knowable must be existent, because Aristotle says (An. Post. 92b, 5) that one may know what the account or the name of what is not-existent (sc. 'goat-stag') means, "but it is impossible to know what a goat-stag is [sc. a not-existent]." (Cf. also 93b, 29-34). At Met. 1031a, 1-11; 13; and 1039 a, 19-20, as J. Barnes points out, Aristotle also says that non-substances cannot be defined (J. Barnes, Aristotle Posterior Analytics, 2nd. Ed., Oxford 1993, p. 216). The proper consequence, then, is that there is no knowledge (science) of what is not-existent. Accordingly, there is a non-scientific way of knowledge of what is non-existent, that is, only opinion, so that δοκαστόν, in its proper sense, is the epistemic characteristic of what is not-existent. This is clearly the sense in which Aristotle takes δοκαστόν in our passage (Perih. 21 a, 32-4), and that in which Boethius does. Ammonius (in Int. p. 184, 25-31) confirms the point by making a useful distinction between what is non-existent in an absolute sense (τὸ μηδεμίας δι', which is neither opinable (δοκαστόν) nor able to receive a name (ὁμοιοτόν), and what is not existent but is δοκαστόν and denominate (ὁμοιοτόν) because it has place (ποι) in our imagination (τὸ ἔπνοοφέλει). Ammonius' remark, therefore, agrees with Boethius' comments on chimera and centaur as objects that poetae finxerunt, that is, as objects that neither have a real referent nor a place in nature, and in sola imaginatione subsistunt (cf. in Cat. 229 B-D; PL 64, and above 1.2, (iv) The extension of an indefinite signification).

395 in Int. 16-19, p. 166.
logical possibility from the context of *PeriH.* 21a. 18-33, for here the proposition 'Homer is a poet' is accepted to be true, but 'Homer is simpliciter' false, because Homer does not longer exist (sc. he is only opinable) and so it is certainly contradictory to attribute existence to him:396

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\text{si quis enim sic dicat: Homerus poeta est, verum dixerit; quod si dicat: Homerus est simpliciter praeter poetam, falsum est.}
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Both points are assumed and developed further in the second commentary. Here, Boethius insists that the error of the mentioned syllogism rests on predicating the verb 'to be' of what does not exist in a *simpliciter* way, as if that were really existent:397

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\text{si verum est praedicare, inquit [sc. Aristotle], de eo quod non est quoniam opinabile est, est quidem verbum de opinabili praedicamus, de eo autem quod non est secundum accidens. quoniam enim quod non est opinabile est, idcirco secundo loco de eo quod non est verbum est praedicamus. quare non possumus simpliciter dicere esse quod non est. idcirco enim opinabile est, quia non est. scibile enim esset, si per se esset, non opinabile, sicut Homerus idcirco esse dicitur, quia poeta est, non qua per se est.}
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The passage adds that if Aristotle considers it true to predicate that what does not exist is opinable, then the verb 'to be' is correctly predicated of what is opinable: however, this is so only if it is predicated *secundum accidens,*398 because we cannot say that

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396 *in Int.* 18-20, p. 164
397 *in Int.* 2, 27-9, pp. 375-6. (italics are ours). Aristotle, then, again confirms the premiss 'Quod non est, opinabile est', and rejects, once more, the other (which was the major in the syllogism of the first commentary), i.e. 'Quod opinabile est, est'.
398 Or, also, *in seundo loco.* The expressions are clearly equivalent. This is clear from the text quoted above and the following text: "de Homero enim poetam quidem principaliter praedicamus, cum dicimus Homerus poeta est, est autem verbum de poeta quidem praedicamus principaliter, de Homero autem in secundo loco. non enim idcirco praedicamus esse, quia Homerus est, sed quia poeta est (...) secundum accidens enim est praedicatur, non principaliter." *in Int.* 2, 15-25, p. 374. The above is equivalent, then, to say that 'is' is taken here in a merely predicative sense, as a mere link, and so Boethius has taken it above (cf. *in Int.* 2, 25-25, pp. 264-266) to explain the
what is not existent exists simpliciter (quare non possumus simpliciter dicere esse quod non est). That is why, the commentary remarks, 'to be opinable' is a qualification that what does not exist receives, because if it were existent, then it would be knowable (scibilis).

It is clear, therefore, that in Boethius' interpretation Aristotle allows us to predicate the verb 'to be' of what is not existent and opinable, if this predication is accidental or strictly predicative, and that this use of επιτυ permits us to talk of what does not exist as opinable, i.e. to make true opinions about it. Indeed, for Boethius the affirmation "Homer is a poet" is a true opinion:399

vel certe idcirco dicitur Homerus esse poeta, quia poesis ipsius exstat et permanet, sicut aliquos in filiis suis saepe vivere dicimus. quocirca id quod non est idcirco esse dicitur opinabile, quoniam ipsius est opinatio, non autem quoniam id quod non est per se aliquid esse potest.

Boethius' interpretation, therefore, suggests that Aristotle could have used instead of 'Homer' at 21a. 25, the term 'goat-stag', or 'chimera' or any other denoting an inexistent and opinable item, because Homer is accepted not to exist, and that through this example Aristotle considers, as Boethius remarks at this point, whether all things which are simultaneously predicated with truth of a subject are also predicated with truth when they are taken separately, that is, simpliciter.400 According to Boethius, when a syntactic nature of the tertium adiacens proposition (see also Part I, 4., (iii. 1), (b) The categorical propositions with three terms). It must be recalled here that Aristotle has called this kind of propositions "Those in which 'is' is additionally predicated as a third thing" (PeriH. 19b. 19, Ackrill translation), and that at An. Pr. I, 24b. 16-18, Aristotle emphasises this 'is' as a mere syntactic link between terms in the proposition, and properly a sign of the quality of the proposition and not a part of it. Cf. also Boethius in Int. 2, 28, p. 264; and see more references at Part I, 4., (ii. 1), (b).

399 in Int. 2, 9-15, p. 376.
400 The order of this question is, as Boethius mentions, converse to that asked previously (PeriH. 21a. 7-21a. 17). There, Boethius remarks, the point was whether everything which is separately predicated with truth of a subject can also be conjunctively predicated with truth ("Dudum quaesivit utrum omnia quae singillatim vere praedicarentur ea iuncta veraciter dicerentur", in Int. 24-25, p. 162); now, as Boethius explains, the point is rather "utrum omnia, quaecumque simul vere dicuntur, et simpliciter vere praedicentur" (in Int. 1-3, p. 163) or, as in the second commentary
contradiction is present in what is predicated, as in 'dead man' said of the man as living, the predication *simpliciter* is not true, but when there is no contradiction, the predication *simpliciter* is not always true, but sometimes true or sometimes false. The example of Homer in 'Homer is a poet' illustrates the case which is false: if the subject does not exist, like Homer, then though 'poet' and 'is' are not contradictory one with another, the proposition "Homer is", that is, "Homer exists" imports a contradiction. Thus, the same will occur in the proposition 'The goat-stag is a fable', because if the opinion that the goat-stag is a fable is true, then 'is' and 'fable' do not contradict one another, but 'The goat-stag is [simpliciter]' is false, because the goat-stag, like Homer, does not exist. The same can also be maintained of other propositions which are accepted to be true opinions and have a not-existent

expresses it, "an ea quae composita vere praedicantur singillatim dicta vere dicantur" (*in Int.* 2, 18-20, p. 370). For the first case, there are two examples: (i) if the predication is accidental: if a man is a cobbler and (without qualification) good, then it is false to say of the man that he is a 'good cobbler'; (ii) if the predication is essential: if a man is animal and two-footed, then it is true to say of him that he is 'two footed animal'. For the second case, Aristotle illustrates only (iii) the accidental predication: here, there are two cases. (iii. 1) if the compound imports contradiction, then the predication *simpliciter* is false: from 'dead man', says Aristotle (21a. 23), it does not follow 'man', because it is contradictory. But (iii. 2) if the compound does not import contradiction, it is sometimes true, sometimes false; it is true (iii. 2.1) if a man is 'white man', then 'white' and 'man' can truly be predicated of the man. But it is false (iii. 2.2) if the compound contains the verb 'to be' and the subject is inexistent, as in "Homer is a poet": 'is' and 'poet' are not contradictory, but 'Homer is [simpliciter]' is false.

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401 *in Int.* 2, 4-9, p. 374. quandocumque in adiecto esset aliqua contradictio, non esse verum simpliciter praedicare, quod coniuncte diceretur, quando autem non inest contradictio, non semper verum esse praedicare simpliciter, quod coniuncte vere diceretur, sed aliquotiens verum, aliquotiens vero falsum. It is important to note that if there is not contradiction in what is predicated of a subject, then (it seems to follow that) every remaining case will verify a predication *simpliciter*, because it is clear that of any real composition its accidents can be predicated simpliciter (and so: as Boethius remarks: "rursus dicimus verbi gratia Calliam album hominem esse et de eo album simpliciter praedicamus" *in Int.* 5-7, p. 163); and also because every 'state of things' can be resolved into simple propositions (e.g. 'this red pen and the rubber are on the table', then 'this red pen is on the table'). Accordingly, the case of Homer could be shown by Aristotle as an exception to what occurs in real predication of natural things. And this could explain the strange remark by Boethius (absent in his first commentary and in Ammonius) on this part of Aristotle's text: namely, that Aristotle ought to be read here as if he is doubting (of his assertions): "hoc autem quasi dubitans dixit. ita enim legendum est, quasi dubitans diceret sic:" (*in Int.* 2, 6-7, p. 371).
subject. The case of 'A chimera is sick' is symptomatic, because even though for Aristotle this proposition is true if the opinion that the chimera in question is sick is true, the condition of existence of this opinion is, in fact, rare, and properly a matter of poets and their art. Accordingly, this example is not appropriate for his purpose here, for the false implication from 'A chimera is sick' to 'A chimera is [simpliciter]' is made less evident by the former proposition, because it can seem to be false, or better, because it is difficult to accept it to be true. Therefore, in this passage, Aristotle selects the best example possible: 'Homer is a poet', because he intends to show that even the truest opinion about what does not exist is false if it is taken in an 'existential' or 'real' way, that is, by following the ontological conditions of the negation, which are based on PeriH. 16b. 15, i.e. on the concept of the indefinite verb (which states the negation). Aristotle poses, then, an example that nobody can call into question, because who will deny that Homer is a poet? Certainly Aristotle will not do it, if Homer is opinable, but it must be denied, if Homer is taken as a real and knowable matter (scibilis) into the proposition 'Homer is a poet'. Thus, Aristotle uses the example 'Homer is a poet' because he needs an opinion that is accepted without objection to be true, because he is precisely illustrating that even from the truest attribution made of an opinable subject, one cannot derive the existence of the subject, i.e. a judgement of reality as if the matter is knowable (scibilis).

Boethius' comments on PeriH. 21a. 32-33 seem to contain a clue to solve the incompatibility of PeriH. 21a. 25-28 with the two texts which we maintain to be in clear agreement: Cat. 13b. 12-35 and PeriH. 16b. 15. The clue is that Aristotle at PeriH. 21a. 32-33 recognizes two different senses of predication: (i) that which is strictly predicative, and (ii) that which is 'existential' or perhaps better 'real'. The sense in (i) allows us to talk of what does not exist qua opinable, because it only states an opinable relation

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402 In ancient and modern literature there are some examples implicitly or explicitly accepted to be true: Philoponus at in An. Post. (92b. 5), p. 359, 25 - p. 360, 9, says: 'The goat-stag is an animal composed of goat and stag', and also 'The hippocentaur is an animal composed of horse and centaur'; and W. D. Ross (1949), p. 410, also says: 'the ἀρχέλαφος was a fantastic animal, represented on Eastern carpets and the like'.
between the subject and the predicate, while (ii) prevents us from doing it, because it states a real predicative relation, in which the subject denotes existence in re. Thus, under (i) propositions like 'A chimera is a fable' or 'Homer is a poet' are considered true, because if the opinion that Homer is a poet is true, then the proposition 'Homer is a poet' is true, and what *PeriH.* 21a. 32-33 tells us in this respect is that we cannot pass from a strictly predicative predication to (ii), i.e. to a real predication, where Homer does not exist in re. Equally, under (ii), the proposition 'Homer is a poet' means that he really is a poet as something holding now, i.e. that his substance is qualified by 'poetry' in actuality, and that this judgement must be false because he does not longer exist. This second sense is governed by *PeriH.* 16a. 15 and the passage of *Cat.* in which existential import of singular propositions is noted (*Cat.* 13b. 26-35), i.e. by our (a)-and-(b) principle, because here one cannot apply a definite verb to what does not exist, and the sole real predication is formed by an indefinite verb, because the indefinite verb states the negation, and so of what does not exist one does not say what is real and knowable (but the opinable), because how are we going to know whether or not a predicate belongs to what does not exist if that is not-existent? Certainly, one should recall here Aristotle's assertion at *An Post.* 92b. 7:403

"(For of that which is not, no one knows what it is —you may know what the account or the name signifies when I say goatstag, but it is impossible to know what a goatstag is)."

Therefore, according to Boethius' interpretation of *PeriH.* 21a. 32-34, it cannot be maintained that Aristotle contradicts himself in maintaining existential import of singular propositions at *Cat.* 13b. 26-35. At *PeriH.* 21a. 25-28, Aristotle shows that one cannot predicate existence of what does not exist, though one can predicate something of it, namely, that it is opinable or opinable matter, but that does not imply that what does not exist exists. But this is exactly what Aristotle states in the mentioned passage of *Cat.*, because here modern commentators rightly see that

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Aristotle implies an existential import of the subject denoted by the simple singular propositions, according to which it is false to say that 'Socrates is sick' if Socrates does not exist, and true or false if Socrates does exist: if Socrates does not exist, then he is opinable and the inference "'Socrates is sick', then 'Socrates exists'" is false, like that about Homer at *PeriH*. 21a. 25-28. But this is not all: according to our interpretation of Boethius this occurs because of *PeriH*. 16b. 15, that is, because here, as our (a)-and-(b) principle shows, when an indefinite verb is applied to a subject, since it states a negation, it does not import existence of the subject. Hence, then, every negation is true if it is said of an inexistent subject.

Therefore, the above shows not that the passages thought to be in conflict are contradictory, but that they are absolutely consistent. And they are consistent, we say, because they are consistent with *PeriH*. 16b. 15, because here Aristotle states the condition of every negation, and the ontological context where every negation can be true or false, as the (a)-and-(b) principle shows. Thus (a) states that "What does not exist cannot truly be a predicative subject of a definite verb": this is confirmed by *Cat*. 13b. 26-35, for here it is stated that if Socrates does not exist, then every affirmation about Socrates is false, but the negation is true. And Aristotle states this as equivalent to saying "but the predication of an indefinite verb is true", because the indefinite verb states the negation. Equally, the (a)-and-(b) principle is also governing *PeriH*. 21a. 25-28, because here 'Homer is a poet' does not imply 'Homer exists', and that is so because from what does not exist a negation follows truly. And this is so, because the indefinite verb truly applies to what does not exist or, as (b) states, because to what does not exist one can truly only apply an indefinite verb.

(viii. 1) *Does non-existence constrain us to tautologies?*

The consideration of what is δεκατών in Aristotle and of Boethius' comments on it is shown to be important for interpreting the textual conflict mentioned above. Equally, both
points will be shown to be important for rejecting an opinion that has gained approval in some modern commentaries on PeriH., namely, that Aristotle thinks that the only thing that we can truly say of what does not exist is that it does not exist. The point is present in E. Montanari\(^{404}\) and J. Magee.\(^{405}\) When Montanari discusses the question of the predication of the indefinite verb,\(^{406}\) he asserts that "I nomi di ciò che non esiste possono esser uniti solo al verbo 'essere' (e veridicamente solo in negazione), non potendosi dire di ciò che non esiste, ad esempio, che 'no sta in salute', né alcun' altra cosa."\(^{407}\) He grounds this opinion on his interpretation of PeriH. 16a. 16-8,\(^{408}\) because when he comments on this passage he clarifies that "In altri termini si può dire solo 'l' irrocervo è' o 'l' irrocervo non è', e sarà rispettivamente falso o vero. Non è invece possibile considerare falso, ad esempio, 'l' irrocervo camina' —in quanto, non esistendo, non può caminare—, poiché dell' inesistente si può veridicamente predicare solo l' inesistenza."\(^{409}\) Apparently, Magee follows Montanari when he similarly writes: "Furthermore, the only true opinion about an opinabile that does not actually exist is that it does not exist."\(^{410}\)

Montanari's thesis is composed of two statements: (a") What does not exist can only be a predicative subject of the verb 'to be'; and (b") What does not exist can only be truly a predicative subject of the verb 'to be' in a negative proposition.

The statements in question have a resemblance with our (a)-and-(b) principle, and with its cognates (a') and (b'), but they are not equivalent and, to be clear, they are, rather, false.

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\(^{405}\) J. Magee (1989), p. 84.
\(^{406}\) cf. above 2.1, (v) Predication and proposition: the genesis of a negation. And see next note.
\(^{408}\) i.e. "A sign of this [sc. that names and verbs by themselves are neither true nor false] is that even 'goat-stag' signifies something but not, as yet, anything true or false —unless 'is' or 'is not' is added (either simply or with reference to time)." (Ackrill's translation).
\(^{410}\) J. Magee (1989), p. 84. The way in which Magee accepts this statement seems to confirm it, for the statement in question is entirely independent of what he treats before and after in his exposition, so it does not undermine the aim of his text. Actually, it was not necessary for Magee's exposition to introduce this statement, because his argument works perfectly well without need of it.
According to our earlier analysis, it is clear that Boethius does not maintain (a") and (b"), and even more important, that he thinks that Aristotle at *PeriH.* 16b. 15 implies that one can truly predicate any indefinite verb of that what does not exist. Indeed, he, as we know, has said:411

> rursus dicimus *chimaera non currit.* chimaera vero non est nec omnino subsistit et potest de ea vere dici, quoniam non currit. quod enim omnino non est, et non currit.

The passage directly contradicts what is maintained by Montanari and Magee. It seems to be, therefore, that they are wrong to think that Aristotle asserted that the only statement that one can make about what does not exist is tautological, i.e. (in Magee's expression) "The only true opinion about an *opinabile* that does not actually exist is that it does not exist." Aristotle, thinks Boethius, considers it correct and true to predicate of what does not exist not only its non-existence, but also any indefinite verb, like 'does not run', 'does not read', etc., because an indefinite verb states a negation, and of what does not exist can be asserted, as has been said above, a negation or a merely opinable predicate which cannot aspire to be *real*, and which cannot be said to be true or false, unless only as an opinion, as 'poet' said of 'Homer', or 'fable' said of 'chimera' for how are we to say it, if the subject matter does not exist as something known?

Magee's statement must also be considered false insofar as it states the same as (b''). However, his opinion deserves a further comment, because he has seen a ground for his statement in Boethius' commentary on *PeriH.*. Magee has cited the respective comments by Boethius on *PeriH.* 21 a. 32-3.412 Magee does not explain why the passage mentioned is a ground for his statement, but whatever his idea is,413 there are two facts that impede his

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411 *in Int.* 11-14, p. 60. See also *in Int.* 2, 3-13, p. 70 (text quoted later).
412 I.e. *in Int.* 6-20, p. 166; Magee (*ibid.*) also points out that the same idea is in the corresponding part of the second commentary (*in Int.* 2, 23-23, pp. 375-6).
413 Magee (1989), p. 84, as a proof of his statement, only cites Boethius' passage. It is not clear why Magee sees in this passage such a proof. The passage in question is not a proof by itself. It is possible that Magee thinks that in the case of the syllogism in question Boethius rejects the idea that
thesis: on the one hand, Boethius' comment on *PeriH*. 21a. 25-28 implies, as we have shown above, that the verb 'to be' is correctly predicated of what does not exist if it is predicated as in (i), i.e. in a strictly predicative sense, and that, under this view, true opinions can be said of what does not exist, like 'Homer is a poet'. What Magee calls 'true opinion' in his statement (i.e. to say of what does not exist that it does not exist) is not an opinion, but a truth, and actually a consequence of our (a)-and-(b) principle. However, under this view, here it is not only true to say that what does not exist does not exist, but also to assert any indefinite verb of it, as Boethius remarks, because the essential point made in *PeriH*. 16b. 15 is that any negation can be predicated of what does not exist, and in this sense Boethius affirms that we can truly say 'chimera non currit' (*et potest de ea vere dici*), because 'non currit' is an indefinite verb, and states the negation, which gives the correct account of the fact: the chimera does not run, because what does not exist does not run either.

(viii. 2) *Ammonius on 21a. 25-33.*

The lines along which Boethius develops his comments on this passage seem to be known for Ammonius. The Alexandrian commentator faces the complete passage (21a. 18-33) as Boethius does: Aristotle here examines the opposite rule to that already treated: he was examining the admissibility of predicking together things that are predicated separately, and now the point is the converse one: whether things predicated together are legitimately predicated in separation (*κεχωρισμένως*).\(^{414}\) Like Boethius, Ammonius points out that this converse rule cannot be maintained always, because even though it works for (e.g.) Aristarchus, who is said to be a 'grammatical man' (*ἀρχαίος γραμματικός*), and also 'a man' and 'grammatical' *άνθρωπος*, it does not

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work when the compound contains a contradiction, as in the case of 'dead man' or, as he illustrates, in the case of an adulterated coin (κακαίως δρωμέα) or in a stone ship (λέκνη ναός): we will have neither a coin nor a ship ἀπλῶς. Ammonius clarifies that this very point is to be found both in the definition of a compound, as in the mentioned case, and in some names, e.g. 'eunuch', because an eunuch is said at the same time (ὁμα) to be a man and not to be a man, or 'bat', because the bat is said at the same time to be a bird and not a bird, or the pumice-stone a stone and not a stone.

But when the compound does not involve any contradiction, Ammonius points out, the predication κεκατευμένως is sometimes possible, though sometimes not: again the negative case is 'Homer is a poet'. According to Ammonius, from 'Homer is a poet' does not follow 'Homer is [simpliciter]', because when we say 'Homer is a poet' we say that Homer, taken as a whole, is a poet, for poetry belongs to him (ἐστιν αὐτῷ ἡ ποιησις), but we do not say that he is absolutely (ἀπλῶς), since the verb 'to be' predicated immediately (ἀφέως) of Homer is not understood (ἐξακούεται) of the Homer to whom poetry belongs, but of the man, and he does not exist.

This first comment, which follows a semantic line, already shows that Ammonius considers that the ontological status of Homer in 'Homer is a poet' is different from that of 'Homer is', because while the first Homer does not exist and it is only opinable, the second

415 Ibid., p. 211, 4-6.
416 Ibid., p. 211, 11-15. These examples mentioned by Ammonius are not his own, but taken from Plato's Rep. 479c. 1. In this passage, Plato mentions these names as elements of a children's riddle (τῶν παιδιῶν ἀκριματί). The Scholia Platonica (G. Ch. Greene, Societas Philologica Americana, 1938, p. 235) gives two versions of this riddle. One of these says: ἄνος τὸς ἐστιν ὡς ἄνη τ' εἰς οὔκ ἀνήρ ἀπλάνα πε δεν τ' οὔκ ῥυθέα ἕως τ' οὔκ ἐνάν τ' ἐπὶ ἔξων τ' εἰς τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκείνη τ' οὔκ ἔκαμεν ἐκεί

exists and is knowable. So, while existence is not truly predicated of the first Homer, it is rightly applied to the second.

In a following syntactic observation, Ammonius clarifies that when 'to be' is predicated of Homer together with 'poet,' 'poet' is predicated of Homer principaliter (προπαγομενός), and by itself (καθ’ αὐτό), and that he says 'by itself' not in the sense of 'by essence' (καθ’ οὐσίαν), but in the sense of 'by nature' (καθα φύσιν), so that the same 'is' (τὸ δὲ γε ἐστι) is predicated of 'poet' by itself, but of Homer by accident (καθὰ συμβεβηκός).

For Ammonius, like for Boethius, the conclusion of this analysis is that after having taken out what has been predicated καθ’ αὐτό, it is no longer sound to express what is predicated καθα συμβεβηκός, even though nothing is to be found contradictory between 'poet' and 'is,' neither in these expressions nor in their definitions.

εξαφθελείντος οὖν τοῦ καθ’ αὐτό κατηγορηθέντος οὐδὲν ἐπὶ φθέγγεται ὕπὲρ τοῦ καθὰ συμβεβηκός κατηγοροῦμενον, κατὰ οὐδεμένα ἐστίν εὑρέθην ἀντίθεσιν τοῦ ποιητοῦ πρὸς τὸ ἐστὶν, οὔτε αὐτόθεν ἐν τοῖς ὀργίμασιν, ὡς ἐπὶ τοῦ ἀνθρώπου καὶ οὐκ ἀνθρώπος, οὔτε ἐν τοῖς ὀργίμασιν αὐτῶν, ὡς ἐπὶ τοῦ οὐκρόδου ἀνθρώπος.

And also Boethius:

sublato igitur eo quod principaliter praedicatur, id est poeta, licet nullam contradictionem habeat est, quod adjacet poetae, contra poetam, non fit vera praedicatio dicendo Homerus est. secundum accidens enim est praedicatur, non principaliter. sublata autem}

418 Ibid., p. 211, 31-p. 212, 2.λέγω δὲ τὸ καθ’ αὐτό οὐχ ὅπι καθ’ οὐσίαν ἀλ’ ὅπι καθὰ φύσιν. 'Poet' is predicated of 'Homer' not as an essential predicate: let us say, Homer is by definition a poet, but accidentally. The use of καθα φύσιν here for 'predication' (κατηγοραθείν) not only assumes the syntactic analysis developed in An. Post. 1, 22 (73a. 34 ff.), according to which 'Homer,' which is naturally a name, and 'poet' a quality and a predicate, are taken as such, and not vice versa, which constitutes an unnatural (παρὰ φύσιν) predication. (See also Ammonius in Int. p. 53. 1-30; and J. Barnes (1993), pp. 114-7; and Wedin (1978), pp. 182-3). But, it also assumes that 'the poet Homer' is not unnatural in the way 'the stone ship' is. A stone ship is, like a dead man, a compound where 'man' and 'ship' are said homonymously. It is not in this way, then, that 'poet' is said of 'Homer.' 'Poet' inheres naturally in 'Homer'.

419 Ibid., p. 212, 2-6.

420 in Int. 2, 14-20, p. 374. (Italics are ours).
Ammonius (though not Boethius) immediately adds what seems to be a justification for this explanation: if someone says to have taken the verb 'to be' in 'Homer is a poet' as if it were a 'was', then—in accordance with what is accepted by Aristotle—it will also be accepted to predicate of Homer the verb 'to be' by itself (κοθ' αὐτός). Ammonius' remark does not suggest that 'Homer is' follows rightly from 'Homer was a poet', but that 'Homer was' follows rightly from 'Homer was a poet', because the point is the decomposition of the predicate in the first sentence ('Homer was a poet'), and here the past tense of the verb 'to be' is now rightly predicated κοθ' αὐτός of Homer. Hence, the remark suggests that when Homer was who was it was true to say 'Homer is a poet', and this was a truth not only predicative, but absolute, as he says that 'is' in 'Homer is' is predicated, i.e. in relation to the nature of Homer as a man.

Ammonius assumes this explanation when he comments on the last part of the passage (21a. 32-33), and similarly to Boethius, he takes the text as a reasoning (though not a syllogism) advanced by some men who consider that the verb 'to be' can be predicated by itself of what does not exist, given that Aristotle has said that 'what does not exist is opinable'; but for Ammonius (as for Boethius), Aristotle disproves this by arguing that it is not correct to say that 'what does not exist exists': and so—Ammonius concludes by relating this passage to that of Homer—this case is not similar to other ones in which a compound can also become a predicate separately. According to Ammonius, in this sense Aristotle adds "but what does not exist, since it is opinable, is not said truly to be something", and the cause of why it is not true is

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421 Ammonius, in Int. p. 212, 14-19.
422 In this remark Ammonius alludes to the fact that the ancient men (οἱ πολλοὶ) frequently (πολλάκις) took ἦν instead of ἐστιν: that was so—Ammonius points out—in the case of ἦν ἦν ('what was it') instead of ἦν ἐστιν ('what is it'), and also in the definition ἦν ἦν ἐνα ('what was to be') instead of ἦν ἐστι τὸ πρᾶγμα τὸ ἐνα ('what is, in fact, to be'). It does not seem that Ammonius grounds his idea about 'was' on these cases, he seems rather to suggest that this substitution is not merely hypothetical, but frequently practised by the ancient men.
stated when he says "because the opinion of it is not that it exists, but that it does not exist". Therefore, Ammonius continues, when we opine about what does not exist (the very fact) that it does not exist, it is clear that we say rightly (εἰκότως) that it is opinable, though we will not concede because of this that it exists.\footnote{423}

Ammonius had already expressed his opinion about the 'is' κατὰ συμβεβηκός in a singular comment on how the so-called canon of Proclus applies (ἐφιμέρεται) to non-existent items, like the goat-stag.\footnote{424} The argument leads to the inquiry of how 'is not-just' is predicated of what does not exist. Here Ammonius must confirm that 'The goat-stag is not-just' is an indefinite affirmation,\footnote{425} and explain how the verb 'to be' is understood when predicating of non-existents. Ammonius supposes an objector who has in mind the proposition 'the goat-stag is not-just' and finds it incredible (τέρας) that 'is' is said truly of any of the non-existents, and transferred absolutely to being wherever it is predicated. Ammonius explains that the objector is wrong to assume that, since this proposition is not a negation, but an affirmation, it will be true. Ammonius confirms that this proposition is an affirmation, though indefinite,\footnote{426} and points out that we will not say for this reason that it is false, or it produces the existence of the things of which is predicated.\footnote{427} He accepts that if the objector says 'The goat-stag is', something is said, but in this case the verb 'to be' is said to belong to the goat-stag (τὸ δ λο ν τοῦτο) as 'not-being something', i.e. as 'not-just', but not in an absolute sense (ἀπλῶς).\footnote{428} Here, Ammonius clarifies, 'is' is predicated of 'goat-stag'

\footnote{423} Ibid., p. 212, 24-31.

\footnote{424} cf. in Int. p. 183, 17-35. Details of this deductive rule are given at Part II, 1, C, Equivalences, (iv) The canon of Proclus.

\footnote{425} Or transposed affirmation. E.g. 'the man is not-just'. Further detail about indefinite propositions at Part I, 5., (a) Theophrastus and transposed propositions.

\footnote{426} Because in general, Ammonius argues, 'the goat-stag is not-just' declares that something is, even if indefinite.

\footnote{427} Ammonius in Int. p. 184, 10-16. εἰ δὲ τέρας εἶναι ὑπολογιζόμενον τὸ περὶ τῶν μὴ δυτῶν τὸ ἐστιν ἀληθῶς λέγεσθαι καὶ εἰς τὸ ἐνία πάρτις ἁγιότατον μεταπιέτειν, οὐ δὲ τούτο κατηγορεῖται. μαυθητέων πρῶτον μὲν ὅτι κακῶς τὰ περὶ τοῦ μὴ εἶναι ἀποφασικὴν τὴν τοιαύτην πρόοσιν λεγόμενα ἐπὶ τὸ μὴ ἀληθεύειν αὐτὴν μεταφερεῖ ἀπόφοιτας μὲν γὰρ εἰκότως λέγεται μὴ εἶναι, διὸ ὅλως εἶναι τι ἀποφαίνεται, εἰ καὶ ἀνάμει, ὡς μὴ διὰ τούτο ἡ φευγός αὐτὴν λέγεσθαι φησιμένη ἡ τῶν δυτῶν ποιεῖν τὸ πράγμα, οὐ κατηγορεῖται.

\footnote{428} in Int. p. 184, 16-20. εἰ μὲν γὰρ αὐτῷ μόνον καθ’ αὐτὸ τὸ ἐστ. κατηγορεῖτο τοῦ μὴ δυτός, ὁ πραγκελάψος ἔστη, ἐλέγετο δὲ τι, μὲν δὲ τὸ δλον τοῦτο λέγεται ὑπάρχειν αὐτῷ τὸ εἶναι μὴ τοιχία, ὁ πρό τὸ ἀπλῶς εἶναι.
accidentally (κατὰ συμβεβηκός) "as in the following [paragraphs] will be said of in respect of the proposition that says 'is a poet' of a not longer existent Homer"429.

After that, Ammonius also considers the hypothetical question of where is the goat-stag of which we speak truly in attributing to it 'not-just': the goat-stag, he says, of which we speak truly as opinable and nameable and also as definite, is in our imagination. And we speak truly, Ammonius remarks, in doing so, because what does not exist in any way at all is neither opinable nor nameable nor capable of admitting any other predicate, as we cannot say that it is individual, or has any other number, as the Eleatic Stranger determined (Sophist 238b. ff.).430 According to Ammonius:431

"It is not to knit flax with flax"432 to combine [the notion of] unity or number to what does not exist at all. Certainly, where we attempt to predicate something, it is necessary that this is previously conceived by us, and that it either has a complete foundation in the pure imagination or that before our mind it subsists by itself."

The passage finishes with an acknowledgement to Metaphysics,433 but the glory is given by the Alexandrian commentator to the

429 in Int. p. 184, 20-22, κατὰ συμβεβηκός γὰρ ἐνταῦθα τοῦ πραγμάτως κατηγορεῖται τὸ ἐστὶ, ὡσπερ ἐν τοῖς ἔξις ἐφησέσται περὶ τῆς προτάσεως τῆς λεγομένης ποιήσεως τῆς ὑπάρχουσας ἐν τοῖς μικρὸν δύνας Ὀμήρου.


431 ibid., p. 184, 31-p. 185, 7. οὐ γὰρ λύνων λύψιν συνάπτειν ἔστι τὸ μονάδα ἡ ἀρίθμοι τῶν ὑπάρχουσαν συμπλέκειν, οὐ μέντοι κατηγορεῖν τινὰ ἐγχειροῦμεν τούτῳ προεπινοοῦμεν παρὰ ἡμῖν ἀνάγκη καὶ ἦτοι ἐν ψυχή τῇ φαντασίᾳ τῆς ὅλην ἔχειν ὑπόστασιν ἢ καὶ πρὸ τῆς ἐπινοούσας τῆς ἡμετέρας αὐτό καὶ αὐτὸ ὑφεστάναι.

432 The expression λύνων λύψιν συνάπτειν is a proverb (see LSJ in συνάπτω). Cf. also Plato Euthd. 298c. 1; and Aristotle Phys. 207a. 17. The idea underlying the proverb is that two things of different nature cannot be joined and maintain a simple unity at the same time. In Ammonius' mind, the proverb is prompted by the context of Soph. 238 b. 1 ff..

433 Ibid., p. 212, 33-34. "It is entirely necessary not to disregard the things finely said in the Third Book of Metaphysics [Met. 1003b. 5 ff.] in respect of the divine virtue of the first being that is really existent (ὄντως ἐνα), which extends not only up to the absolutely formless matter (ἄνεμος [λίθος]), but also to the privations and negations and the very not-being (οὐ τοῦ μὴ ὄντος), since we say even that what does not exist in itself is not-existent."
Sophist and what Plato states in the fifth book of Republic about ὑποτείνεσθαι and ἐνα.\textsuperscript{434} Ammonius' reflection confirms that the ancient commentators take the 'is' κατὰ συμβεβηκός in a merely predicative way, as a connective without existential implication, when it is predicated of what does not exist. Ammonius' explanation states that this sense of 'is' is not ἄνα, as that of 'Homer is', where it declares that Homer exists as a man. Equally, his explanation states that if 'a poet' in 'Homer is a poet' is cancelled, the resultant 'is' never will be a 'is' καθ' αὐτό. For Ammonius, the merely predicative sense of 'is' can truly be applied to propositions about non-existent subjects, and even produce true affirmations like 'Homer is a poet', or 'The goat-stag is not-just', but it neither gives existence to the subject nor is 'is', in this predication, transferred absolutely. Ammonius and Boethius are in clear agreement in respect of the interpretation of 21a. 32-33 and its connection with the example of Homer (21a. 25-8):\textsuperscript{435} both the passage and the example imply that the negation of what does not exist is true, and that Aristotle allows us to affirm truly something of what does not exist, if it is affirmed κατὰ συμβεβηκός.

\textsuperscript{434} Ammonius thinks that Aristotle here extends (ἀποτείνεσθαι δοκεῖ) what Plato says in Sophist (258b. ff.) and Republic (477d. ff.).

\textsuperscript{435} i.e. "What does not exist, since it is opinable, is not said truly to be something, because the opinion of it is not that it exists, but that it does not exist."
3. Antiqui et antiquiores

(i) The historical view of Boethius' commentary

Aristotle's intention of discussing the nature of indefinite names and verbs (and also the name's and verb's cases) is to get the \textit{integra definitio} of name and verb.\textsuperscript{436} The purpose would be amply justified because the notions of indefinite name and verb are different from the name and verb, but at the same time have a similar definition.\textsuperscript{437} According to Boethius, there existed a uncertain opinion (\textit{dubia sententia})\textsuperscript{438} among the ancients (\textit{apud antiquos}), as to whether the indefinite name should not be called a name (\textit{nomen non dicerent}), or it should, but with a certain qualification (\textit{aliaqua adiectione}).\textsuperscript{439} He mentions the existence of a discussion on this concern, and gives details of the corresponding positions.\textsuperscript{440} The first position excludes (\textit{separaretur}) the indefinite name from the \textit{integra nominis definitio}, so that an indefinite name is absolutely separated from the definition of name as if it were not a name. The other group of \textit{antiqui}, reasoning from the same \textit{integra definitio}, does not reach the

\textsuperscript{436} \textit{in Int.} 2, 9-13, p. 61. nunc vero quoniam sunt quaedam quae sub definitione quidem nominis cadunt, videntur tamen a nomine discrepare, de his dissertation, ut quid esse nominem integre videatur expedit. (Remarks on indefinite verb and the \textit{integra definitio verbi} at \textit{in Int.} 8-13, p. 59; 26-4, pp. 61-2; and see also above 1.2, (vi. 3) \textit{The 'integra nominis definitio'}.\textsuperscript{437} \textit{in Int.} 2, 16-19, p. 62. omne enim nomen (ut dictum est) definite id significat quod nominatur, et non similiter et de eo quod est, et de eo quod non est dicitur, sed haec huiusmodi vox et designativa est, et ad placitum et sine tempore, et (ut dictum est) partes eius nihil extra designant. For the case of the indefinite verb, cf. \textit{in Int.} 26-31, p. 59; and also above 2.2, (i) \textit{The definite and indefinite verb: similitude and difference}.\textsuperscript{438} For the case of the indefinite verb, see \textit{maximam dubitationem} at \textit{in Int.} 26-1, p. 50-60. And also above 2.2, (i).\textsuperscript{439} \textit{in Int.} 2, 21-23, p. 62. quare dubia apud antiquos sententia fuit, utrum nomen hoc non dicerent, an hoc aliqua adiectione nominis definitioni subicerent.\textsuperscript{440} \textit{in Int.} 2, 24-31, p. 62. et qui hoc a nomine separabant, ita nomen definitione claudebant dicentes: nomen esse vocem designativam secundum placitum sine tempore circumscriptae significationis, cuius partes extra nihil designaret, ut quoniam \textit{non homo} rem circumscriptam non significaret a nomine separaretur. aliis vero non eodem modo, sed dicebant quidem esse nomen, sed non simpliciter.
same conclusion, but only that the indefinite name is not an absolute name (simpliciter).

According to Boethius, Aristotle himself would give the clue to advance an answer to this problem when he says:

\[ (...) \text{où μὴν οὐδὲ κατα ὅνομα ὅ τι δὲ καὶ ὡντό, (...) ἀλλ’ ἔστω ὅνομα ἀόριστον.} \]

The commentary discovers an historical perspective in this passage: expressions like 'not-man' did not have a name before Aristotle, and no one knew their nature (nullus noverat quid esset), so that when he said \textit{sed sit nomen infinitum} (ἄλλ’ ἔστω ὅνομα ἀόριστον), he resolved implicitly the question of its nature, and the imposed name testifies this solution. According to this, Aristotle accepts that the indefinite name is a name, though a non-absolute one (\textit{non simpliciter}), because it denotes nothing definite (nulla circumscriptione designat), but an indefinite one, because it signifies many and indetermined things:

\[ \textit{a}it enim: \textit{at vero nec posatum est nomen, quo illud oporteat appellari,} \\
\textit{dicens: id quod dicimus \textit{non homo} quo vocabulo debeat appellari non vocavit antiquitas. et usque ad \textit{Aristotelem} nullus noverat quid esset id quod \textit{non homo} diceretur, sed hic huic sermoni vocabulum posuit dicens: \textit{sed sit nomen infinitum}, non simpliciter nomen, quoniam nulla circumscriptione designat, sed infinitum nomen, quoniam plura et ea infinita significat.} \]

Boethius' commentary implies that the right position is not to exclude absolutely the indefinite name from the definition of name, but relatively. Therefore, the first position of the \textit{antiqui} is wrong, and the second group must be right when they say that the indefinite name is a name though not absolutely (\textit{esse nomen sed non simpliciter}), and also when they contribute with a

\[ \text{\textsuperscript{441} cf. PeriH. 16a. 30-31. In Boethius' translation: \textit{at vero nec posatum est nomen, quo illud oporteat appellari} (...) \textit{sed sit nomen infinitum}, Ackrill also says: "(...) nor is there any correct name for it. (...) Let us call it an indefinite name."} \]

\[ \text{\textsuperscript{442} in Int. 2, 5-14, p. 63.} \]
comparison that clarifies the relationship between these two kinds of name, namely, that of a man and a dead man:443

quadam namque adiectione sub nomine poni posse putabant hoc modo, ut sicut homo mortuus non dicitur simpliciter homo, sed homo mortuus, ita quoque et nomen hoc, quod nihil definitum designaret, non diceretur simpliciter nomen, sed nomen infinitum.

Boethius' commentary agrees with this solution and comparison by saying immediately that Aristotle is the author of this last opinion and that he says that he (autum at se) has invented the denomination of 'indefinite name' for this indefinite expression (ei):444

cuius sententiae Aristoteles auctor est, qui se hoc ei vocabulum autum at invenisse.

(iii) Antiqui

Boethius' report of these antiqui rıses many questions but one of importance is the following: Who are these antiqui?445 There is no further notice given by Boethius' commentary, and Ammonius and Stephanus do not mention this situation of conflict.446 Hence, the identification of these antiqui (or at least the time in which they flourished) seems to be a question extremely difficult to answer. A proof of this difficulty is that J. Barnes447 faced a similar problem when he attempted to place Ammonius' logical development on propositions with modal adverbs (μετὰ τρόπου) in the scholarly activity of the earlier Peripatetics. As Barnes' paper points out, this kind of proposition

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444 in Int. 2, 4-5, p. 63.
445 The following discussion will show that there is no need to suppose this question is historical.
446 Rather, Ammonius and Stephanus will comment, similarly, on some παλαιότεροι (= antiquiores). This point will be discussed later here at 3., (iv) Antiquiores.
is treated by Ammonius' commentary on *PeriH.*, but "they [sc. the propositions] are not idiosyncratic to Ammonius", but a theme "current before Alexander's time and it seems to have been peculiar to Peripatetic logic." Accordingly, he conjectures that "the notion [of *τρόπος* presented by Ammonius] was developed in the renascent Peripatos, some time after the middle of the first century BC", which seems to be reasonable because it is known that there is no notice of this development by Aristotle, Theophrastus or Eudemus. However, in our particular case, we cannot make the same conjecture, because a brief and isolated notice about a certain observation that Theophrastus made on indefinite names opens the possibility that some scholarly activity on this point had been already developed by the immediate followers of Aristotle.

It is worth noting, however, that Boethius' commentary does not describe a situation of passive uncertainty, but rather the existence of an active discussion developed in terms of whether indefinite expressions can or cannot be included in the respective definitions of name and verb. The context of this notice seems to be that of a quarrel, with its difference clearly defined. Now, since this discussion evolved around a point introduced by Aristotle in *PeriH.*, it can be implied that this quarrel is internal to a Peripatetic school and, equally, that the parties to this conflict must be Peripatetics. Accordingly, those ancient men (antiqui) mentioned by the commentary are rather ancient scholars, and

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449 *Ibid.* p. 147. As Barnes observes, "The earliest extant reference to *τρόποι* is in Alexander's commentary on the Prior Analytics (in An. Pr. 26. 15-18). But Alexander mentions *τρόποι* as though they were familiar to his audience: he sees no need to explain the word *τρόπος*, and he evidently uses it as a standard piece of logical jargon." (p. 147).
451 According to J. Barnes (*ibid.*, p. 147) "the word [*τρόπος*] is not found (in the relevant sense) in Aristotle." "And [as he adds in n. 11] —for what it is worth— it does not appear in the surviving testimonia to early Peripatetic logic".
452 As is clear from a notice by Alexander of Aphrodisias (in An. Pr. p. 396, 34-397) and Ammonius (in Int. p. 161, 5-1; and 24-32), Theophrastus called propositions with an indefinite name in its predicate 'transposed'. About this denomination and a possible development on the theme of indefinite names and verbs by Theophrastus, see Part I, 5., (a) *Theophrastus and transposed propositions*. (References there).
their dispute reveals that a certain activity around the theses of the *Perih.* was developed very early among the followers of Aristotelian doctrines.

Similarly, it should be noted that the allusions to ancient scholars, without any other qualification, made by Boethius, represent an exception to his normal practice. In other words, his allusions to *antiqui*, and later to *antiquiores*, are to be found only in connection with the theme of the indefinite names and verbs.\(^{453}\) Boethius' normal practice is to cite some historical notices by means of the expression 'According to the Peripatetics' or to allude directly to the Peripatetics.\(^{454}\) Now, the modern scholars who have discussed the question of the sources of Boethius' commentaries in logic agree with the thesis that when Boethius refers to the earlier commentators his principal source is Porphyry.\(^{455}\) This is, besides, in accordance with something that Boethius himself has declared at the beginning of his second commentary on *Perih.*, namely, that his exposition is chiefly based on Porphyry although not uniquely on him.\(^{456}\)

\(^{453}\) Cf. *antiqui* and *antiquiores* in Meiser's *Index Nominum*. This practice is more common, however, in Ammonius' commentary; in fact, as J. Shiel has shown, sometimes Ammonius refers to the Peripatetics as 'ancients' (cf. Amm. *in Int.* p. 199, 19-20; p. 200, 5-8; and also J. Shiel, *Boethius and Eudemus*, pp. 16-17, in *Vivarium* XII, I (1974)).

\(^{454}\) So, for example, *at in Int.* 5, p. 151; *in Int.* 2, 17, p. 129; *in Int.* 2, 3, p. 30; *in Int.* 2, 9, p. 95; et passim.

\(^{455}\) So Courcelle, *Late Latin Writers and their Sources*, Cambridge/Massachusetts, 1969), p. 28; J. Shiel (1990), p. 358; and Bidez (1923), p. 199. Shiel (*ibid.*, p. 358), in particular, has confirmed this tendency by noting that there is a series of passages referring to the earlier commentators where Boethius adds a final criticism made by Porphyry, which is a reasonable proof that Boethius has taken the corresponding information from Porphyry. Even more, he has shown that several passages in which Boethius does not name Porphyry have parallels in Ammonius' commentary where Porphyry's name certainly occurs.

\(^{456}\) Cf. *in Int.* 2, 5-7, p. 7. "(...) liber de Interpretatione (...) cuius expositionem nos scilicet quam maxime a *Porphyrio* quamquam etiam a ceteris transferentes Latina oratione digessimus". According to Shiel (1990), pp. 358-9, this phrase entails that Boethius does not follow a continuous copy of Porphyry's commentary, which, at the same time, would explain why Boethius quotes Syrianus (a post-Porphyrian commentator) four times. Courcelle (1969), p. 28, thought that Boethius had access to a continuous copy of Porphyry's commentary, but this is unlikely, as Shiel (*ibid.*, p. 359) has observed, since as Stephanus says (*at in Int.* 63, 9) the commentary of Porphyry was lengthy. L. Tarán concluded (1978), p. xvii, quite improbably, that the occurrences of Syrianus in Boethius' commentary were due to that Boethius had access to Syrianus' commentary on *Perih.*.
Thus, it seems to be clear that this notice about *antiqui* has been taken from some Porphyrian material, even though there is no identification of the scholars alluded to. However, one can question whether this Porphyrian information has not come ultimately from Alexander of Aphrodisias, because what evidence does Porphyry have of this ancient dispute that Alexander does not already have? It can be, indeed, suggested that not only this notice about *antiqui*, but also every other piece of historical information that Boethius transfers from his Porphyrian material was already present at least in Alexander's commentary. A proof of this is that in the passages in which Boethius alludes to the earlier commentators, Boethius also alludes to Alexander, and thus it seems to be more likely that Porphyry, in his commentary, adds his critical view on the ancient theses from the evidence that he encountered in Alexander's commentary.\(^{457}\) Besides, the assumption that Alexander's commentary is the historical subsoil of Porphyry's commentary makes sense when taken with a notice of Alexander referred to by Boethius, namely, that Alexander undertook the task of making a long commentary on *PerlH.* due to the disagreement that he had with the opinions of the earlier commentators (*scriptores*), so that, at the same time, this interpretation would clearly explain the polemical aspect and

\(^{457}\) The analysis of each occurrence of Porphyry's name in Boethius' twin commentary shows clearly that every time that Boethius introduces Porphyry's opinion concerning the doctrines of the ancient scholars (in particular, Aspasius and Herminus), Alexander's name is also present. The exceptions confirm this rule, because when Porphyry is cited in isolation, this is due either to the fact that Boethius is not sure of his notice (*in Int. 2, 20*, p. 60: "(...) (ut Porphyrius autumat) cicada per pectus sonitus mittit"), or to the fact that none of the ancient commentators has treated the point before (*in Int. 2, 20*, p. 106; and *10*, p. 110), or to the fact that there is no reference to the past at all, as at *in Int. 2, 6*, p. 383. Apart from these exceptions, there are more than 20 occurrences of Porphyry's name together with that of Alexander, a fact which seems to confirm the hypothesis that he has taken historical information from Alexander's commentary. In most of these occurrences Porphyry's name is introduced by means of the formula 'Porphyrius vero', or 'Porphyrius autem'. There are some occurrences where Porphyry's name depends on Alexander's name, which is cited some passages before, so at *in Int. 2, 10*, p. 11; *29*, p. 29; *20*, p. 33; *20*, p. 60; *29*, p. 88; *20*, p. 134; at *8*, p. 276 (the passage depends on passages of the first commentary (*in Int. 3*, p. 132)). Finally, at *in Int. 2, 26*, p. 121, Boethius reports a certain opinion that neither Porphyry nor other any commentator has seen ("sed hanc expositionem (quod adhuc sciam) neque Porphyrius nec ullus alius commentatorium vidit").
critical emphasis of these reports on the ancient commentators, as is manifest in Boethius' commentary:458

Alexander in commentariis suis hac se inpulsam causa pronuntiat sumpsisse longissimum expositionis laborem, quod in multis ille a priorum scriptorum sententiis dissideret.

It is more likely that the post-Porphyrian material that Boethius has at his disposal to comment on PeriH. had been derived from Alexander's commentary in every point in which the past scholarly activity is alluded to. However, this result by itself cannot imply directly a determined period of time or some scholars to be identified with these antiqui. As general evidence the antiqui referred to by the commentary could be members of the Athenian Peripatos or they must be placed in the renascent period of Peripatetic commentaries, which would place them about the middle of the first century BC onwards.459

On the one hand, it must be noted that if Alexander is the source of Boethius for this notice referring to these antiqui, then it is more likely that these ancient Peripatetics had belonged to some of the generations of teachers and students placed after the revival of this scholarly tradition produced by the edition of Aristotle's works at Rome.460 Thus, since Boethius' passage

458 in Int. 2, 1-4, p. 3. ("In his comments, Alexander says to have undertaken, as a purpose of his concern, a very extensive task of exposition, because he disagreed with the opinions of the earlier commentators."). It can be worth noting that these are the opening words of Boethius' second commentary.

459 I.e. after the new edition of some of the Aristotle's works (mainly his exoteric works) made by Andronicus of Rhodes about 60 BC at Rome. Cf. R. Lynch Aristotle's School, University of California Press, 1972, pp. 193 and 200-203.

460 The reasons that Lynch (1972), p. 201-203, gives for demonstrating the decline and rupture of the Athenian tradition of the ancient Peripatos after Sulla carried off the library to Rome (86 BC) seem to be convincing, and they allow little scope for believing that other logical developments than those made by Theophrastus and Eudemus had been made by later generations. The passage that Lynch (ibid., p. 201) quotes from Strabo (XIII, 1. 54) suggests that there was no outstanding scholar after Theophrastus, and rather the decline and sporadic revival described here implies that the Athenian Peripatos during this time was entirely dependent on the existence of Aristotle's and Theophrastus' books, which would also explain the revival of this tradition at Rome once these texts were available. Thus, as Lynch says 'It is Andronicus' work which forms the basis of the modern
mentions two groups in discussion, they could have been students or followers of Aspasius or Herminus, i.e. scholars immediately preceding Alexander, for Alexander, in this case, would have more likely had notices about their activity. Accordingly, the notice about the *antiqui* could belong to the same group of notices about Herminus and Aspasius transmitted by Boethius' commentary; in particular, that Aspasius wrote a commentary on *Peri H.*, and all the agreements and disagreements that Herminus maintained in relation to different doctrinal points of this treatise. Besides, this hypothesis becomes more likely, if one considers that these *antiqui* are involved in the discussion of how to interpret the relation that the indefinite name has with the definition of name (16a. 19-21), and that Herminus must have discussed the same problem, because he is said by Ammonius to have maintained that Aristotle's definition of name is not complete (ἐξαντικεῖται), i.e. is not the *integra nominis definitio*, as Boethius and Stephanus correctly explain.

The preceding explanation seems to give us a provisional answer to our question: namely, that Herminus could be considered a possible *terminus ad quem* of the discussion reported by Boethius' commentary, and the *antiqui* could be assumed to be linked to his intellectual activity. It is worth noting, however, that this explanation does not exclude the possibility of seeing these *antiqui* in the earlier stage of the Peripatos. In fact,
the aspect of scholarly activity implied in the sense of the passage referred to by Boethius seems to give reasons to assume that these "antiqui" are, rather, some of the students involved in the public educational system that the Lyceum of Aristotle and Theophrastus is said to have had. If this is so, the historical sense of the phrase cited above, namely, "cuius sententiae Aristoteles auctor est," would imply that Aristotle resolved the discussion of whether an indefinite name is or is not a name, by indicating—as we know—that an indefinite name is a name but not an absolute one, just as a dead man is not a man. In fact, the "antiqui" who say that the indefinite name is a name though a non-absolute one assert that this is implied by Aristotle's phrase ("sententia") "'not-man' is not a name (...). Let us call it an indefinite name". Accordingly, they would suggest that Aristotle should be taken as the source of the doctrine of the "integra nominis definitio" and, on this assumption, Herminus would be, rather, only another ancient commentator who adopted (or perhaps developed further) this doctrine.

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As Lynch argues (1972), p. 91, the Lyceum of Aristotle and Theophrastus, by contrast to Plato's Academy, believed in public expositions as an educational procedure. Similarly, Lynch (p. 91) seems to describe appropriately the atmosphere of intense education of the Athenian Peripatos, when saying that "Not only did Aristotle give instruction to the students of the school in the evenings, but he also lectured publicly in the mornings." He cites as sources Aulus Gellius Noctes Atticae XX, 5; and even Aristotle's Eud. Eth. I, 8, 1217b. 17-26. The number of 2000 students attending Theophrastus' lectures is in a notice given by Diogenes Laertius V, 35-37, p. 483 (The Loeb Classical Library, 1972) as evidence of his successful teaching, and Lynch (1972), p. 92, takes reasonably this notice as evidence of the activity of the Peripatetic school in the times of Aristotle and Theophrastus. And also, the detail added by A. Gellius (Attic Nights, XX, V) — which, in fact, is more conclusive than that from Eud. Eth.— that "The philosopher Aristotle, the teacher of king Alexander, is said to have had two forms of the lectures and instructions (commentationes suarum artiumque) which he delivered to his pupils (discipulis)", and that "Aristotle did not ordinarily admit any pupil to it [to his acroatic teaching] until he had tested his ability, his elementary knowledge, and his zeal and devotion to study", reveals that the activity of Aristotle and that of the Lyceum was much in demand.
(iii) Is there a modification of the name's definition by the antiqui?

E. Montanari\(^{468}\) has observed an exegetical line, which—as he says—would attempt to establish a solid reworking (massiccia rielaborazione) of the definition of name by excluding from it the notion of indefinite name. This tendency, as he also observes,\(^{469}\) is perceptible in connection with the name's and verb's cases (πτώσεις ὄνοματος, ῥήματος). This exegetical line has been detected by him in the post-Ammonian commentators Stephanus, Olympiodorus and Probus, who "offrono un' integrazione della definizione di nome finalizzata ad escluderne appunto il 'caso', in totale analogia a quanto si è già visto per il 'nome indefinito'."\(^{470}\) This tendency is characterized basically by adding the phrase ὑφισμένην καὶ φύσιν ἐξάγουσα by Stephanus\(^{471}\) and Probus,\(^{472}\) and ὑφισμένον τι δηλοῦσα by Olympiodorus,\(^{473}\) after ἀνευ χρόνου in the definition of name at PeriH. 16a. 19.

Now, the tendency of these post-Ammonian commentators has been also detected by Montanari in the passage of Boethius' commentary cited above,\(^{474}\) where Boethius alludes to antiqui.\(^{475}\) Montanari's opinion certainly gets support here, because in Boethius' report the expression circumscripta significatio is attributed to the nature of the name by these antiqui, and one could even assume that this expression used by Boethius is the Latin translation of ὑφισμένον τι δηλοῦσα. Accordingly, Montanari's interpretation suggests that the problematic relation between the definition of name and the notion of indefinite name is so difficult

\(^{471}\) cf. Stephanus in Int. p. 8, 12; p. 11, 31-36
\(^{472}\) cf. Probus (latin version) p. 71, 30 ff; p. 72, 14.
\(^{474}\) Namely, in Int. 2, 25 ff. p. 62.
\(^{475}\) cf. Montanari (1988), vol. ii, p. 154. It is clear, in his opinion, "che l' aggiunta in questione [i.e. ὑφισμένην καὶ φύσιν ἐξάγουσα after ἀνευ χρόνου of 16a.20] è conosciuta anche da Boezio (sec. p. 62, 25), che l' attribuisce non già ad Aristotele, benzì a non meglio identificati 'antiqui'".
to express that it produced a sort of 'history of an unsolved problem', which finished in the *rielaboratione* of this definition by Stephanus, Probus, and Olympiodorus. Montanari, however, thinks that this tendency to modify the definition of name (and verb) is wrong, because the solution of that difficulty is present, in his opinion, in the concept of διαφορά maintained by Ammonius, though this solution needs to be interpreted, since it is only glimpsed by this ancient commentator.

We have shown above that διαφορά is a false link in this context, and also that Montanari's interpretation of this term cannot work. Now, the thing is to show that the post-Ammonian commentators do not attempt a reworking of the definition of name and verb, as Montanari claims, and that they are not wrong doing what they do. According to our results, what these post-Ammonian commentators really do is to follow a traditional interpretation of *PeriH*. maintaining that Aristotle would give a non-strict definition of name and verb in order to see where the indefinites and the oblique cases fall, and a restricted one to see what is the specific nature of the name and verb. This exegetical line is, as is pointed out above, already present in Herminus, for Ammonius attributes to him the question of why Aristotle does not give from the beginning the complete definition of name and verb, but he kept the indefinites and the oblique cases excluded, and also the answer, namely, that this is

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478 Above: 1.2, (vi. 2) Boethius' position. See also here (vi. 1) Montanari's interpretation. This discussion can be summarised thus: one can neither disregard the fact that, in Boethius' commentary, Aristotle himself appears to give a solution to this ancient apprehension concerning the relation between name and indefinite name, nor that Ammonius does not devote to διαφορά an account as if it were the solution of the problem of that relationship. Besides, we have also shown that διαφορά cannot be interpreted as Montanari claims (i.e. as implying a genus-species relation), because in that case the indefinite aspect should be counted as an essential attribute of the name, but Aristotle's text does not show an inclusion of this aspect in the definition of name at all.
so because the first definition of name and verb given by Aristotle is incomplete (ἐλληνικά). Again, this interpretation occurs, as is also seen, in Boethius' commentary, because the interpretation based on the existence of an *integra definitio* intends precisely to show the strict and non-strict senses of name and verb. Now, the same interpretation is adopted by Ammonius, though he avoids implying that the definitions of name and verb by Aristotle are incomplete (this is, in fact, his disagreement with Herminus' interpretation), but that Aristotle signified 'name' and 'verb' through many senses. And finally, if Stephanus' commentary is brought into question—which is the most complete and elaborated of these post-Ammonian commentators mentioned by Montanari—we will obtain the same result. Before this analysis, however, let us give an exposition of Ammonius' interpretation of the name's definition to complete what we have said of it above, and also to understand in a more proper way Stephanus' position.

Like in the case of the definition of verb, Ammonius also accepts a restricted definition of name, and questions why Aristotle did not give it from the beginning:

"Now, making a summary of the things which have been said of the name by Aristotle, we say that properly speaking (κυρίως), the name will be [is: MSS], according to the now traditional interpretation (τὸ κατὰ τὴν ἱδιὰν παράδοσιν), a spoken sound significant by convention, without time, none of whose parts is significant in separation, with a definite signification, and true or false with 'is' or 'was' or 'will be'. But for what reason did Aristotle not give this definition of name from the beginning, so that neither indefinite names nor cases would disturb the exposition?"

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479 cf. Ammonius in Int. p. 52, 25-32. Also above, 1.2, (vi. 3) The *integra nominis definitio*; and see also here (vi. 4) Ammonius' position.

480 cf. above 1.2, (vi. 4) Ammonius' position.

481 in Int. p. 45, 7-14, ἣμῶς εὲ συγκεφαλαιώμενο τὰ περὶ τοῦ ὄνοματος ὁρθέντα τῷ Ἀριστοτέλει λέγομεν ὡς ἐστι τὸ κατὰ τὴν ἱδιὰν παράδοσιν κυρίως ὄνομα φωνῆ σημασική κατὰ συνεχὴν ἄκουσιν ἢς μηδὲν μέρος ἐστὶ σημαντικοὶ κεχωριζόμενοι, ὡςιμένους τι σημαντῶσα καὶ μετὰ τοῦ ἐστιν ἢ ἢν ἢ ἐσται ἀληθεύουσα ἢ ἀεικόμενή, ἀλλὰ διὰ τίνα ἀπαίσιν οὐκ ἐξ ἀρχῆς ὃ Ἀριστοτέλης τούτων ἀποδέουσε τοῦ ὄνοματος τῶν ὁρισμῶν, ὥστε μηδὲν ἐνοχλεῖν τὸν λόγον μήτε τὰ ἀριστά ὄνοματα μήτε τὰς πτώσεις.
Like with the verb, Ammonius also will avoid Herminus' answer that Aristotle's initial definition is incomplete. Ammonius' interpretation (or perhaps that of his school: φομεν), maintains that Aristotle has signified many senses of 'name'.

"We, for our part, (δι) say that, according to Aristotle, the significations of name are many."

This statement of Ammonius also differs from the corresponding explanation by Boethius, which contains a teleological trace, since it states that Aristotle would analyse the indefinites and the cases of the verb and name to see what are their proper (or restricted) corresponding definitions. Ammonius rather proposes that Aristotle has used different senses of 'name' throughout PeriH, so that one can find five senses: (1) the sense in which a verb can be called a name, that is, 'a significant spoken sound by convention denoting an existing thing'. This sense is at 16b. 19, where Aristotle says: "When uttered by itself a verb is a name and signifies something". (2) A name as subject, that is, a sense involving the participle of the verbs and the adjectives, but not the indefinite names and the cases of the name. This sense occurs, Ammonius clarifies, at 20b. 1, where it is said: "If names and verbs are transposed they still signify the same thing". (3) Name as denoted in the initial definition at 16a. 19, according to which adjectives, indefinite names and cases of the name are said to be names. (4) A sense which includes the cases but not the indefinite names. Ammonius testifies to this sense with 19b. 10, where it is said: "So every affirmation will contain either a name and a verb

482 Ibid., p. 45, 14-15. φομεν δι ὁ πολλά ἐστι παρ’ αὐτῷ τοῦ ὀνόματος τὰ σημανώμενα. The occurrence of this δι must be noted here: it is certainly important, and it emphasizes the position that Ammonius (or his school) maintains in relation to the answer that Herminus gave to the question of why Aristotle did not give from the beginning a complete definition of name and verb. Ammonius does not agree with Herminus' solution, namely that those initial definitions are incomplete, as he says at in Int., p. 52, 28. Hence δι must emphasize his own position, which seems to be that of his school or tendency. The point can represent an implicit allusion to Proclus' teaching, for Ammonius recognizes at the beginning of his commentary that he is following him. (Cf. Amm. in Int., p. 1, 6-11; and later Part I, 4, (iii. 3), (c) Syrianus' calculus and the school of Proclus at Athens).
or an indefinite name and a verb".483 (5) A sense including indefinite names but not the cases.484

Stephanus accepts Ammonius' opinion that Aristotle in Perih. has used different senses of 'name' and 'verb', and he even makes use of these five senses to show how the restricted and non-restricted definition of name are articulated. First of all, the question proposed by Stephanus is similar to that recounted by Ammonius about Herminus:485

"But some people wonder why Aristotle did not give a complete definition of name from the beginning, but introduced afterwards 'not-man', that is, the indefinite name and the inflections of name".

And the answer given by Stephanus is:486

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483 Through this statement Aristotle includes indefinite names as subjects of the categorical propositions. ( Cf. Part I, 4., (i) Chapters 2, 3 and 10 ).

484 This is, besides, the obvious inference from (4) and from the fact that some lines later (p. 46, 15 ff.) Ammonius remarks that these two last senses are given by the qualifications (ἀφορμομέλ) introduced by the indefinite names and the cases. The point is plain in this way, however Blank's translation does not make properly the distinction between the fourth and the fifth sense. Blank misses the fifth sense, because he includes the fourth in the fifth. As a result, the fourth becomes obscure and the fifth points out a nonsense. Blank says: "Further, besides all the enumerated senses of 'name', that (5) which results from the qualifications added to the given definition of name, apart from the cases and indefinite names, is also called 'name'. (p. 54). But Ammonius here does not assert a fifth case, but he refers to the two last senses already stated: And up to this point, apart from all the enumerated ways [i.e. the first three senses], name is said, starting from the given definition of name [i.e. the third sense], by excluding the cases and the indefinites." ( ἕπ δὲ παρὰ τοῖς ἀπροθιμήμους τοῦ ὄνοματος ἀπαντάς τρόπους ὄνομα λέγεται τὸ ἑκ τῶν προσθετέντων τῷ ἀποδοθέντι τοῦ ὄνοματος ὅρῳ διορισμῶν ἀποτελεσθέν, ἀποκεκριμένων τῶν τε πτώσεων καὶ τῶν ἀφράτων ὄνομάτων. Amm. in Int. p. 46, 10-13). The sense of the passage is also clear in William of Moerbeke's translation: Adhuc autem praeter omnes modos enumeratos nomen dicitur quod ex appositis traditae nominis definitioni determinationibus efficitur, separatum a casibus et ab infinitis nominibus. (Verbeke (Ed.), 1961).


486 Ibid., p. 11, 25-31. λεγόμενον τοῖς, εἰ τὸ ὄνομα πολλά σημαίνει παρά Ἀριστοτέλεις (νηλοῖ γὰρ καὶ τὴν εὐθείαν καὶ τὰς πτώσεις καὶ τὸ ἄορατον ὄνομα καὶ τὸ ῥήμα καὶ τὸ ὑπόπτημα) ἐν τῇ οἷς εἶπέν ἐκείνης ὀσμῆς σημασικὴ κατὰ συνθένθην τὰς ταῦτα ἐξήλθαν, ἐν δὲ τῷ προσθέματι καὶ χρόνον μὴ προσποιμάνουσα ἐξέβαλεν τὰ ρήματα, μεμενήκας δὲ τὰ λοιπὰ, τοῦτ' ἐστι τὰ ἀόρατα ὄνοματα καὶ αἱ πτώσεις.
"we say the following: if the name signifies many things for Aristotle (for he clarifies: the nominative and the cases, and the indefinite name and the verb and the subject), then he showed these five meanings in what he said: 'a spoken sound significant by convention', and in what he added, namely, 'without time' he excluded the verbs, but he maintained the remaining things, i.e. the indefinite names and the oblique cases".

Thus, Stephanus comes to analyse the note: ώρισμένην φύσιν εἰσάγουσα, and here he states that Aristotle by means of this phrase excludes only the indefinite names. Another formula excludes the cases of the name: μετὰ τοῦ ἢν ἢ ἔστιν ἢ ἔσται ἀληθεύουσα ἢ φευδομένη. 487

"Again, through the expression "with a definite signification" he excluded only the indefinite names: after that, finally, when he says "and with 'was' or 'is' or 'will be' is true or false" he put the cases aside."

Once Stephanus has unfolded all the attributes of the name, he goes to synthesize the name's definition, which is actually the strict or complete definition: ὅλων τὸν ὄρισμὸν τοῦ ὀνόματος. 488

"So that the complete definition of name is thus: "a spoken sound significant by convention, without time, none of whose parts is significant in separation, with definite signification, and true or false with 'was' or 'is' or 'will be'."

It is worth noting that this definition, as it is the complete definition of name, is subject to criticism: Stephanus says that Galen is not inclined to accept it, because it seems to be a phrase (λόγος) rather than a definition, and he proposes another: 'a

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487 ibid., p. 11, 31-34. πάλιν διὰ τὸ ἐπεὶ ἐνδείχνεται τὸν εἰσάγοντα φύσιν εἰσάγουσα ἐξερεύνησεν μόνον τὰ ἀρίστα ὀνόματα: ἔσττ τελευτάτου ἐποίησεν καὶ μετὰ τοῦ ἢν ἢ ἔστιν ἢ ἔσται ἀληθεύουσα ἢ φευδομένη τῶν πτώσεως ἀπώφασιν.
488 ibid., p. 11, 34-p. 12, 1 οὐς ἦν ὁ θεών ὁμόλογον τοῦ ὀνόματος οὕτως ὧν ἔκαμ βαθμὸν τὸν ὄρισμόν τοῦ ὀνόματος κατά συμπλήρωσιν κατὰ τούτον μὴν προσθήκην, ἢ ἂς τῶν μερῶν οὐδὲν τίποτα. ἢ καὶ συμπλήρωμα ὑπολογίσμων ὑπολογίσμων, ὥρισμένην εἰσάγωνος, μετὰ τοῦ ἢν ἢ ἔστιν ἢ ἔσται ἀληθεύουσα ἢ φευδομένη.
spoken sound significant, by convention, of a single thought (ἐπιθετικοῦ
νοηματος)";489

"In respect of this [definition] Galen says that it is not a definition, but
a phrase. Hence, he himself defines the name thus: 'a spoken sound
significant, by convention, of a single thought''

Stephanus, however, will confirm the value of the complete
definition of name in PeriH., by arguing that Galen's definition is
too generic to stand for the name's definition, and his argument is
that a phrase and other parts of the phrase (e.g. the verb) could
be defined through Galen's definition:490

"But this definition not only applies to the name, but also to the phrase
and to the other parts of the phrase."

Even more, Stephanus adds that the essence (λόγος) of the name is
present in these attributes, and that Aristotle should not be
censured for using this procedure of not giving the complete
definition of name at once from the beginning, because the nature
of the matter in question obliges him to show it in that way,
namely, by means of many expressions:491

"So that Aristotle should not be blamed on account of the necessity of
the matter showing the definition of name through many expressions.
The essence of the name is [present] in these expressions."

These passages already show that Stephanus is not
modifying the definition of name, but following the traditional
exegetical line, already known for Herminus, Boethius and
Ammonius, on which they made their own interpretations.
Stephanus' development also embraces the verb's definition and

489Ibid., p. 12, 1-3. πρὸς δὲν φησιν ὁ Γαληνός ὅτι οὐκ ἔστι όρισμὸς αὐτὸς ἄλλα
λόγος. ἄλλον αὐτὸς δριχεῖ τα ὄνομα οὕτως ἑινή σηματικὴ κατὰ συνθήκην ἀπλοῦ
νοηματος.
490Ibid., p. 12, 3-4. οὕτως δὲ όρισμὸς οὐ μόνον ἐπὶ ὄνοματος ἁρμόζει, ἄλλα καὶ ἐπὶ
λόγου καὶ ἐπὶ ἄλλων μερῶν τοῦ λογου.
491Ibid., p. 12, 2-4. ὅτε οὐ μείμας Ἀριστοτέλει ἀλλὰ τὴν ἀνάγκην τοῦ πραγματος
ὄρισμον τοῦ ὄνοματος ἀλλὰ πολλῶν λέξεων δημιουργον. Εν οἷς ἔστιν ὁ περὶ τοῦ ὄνοματος
λόγος.
here this general tendecy is confirmed, as the following passage shows:

"Again, in the same manner as we explained in respect of the definition of name, [namely] why Aristotle did not give from the beginning a complete definition of name, thus now we also explain why he did not give a complete definition of verb as a whole, namely, 'verb is a spoken sound signifying additionally time, with a definite signification, whose time is in present tense', but he made additions afterwards. We say that the verb is also said in many senses: in fact, it is what signifies time, and what is predicated in propositions, and besides both the cases and the indefinites are. Therefore, in the expression 'a spoken sound significant by convention' we also signified what is predicated in propositions, and even the name: because this does not signify additionally time: but in the expression 'signifying additionally time' that is excluded. And again, in order, [by] 'with a definite signification', he excluded the indefinite verbs; [by] 'whose time is in present tense', he excluded the cases of the verb. These things contain the essence and the present theory of the verb."

This last passage confirms that Stephanus assumes Ammonius' interpretation, though it does not amount to a mere repetition of Ammonius' explanations. Stephanus follows Ammonius' interpretation of the senses of name and verb (in fact, the five senses of the name and the three of the verb are taken by Stephanus); however, while in Ammonius the thesis of the existence of these senses constitutes all his interpretation, in Stephanus the aspect of a strict and non-strict definition of name and verb also plays an explanatory role, and this point has a resemblance with Boethius' explanation, though in Stephanus

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492 Ibid., p. 14, 1-15. πάλιν ὁπερ ἐξημεύει ἐπὶ τοῦ ψηφισμοῦ τοῦ ὀνόματος, διὰ τῇ μη ἔξ ἄφας ὃν παραβλέψακεν τὸν ψηφισμὸν τοῦ ὀνόματος, οὗτος καὶ ἐνταῦθα φαίμεν, διὰ τῇ ἴδιον ὃς ἴδιον τὸν ψηφισμὸν τοῦ ρήματος οὐ παραβλέψακεν, ὡς εἴη ὃν τοκεῖον ἢμιά ἐστι ψηφισματικὴ χρόνον προσημαίνονσα, φύσιν ἄρωμενην εἰσάγουσα, μόνον τὸν ἐνεστάτα χρόνον εἰσάγουσα, ἀλλ’ ἓστερον προσέθηκεν. λέγομεν δὲ καὶ τὸ ρήμα πολλαχῶς λέγεται παρ’ αὐτῷ· καὶ γὰρ αὐτὸ τὸ προσημαίνων < χρόνον > καὶ τὸ κατηγοροῦμεν ἐν ταῖς προτάσεσι καὶ οὐ καὶ αἱ πτώσεις καὶ τὰ ἄριστα, ἐν τῇ εἰπέν οὐν ψηφισματικὴ κατὰ συναθετὴν ἓστημεν καὶ τὸ ἐν ταῖς προτάσεσι κατηγοροῦμεν, κἂν δύναμι ἐστιν ἐκεῖνο γὰρ χρόνον οὐ προσημαίνας· ἐν δὲ τῇ εἰπέν χρόνον προσημαίνονσα· τότῳ ἐξέβαλεν, καὶ κατὰ ταῖς πάλιν ἄρωμενην φύσιν εἰσάγοσα ἐξέβαλεν τὰ ἄριστα ρήματα, ἐνεστάτα χρόνον εἰσάγοσα ἐξέβαλεν τὸς τοῦ ρήματος πτώσεις. ταῦτα ἔχει ὁ περὶ τοῦ ρήματος λόγος καὶ ἡ παρούσα θεωρία.
there is no indication, as in Boethius, that Aristotle intends to get the strict definitions through the analysis of the indefinites and cases. Similarly, these passages confirm that Stephanus' point is not a mere exclusion of the indefinites from the definitions of name and verb, but a distinction: the complete (or strict) definitions exclude the indefinites, but the incomplete (or not-strict) ones include them.

Therefore, Montanari's point of a massiccia rielaboratione of the definition of name in the post-Ammonian commentators of PeriH. encounters not only the inconvenience that Stephanus develops an interpretation according to which Aristotle includes the indefinites in the non-strict definitions of name and verb, and excludes them from their strict ones, but also that Stephanus' interpretation is not more than the development of a point that is a commonplace in the ancient commentaries of PeriH. Stephanus' discussion, indeed, already supports this view by saying that Galen criticised the complete (or integrative) definition of name on the basis that it does not seem a definition but a phrase. This very fact already implies that Stephanus' account of it must have been known before Galen's activity on logic. The point certainly agrees with the notice given by Ammonius referring to Herminus as implying incomplete definitions of name and verb in PeriH. Therefore, the presence of this traditional and accepted exegetical line in all these ancient commentators certainly implies that there is no modification of the definitions of name and verb, as was suggested.

(iv) Antiquiores

Boethius' first commentary points out that Aristotle was the first (primus) to use the denomination 'indefinite name', and that this denomination was only possible once a clear distinction (differentia) between a definite name (definitum) and a name with a negative particle arose.493

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493 in Int. 25-4, pp. 52-53.
sed hoc Aristoteles vocabulum, cum infinitum nomen vocaret, primus invenit. apud antiquiores enim ista quidem erat dubitatio, sed huic differentiae, qua differt nomen definitum ab huiusmodi nomine quod cum negatione proponitur, impressum vocabulum non erat, quod ipse testatur dicens: *at vero nec positum est nomen, quo illud oporteat appellari.* nullus enim posuit vocabulum, quo oporteat appellari id quod dicimus *non homo,* Aristoteles perspicaciter infinitum nomen huiusmodi praedicamentum censuit appellari.

The passage adds that there existed a general uncertainty (*dubitatio*) among the more ancient authors (*apud antiquiores*) concerning this difference, which is confirmed by the fact that there did not exist a coinage (*impressum vocabulum*) to express this difference. According to the commentary, this is what Aristotle means when he says (16a. 30-1) "nor is there any correct name for it." Thus, expressions like 'not-man' existed without any specific denomination because no one (*nullus*) gave a name to them, until Aristotle, who perspicuously decided (*censuit perspicaciter*) to call this expression (*praedicamentum*) 'indefinite name'.

In an already quoted passage, the commentary states that Aristotle at 16a. 30-1 means that antiquity (*antiquitas*) had not brought into question (*vocavit*) the word by which this that we say 'not-man' should be called (*debeat appellari*), and that until Aristotle (*usque ad*) nobody had become cognizant (*noverat*) of what is this which is called 'not-man'. But this situation, Boethius suggests, changed historically with Aristotle when he imposed a denomination to this expression, by saying: "Let us call it an indefinite name".

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494 In the apparatus criticus: *antiquari,* but the passage at *in Int.* 18, p. 59, confirms *antiquiores* here.

495 Ackrill's translation (1963), p. 44. Aristotle's words are: οὔ μὴν οὐδὲ κεῖται δύναμι σε ὧν δὲ κολέν αὐτό, (...), 16a. 30-31. Boethius' translation: *at vero nec positum est nomen quo illud oporteat appellari.* *AL* II.1, 2, (16a30-31); text above: 1.1, (ii) *Indefinite name and negation.*

496 The passage (*in Int.* 2, 5-14, p. 63) is quoted above at Part I, 3., (i) *The historical view of Boethius' commentary.*
Finally, though only in his first commentary, Boethius makes a similar remark for the case of the indefinite verbs. Here the absolute verb is also called *purum et simplex*, and Boethius' commentary insists that the more ancient authorities (*antiquiores*) did not make an explicit difference (*nuncupata differentia*) for these expressions. Similarly, the commentary makes manifest that the imposition of the name 'indefinite verb' made by Aristotle historically, is a remarkable fact, because a name for these expressions had not been imposed by the ancients, (*ab antiquis*), despite the difference between this kind of verb and the simple and pure one.

 haec enim differentia quae est *non currit* et *non laborat*, quae a verbo *puro et simplici* distat, nulla apud antiquiores vocabulo *nuncupata* est differentia. differentiam autem vocavit id quod dicitur *non currit* et *non laborat* ab eo quod est *currit* et *laborat*. sed quoniam his nullum est ab antiquis nomen impositum, Aristoteles nomen ipse constituit dicens: *sit verbum infinitum*.

Although none of these texts specifies who these more ancient men (*antiquiores*) are, the passages make sufficiently manifest that they are ancient in relation to Aristotle, since the commentary employs systematically a comparative adjective:

497 The second commentary does not mention this historical aspect when the nature of the indefinite verb is treated. The fact can be attributed, plausibly, to the existence of the lacuna (which we have mentioned earlier) at *in Int. 2*, 15-19, p. 70, and this would imply an extensive lacuna for this part of the text. However, the view can also be defended that Boethius did not introduce any historical element for indefinite verbs in his second commentary, because all, or the most important points, had been already said in his first commentary. The point is uncertain, but this last possibility can be reinforced by the fact that both Ammonius and Boethius start their comments on the nature of the indefinite verb by establishing a parallel with their earlier exposition on the indefinite name aiming at a more economical exposition. So Boethius: "Quemadmodum dixit in nomine (...) ita in verbo (...)" (*in Int. 2*, 29-3, pp. 69-70); and Ammonius: *περὶ δὲ τοῦ ἀορίστου ρῆματος οὐ δημοσίως πολλῶν λόγων τά αὐτά γὰρ ἔρουμεν τός περὶ τοῦ ἀορίστου ὄνοματος, (...)" (*In respect of the indefinite verb we shall not require much explanations, because we shall say the same as in connection with the indefinite name, (...)".*

498 Boethius does not use here the comparative *antiquiores*. However, *antiquis* which is the expression used by him, refers to *antiquiores*, which is named three lines earlier.

499 *in Int. 18-26*, p. 59
antiquiores. This notice is confirmed by the words already quoted of the second commentary,\textsuperscript{500} by which it is stated that men of the ancient times (antiquitas) did not maintain a coherent way of conceiving and naming any of the indefinite expressions until Aristotle (\textit{usque ad Aristotelem}).\textsuperscript{501}

As far as we know, there is no indication mentioning a discussion, or even a specific scholarly activity about the uncertainty in conceiving the nature of indefinite expressions and their specific denominations, but the commentary suggests that this uncertainty was an issue in pre-Aristotelian times and this situation was maintained until Aristotle and his \textit{PeriH}. As a matter of fact, these \textit{antiquiores} are not the same as those \textit{antiqui} referred to by Boethius' commentary on the earlier point,\textsuperscript{502} because the former ones are more ancient than Aristotle, and the latter ones are said to have maintained different opinions about whether the indefinite name and verb should or not be included in the respective definitions of name and verb, so that they have to be old but not older than Aristotle, for they are engaged in a particular discussion of \textit{PeriH}. By contrast, what is implied by the expression \textit{antiquiores} is that the pre-Aristotelian past did not hold a clear idea about the nature of the indefinite names and verbs.

Therefore, what is established by the commentary leads us to ask for the identity of those authors of the pre-Aristotelian past, and to determine in what sense they approached the theme of the indefinite names and verbs. The point is evidently difficult, since, on the one hand, there are apparently no direct sources of information, for Boethius does not mention any author when he

\textsuperscript{500} Above, i.e. \textit{in Int. 2}, 5-14, p. 63.

\textsuperscript{501} Strictly, this text is established in relation to the indefinite names, but there is no doubt that the general historical commentary can be extended in similar terms to indefinite verbs as well, because of the parallel established for both expositions.

\textsuperscript{502} i.e. at \textit{in Int. 2}, 21-5, pp. 62-3. (Quoted above at Part I, 3., (ii) \textit{Antiqui}). The passages are presented together in Boethius' commentary, which could mislead. However, to distinguish \textit{antiqui} from \textit{antiquiores} is vital for a correct interpretation of this historical notice about indefinite names and verbs. Thus, they are certainly not the same scholars. \textit{Antiquiores} refers, as we will show, to some men or authors more ancient than Aristotle, while \textit{antiqui} refers, as we have shown, to some scholars who discussed the question of including indefinite names and verbs in the respective definitions of these simple expressions.
gives us this historical notice, and Ammonius, who refers to these more ancient authors (παλαιότεροι), seems to have adopted a mythical interpretation of their existence.\(^{503}\) On the other hand, to analyse occurrences of indefinite names in authors of this past

\(^{503}\) Ammonius makes a passing allusion to these ancient authors at in Int. p. 41, 16-20: Τούτο δὲ νῦν ἐκήσατο τὸ θεώρημα, διότι ἐώρα μὲν καὶ τὰς τοιαύτας φωνὰς παραλαμβανόμενας πολλὰς ἐν ταῖς ἀποφάσισεις, ὡς ὅταν εἴπομεν 'οὐκ ἐκφυώμενος περιπατεῖ, οὐδενὸς γε ἐνόματος ἐκτικεῖτο ὑπὸ τῶν παλαιότερων. ("And now, he alluded to this point [i.e. Aristotle's words of 16a.30-32] because he saw that this kind of spoken sound occurred frequently in propositions, as when we say 'a not-man walks', and no denomination had been given [for these expressions] by those more ancient."). This allusion supposes that they were more ancient than Aristotle, which is clear from his use of the adjective comparative παλαιότερος. But Ammonius seems to have understood the existence of these ancient men in a non-historical sense, since when he comments on this point, (though in reference to the indefinite verb), he says that even though there is an obvious difference between a definite and an indefinite verb, this last name was disregarded (παρεσώμενα: p. 52, 6) by those who have given the names (ὑπὸ τῶν τὰ ὠνόματα θεώμενα), and some lines later he adds that this difference should have been established by the 'fathers of the names' (τοὺς τῶν ὠνόματων πατέρας: p. 52, 9). So it is evident that Ammonius' comments on this point lead to a non-historical interpretation. To be more exact, he has interpreted these passages of Aristotle from the perspective of Proclus' commentary on Plato's Cratylius. In particular, there are good reasons to relate Ammonius' opinions on the νομοθέτης mentioned by Plato at Crat. 389a. 2 et passim, to the interpretation that Proclus made on it in his commentary on this dialogue. First of all, A. Sheppard (Proclus' Philosophical Method of Exegesis: the use of Aristotle and the Stoics in the commentary on the Cratylius, in Proclus Lecteur et Interprète des Anciens, CNRS, Paris, 1987) has shown how Ammonius maintains equivalent explanations in all points that can be paralleled between Plato's Cratylius and Aristotle's PeriH. and, in general, that "Proclus and Ammonius both set Plato's Cratylius and Aristotle's De Interpretatione side by side and show them, quite rightly, as concerned fundamentally with the same philosophical questions." (p. 143). Similarly, J. Ritoré (La Teoría del Nombre en el Platonismo Tardío: traducción y escolios XVI, XVII y LII del Comentario al Cratilo de Proclo, Universidad de Cádiz, 1992) has shown that Proclus at scholium LI 18, 27-20, 21, Pasquali (ed.), shows a correspondence between the νομοθέτης of the Cratylius and the Demiurge of Timaeus on the basis that the Demiurge gives the names to the circular movement of the same and the other (p. 188). Accordingly, it seems to be clear that Proclus' commentary on Cratylius is the model of Ammonius' interpretation of those παλαιότεροι, and that Ammonius' commentary could hardly be useful for finding out who are the more ancient men that Boethius mentions. For modern interpretations of the figure and role of the νομοθέτης in Plato's Cratylius, see: (i) νομοθέτης as a mythical resource: N. Kretzmann (Plato on the Correctness of Names, in American Philosophical Quarterly, vol. 8, Nº2, 1971, pp. 126-138), and also R. Robinson (The Theory of Names in Plato's Cratylius, in Revue Internationale de Philosophie, vol. 9, 1955, pp. 221-236. For (ii) a functional interpretation of this νομοθέτης, ("The νομοθέτης is brought in again and again simply because his name itself makes the very point which the discussion as a whole makes: that you cannot learn from names.", p. 108), see N. Desman The Nomothetes of the Cratylius, in Phronesis, vol. 20, 1975.
could offer no more than inconclusive results, since —though there is a certain use of these names in pre-Aristotelian authors of V and IV BC— their use does not yet imply a reflection about their nature.

As LSJ shows, the use of the negative particle οὐ as well as μὴ with names or verbs, i.e. composing indefinite names or verbs, is detectable in poetry and prose writers like Aeschylus, Sophocles, Aristophanes, Thucydides and Plato. Some occurrences of οὐ are, for instance, in Thucydides, I, 137: τὴν τῶν γεφυρῶν οὐ διάλυναι, "the not-dissolution of the bridges", by referring to the bridges built by the Persians. Similarly, Thucydides 5. 35: κατὰ τὴν τῶν χωρίων ἀλήθειας οὐκ ἀπόδεικνυ: "according to the non-retribution to one another (i.e. 'the failure to give back to one another') of the places specified." Similarly, Euripides Hipp. 196: κοῦκ ἀπόδειξιν τῶν ὑπὸ γαῖας. And also Euripides Bach., 1287: ἐστὶν ἐφ' ἀλήθεια, ἢς ἐν οὐ καρφ ὀφείλει: "O piteous truth, how untimely (i.e. in a non-propitious moment) you dawn!". The same use for μὴ: Aeschylus Eumen. 432: ἐρκός τὰ μὴ δίκαια μὴ νικῶν λέγω: "I say that oaths must not win victory by injustice (i.e. not-just things)". And Aristophanes Eccles. 115: σὲν ὑμὶῖ ἐστὶν ἢ μὴ μεσαπέρ: "and inexperience (i.e. the non-experience) is a serious matter." And also Plato, who in Laws 759b. 8, makes a literary use of δῆμον καὶ μὴ δῆμον when he says "In establishing all these offices, we must make the appointments partly by election and partly by lot, mingling democratic with non-democratic (i.e. δῆμον καὶ μὴ δῆμον) methods, to secure mutual friendliness." An occurrence worth noting is in Plato (Gorg. 459b. 2-3), which already introduces a certain logical relation between the predication of an indefinite and definite name, though implicit and not-explained at all. Socrates says: "Ὁ δὲ μὴ λατρός γε δῆπτου ἀναπτήμον. Ἔω ὁ λατρός ἐμφαστῆς. "But he who is not a doctor (i.e the non-doctor) is surely without knowledge of that whereof the doctor has knowledge." See next note.

The occurrences of indefinite names and indefinite participles in poets and prose writers of V and IV BC (as is shown above) do not constitute a reflection of the linguistic nature of this kind of names. Plato at Gorgias, 459b. 2-3 (see note above), besides, keeps implicit the logical relation between 'not to be x' and 'to be not-x'. This general result receives further support from the article by F. Létoublon (La Notion de Non-être dans l'histoire de la langue Grecque Archaïque, in Revue de Théologie et de Philosophie, 122 (1990), p. 313-322), who has investigated the notion of 'not-being' (τὸ μὴ ὑπὸ) in the history of the archaic Greek language. In accordance with his results, one could reasonably state that the allusions made by Boethius' commentary to these antiquiores must refer to ancient philosophers and neither to ancient poets nor other prose writers. According to him, "the notion of 'not-being' does not exist in Greece in its archaic period. Homeric poetry is a poetry of being, though it treats of Sirens, who are shown in a whole activity of dreaming." (p. 313). And he adds: "La poétique du mesonge (ou de la fiction?) apparaît, timidement d'ailleurs, avec Hésiode; mais il n' est pas jamais question du non-être à cette époque, même avec le terme χάος 'vide'." (Ibid., p. 313). Therefore, as he concludes, the Greek theory (spéculation) about not-being starts from the Pre-Socratics, their philosophical objectives, and language, so that Xenophanes and, above all, Parmenides need to be mentioned here. In fact, he adds, 'C'est l' apparition du neutre singulier affecté de la negation (τὸ μὴ ὑπὸ) au lieu du pluriel homérique jamais nié (τὰ δοῦτα) qui nous semble le signe linguistique capital de cette évolution dans la pensé, à mettre en parallèle avec la désignation, à partir d' Anaximandre, de "l' infini" par un
Despite this, the assumption that Boethius' commentary refers to the late Parmenidean tradition and, in particular, to Plato and his followers in the Academy, seems to be quite probable, because it makes sense when taken with a passage of Boethius in his first commentary concerning the use of the word *innominatum* (τὸ ἄνωνυμον), which is the other term that Aristotle uses in *PeriH.* to denote indefinite names. According to Boethius τὸ ἄνωνυμον is the name by which the ancients (veteres) denominated what Aristotle called 'indefinite name'.

subjectum autem illud aut nomen est aut quod apud veteres quidem fuit innominatum, ab Aristotele vero infinitum nomen vocatum est. prius enim dictum est, quod homo nomen esset, non homo vero innominatum quidem apud antiquos, sed nunc infinitum nomen.

Even though this passage does not refer to *antiquiores* textually, there is no doubt that those who are denoted by the term *veteres* are older than Aristotle, since, as the passage mentions, *innominatum* was the name for 'indefinite name' before Aristotle. Accordingly, by means of this passage it seems to be possible to state that Boethius' commentary refers at least to Plato as one (or perhaps the principal) of the authors who maintained an uncertainty about the nature of this kind of indefinite expressions, since Plato uses systematically the expression τὸ ἄνωνυμον in his last dialogues and even, in those in which the dialectic occupies a central role, especially in the *Sophist*, he makes an attempt to

autre neutre singulier (τὸ ἄνωνυμον).“ (ibid., p. 319). These results leads us directly, then, to ancient Greek philosophy, and in particular to Parmenides. It is hard to belief, however, that this negative notion of not-being would have been understood originally by Parmenides himself as a grammatical expression, and certainly he does not give signs of this, so that it will seem absurd to ascribe him a linguistic preoccupation on this matter. Accordingly, the assumption that Boethius refers to Parmenides when he mentions those *antiquiores*, though not impossible, does not make complete sense. However, the commentary could make reference to the late Parmenidean tradition and, in particular, to Plato, because he certainly considered philosophically this notion of τὸ μὴ ὄν in some of his late dialogues (basically at *Sophist*, but also *Parmenides* and *Theaetetus* could give signs of this philosophical interest), and even in the *Sophist* he made a first approach to define a general notion of not-being.

506 in Int. 9-14, p. 127.
507 cf. Sophist 220a. 2 ff; and 257d. 9 ff.
discover the nature of this notion. Accordingly, one can infer that when Aristotle defines the nature of the indefinite name and verb he bore in mind the attempts that Plato made in this sense in his dialectical dialogues.

Plato uses the neuter substantive τὸ ἄνωνυμον three times in the whole of his work.508 All these occurrences are in his dialectical dialogues.509 However, there are some occurrences of the neuter plural τὰ ἄνωνυμα in Timaeus,510 which are valuable to consider because they seem to show the first steps of a further development. In these occurrences, τὰ ἄνωνυμα is a word for referring to what does not have yet a name but whose existence appears among the species of a genus whose physical composition is known. Thus, according to one of the examples by Plato, certain species of air do not have yet a name (they are anonymous) but they exist as species of air. The point, then, is similar to that of a modern chemist facing the discovery of a substance for which no name has yet been adopted. Statesman 260e.4 presents a first example of something that will be common later: to call that species without an imposed name which appears in a division seeking out a certain definition 'τὸ ἄνωνυμον'. Thus at Sophist 220a. 2, the point is made clearly: the division undertaken by Theaetetus and the Eleatic Stranger aiming at the definition of the sophist passes on to the species of the art of hunting, and here two species are identified: the hunting of lifeless things, and the hunting of living things, which can be called immediately 'animal-hunting' (ζῷοθηρική). The first species, however, does not have, according to the Eleatic Stranger, any name (= ἄνωνυμον ὃν), "apart from those of some of its branches",511 which are certain forms of diving and other similar trivial activities (καὶ τοιαῦτ’ ἄλα βραχέα).

This occurrence at Sophist confirms this term as the general name given to a class of things or activities for which there is no general name or denomination at all. However, the following

509 Namely, Soph. 220 a. 2; 257d. 9; and Pol. 260e. 4.
510 cf. Timaeus 58d. 3; 60a. 3, and 67a.1. The occurrence of ἄνωνυμα in Theaet. 156b. 6 is related to those from Timaeus as well, but one for ἄνωνυμα in Laws IX, 873d. 7 is irrelevant for our concern.
occurrence of this term, at 257d. 9, related to a more complex context, is entirely relevant. The Eleatic Stranger has realized, after attempting to define the nature of the sophist, that an essential characteristic of the art of sophistry is given by the capacity of imitation (μιμησική), and in particular by the capacity of making deceitful reproductions in so far as these do not follow likeness (235d). The dialogue, then, discovers that the sophist produces false opinions. But, if a false opinion is, as is accepted, to think as being what is not, and as not-being what is, then the sophist cannot be accused of the charge of producing false opinions because if, according to Parmenides, it is an evident and unrejectable truth that not-being is not, one must necessarily conclude that falsity cannot exist. Plato cites Parmenides fr. 7 (Diels):512

"Never let this thought prevail, saith he, that not-being is;
But keep your mind from this way of investigation."

To believe in not-being would be, as Plato expresses, a kind of parricide (241d.3), however the dialogue is led to analyse this notion and to conclude finally that not-being is. The analysis of its nature, i.e. the being of not-being, will show that not-being is not the opposite to being, but only something different to it (ἕτερον). Accordingly, the negation (ἀπόφασις) does not signify the contrary (ἕναντίον, 257b. 9), but the negative particle 'not' will indicate something different from the words to which prefixed (257c). In this context, then, the word τὸ ἁνόδυμον is introduced. If we consider particular cases of being, for example, what is beautiful, there will be an 'other part' opposing it (ἀντιθέμενον, 257d), which is not nameless (τὸ ἁνόδυμον), whereas it can receive the name of 'not-beautiful' (τὸ μὴ καλόν). Again, what is not-beautiful shows itself as other than what is beautiful or, as the Eleatic Stranger

512 Sophist 237a. 1-237b. 1. (Loeb translation). Plato's text quotes (Cf. also Diels (1906), vol. 1, fr. 7):

οὐ γὰρ μὴ ποτὲ τούτῳ σαμῆ [Simplicius; τούτῳ 'οὐδαμῇ BT]
φησιν, εἶναι μὴ ἑόνταν
ἀλλὰ σὺ τῷ τῆς ὀφθάλμου διεζήμενος [διεζήμενος BT (διεξήμος 258d)]
ἐίργε νοήμα.
expresses, it is ἄλλο τὰν δύναμιν πιστοὶ ἐνὸς γένους μέρος ἀφορισθεῖν, i.e. a certain other part separated from a determined genus of things. Thus, the consequence will be that what is not-beautiful is a part of being as is the beautiful, and the same must be said of the other things.

According to Sophist, the determination of the nature of not-being clarifies the nature of what is anonymous. Indeed, since now every not-being can be called 'not-something', and this is simply what is different from the particular being, then what was called earlier τὸ ἀνώνυμον, can now be rightly called 'not-something'. Thus, Plato seems to suggest that the denomination of something like τὸ ἀνώνυμον was a provisional denomination, and its nature has been determined a propos of the analysis of the nature of not-being.

This brief and summary review of the occurrences of τὸ ἀνώνυμον in Plato's dialogues confirms that the point remarked by Boethius' commentary in the passages cited above must refer especially to Plato. In fact, the following three aspects shown by the commentary are entirely contained in the late dialectic dialogues:

(i) an uncertainty (dubitatio) concerning the nature of a name with a negation (i.e. indefinite name, as Aristotle called it), and its difference from the simple name.
(ii) the lack of an specific name for this kind of term with negative particle
(iii) the provisional denomination of τὸ ἀνώνυμον for this kind of names.

It is manifest that in Plato's Sophist the attempted solution of the question asking for the nature of not-being, correct or not, leaves expressions like 'not-beautiful', or even the general expression 'not-something', without a specific (or technical) name. As is clear, if this does not happen in the Sophist, it does not happen in any

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other dialectic dialogue, and thus in any dialogue at all.\textsuperscript{514} Therefore, the existence of an uncertainty about the nature of names with negative particle seems to be proper to Plato and the former thinkers, though unquestionably the \textit{Sophist} attempts to resolve this uncertainty. Because of this doubt, the authors who were more ancient than Aristotle, and in particular Plato, kept the denomination of τὸ ἀνώνυμον for expressions composed of a name and a negative particle, like 'not-beautiful'. (Plato, in fact, had used the expression τὰ ἀνώνυμα in \textit{Timaeus} and τὸ ἀνώνυμον in \textit{Stateman}, and in \textit{Sophist} he maintained the same expression, which shows its provisional character.) So, even though Plato's \textit{Sophist} represents an advance in determining the nature of this kind of expression, the account was unsufficient to give them a technical and definitive name.

Boethius' comments suggest that the lack of a specific denomination for expressions like 'not-man' is due to the fact that nobody before Aristotle had become really cognizant of the nature of that kind of expression (et usque ad Aristotelem nullus noverat quid esset id quod non homo diceretur). Here noscere must signify a real knowledge and it should imply the disapproval of Plato's solution in \textit{Sophist}. Thus, while it is unquestionable that Plato in the \textit{Sophist} tries to determine the nature of not-being and even that he, as a product of this attempt, remains able to give a certain

\textsuperscript{514} According to the chronological structure of Plato's dialogues, if this does not happen in the dialectic dialogues, which are all of the late period of his production, then this will occur neither in his middle nor earlier dialogues. But the relevant point is to show that the affirmation above can be extended safely to any dialectic dialogue. It is worth noting that Aristotle criticizes Plato even though in \textit{Philebus} 16c.6-18a. Plato censures the wise men of his time for not seeing the 'how' and the 'how many' and, in general, the relations which there exist between the one and the many, finite and infinite, principles which —Plato remarks— were known already by the ancients (ἐκ παλαῖοι). Thus, these presumed wise men rested content, Plato observes, with indicating that the one is many and the many one, but this does not make them wise in truth, but to know the relations between these principles, in the same manner as the grammarian, for example, is not wise because he knows that spoken sounds are one and many, but because he knows how and how many produce letters. Plato in \textit{Philebus} suggests that this new way of researching belongs to the dialectician, because he knows, as the grammarian in his own field, not only that one is many and many one, but determines the 'how' (ὅπως) and the 'how many' (πόσα) in the genera of things. (Cf. \textit{Phil.} 17b. 7-10). This shows that Aristotle addresses his criticism to Plato even though Plato attempts in his late dialectic dialogues to get a renewed metaphysics by means of his dialectic method.
account of the nature of expressions like 'not-beautiful', Aristotle's attempt—at least according to what is suggested by Boethius' commentary—would be an accurate account of those expressions and that would be tested by the technical name that Aristotle gave to the difference (differentia) between simple names and names with a negative particle, which denotes an explicit difference (nuncupata differentia). Thus, Boethius' comments on Aristotle's observations at 16b. 30-1 and 16b. 14, (namely, that in his time there was no correct term for the difference between indefinite and definite expressions, and that he imposed a term for this difference), imply a division between the pre-Aristotelian past and Aristotle's own position: the earlier authors (especially Plato) made an incomplete theoretical analysis of these expressions which are preceded by a negative particle.

Moreover, by going beyond Boethius' words, it seems also possible to advance the idea that Aristotle would not be satisfied with the orientation that Plato impressed on his partial solution in *Sophist*. This is clear from the fact that Aristotle does not share the results of this dialogue concerning the signification of the expression 'not-beautiful' and, in general, Plato's conclusion of what is not-being. A reason for this view can be found at *Met. N*, 2, 1088b. 13-1090a. 15. As is generally accepted,515 Aristotle bore in mind *Sophist* (and especially the part we have analysed earlier) when he addressed his criticism to the old-fashioned way of solving the problem of the existence of being and plurality.516 According to Aristotle's criticism of *Met. N*, 2, Plato's error is the same one as that of the ancients, because he started from the point that all beings are one and that this being one is by itself (ἐν

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ta ónta, autó to ón), and he thought that it was necessary to prove that not-being exists and has a certain reality, i.e. a certain being, in order to prove the existence of plural things.\textsuperscript{517} But, according to Aristotle, it was not necessary, in order to derive the plurality of beings, to show that not-being is, since being and not-being are already multiple by themselves,\textsuperscript{518} and this fact by itself constitutes already a rejection of the ancient position, whose foundation was seen in the phrase of Parmenides ὤν γὰρ μὴ ποτε τοῦτο δαμό, δίνα μὴ ἐόντα, i.e. "Never shall this be forced through, that things that are not, are."\textsuperscript{519}

Because of this (as he sees it) wrong settlement of having accepted the Eleatic position, Aristotle cannot agree with the consequence that Plato derived from his own analysis. This consequence is that not-being is other than being, just as what is not-beautiful is other than what is beautiful. It seems that the reasons that Aristotle has for rejecting Plato's position in \textit{Sophist} are properly based on his doctrine of being and not-being, since Aristotle not only rejects Plato's old-fashioned scheme of questioning about being and not-being, but also he opposes to that conception of not-being as 'the other' his own analysis about not-being developed in \textit{Metaphysics}. In fact, Aristotle here has not only expressed that being and not-being have many senses, all of them determined by the categories, but also that a categorized not-being is the \textit{negation} of the corresponding categorized being, which means that not-being is the absence of that which is denied,\textsuperscript{520} (e.g. not-white is the absence of white), and this

\textsuperscript{517} Met. 1089a. 4-6. "They [the Platonics] thought it necessary to prove that what is not, is; for only in this way —from being and from something else—would it be possible for there to be many existing things." (Trans. J. Annas (1976), p. 119).

\textsuperscript{518} In fact, as Aristotle implies in Met. 1089a. 26-31. According to Aristotle, Plato in the \textit{Sophist} meant only the epistemological sense (cf. 1089a. 20), and this is another feature of the partiality of Plato's account in that dialogue.

\textsuperscript{519} Translation by J. Annas (1976), p. 119.

opposition, as E. Berti has shown, is one of contradiction (δυσφάσας).

The ground of this conception of not-being as the contradictory negation of being seems to lie at the very heart of Aristotle's thought, since the most basic principles of Book Γ of his *Metaphysics*, namely, the principle of non-contradiction and that of excluded middle, already imply it. Thus, this conception shares the ontological and logical preeminence of these two

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521 cf. E. Berti (1983), p. 122. As Berti remarks (p. 122), Aristotle in *Met. Γ, 7*, when he explains and defends the validity of the principle of *tertium exclusum*, maintains in his argument that being and not-being are a contradictory pair (1012a. 5-8). Similarly, some lines later (1012a. 15-18), Aristotle will affirm clearly that not-being is the negation (or perhaps the expression of a negation). In this passage, as is known, Aristotle says that "when a man, on being asked whether a thing is white, says 'no', he has denied nothing except that it is; and its not being is a negation." (Trans. W.D. Ross, in *The Revised Oxford Translation*, J. Barnes (Ed.) 1991). Apparently, the translation of the last phrase (δενιάζει καὶ τοῦ μη ἐστα) is difficult. Ross has taken it as if negation is not-being of the thing which has been asked—which seems to be reasonable and it would imply that negation is the expression of not-being. J. Tricot (1962)—whose translation Berti follows—says "et le Non-être est une négation", which seems to be an assertion of equivalence, and too general. On the other hand, Berti has also observed that Aristotle (in *Met. Γ, 2, 1004a. 2; and 1, 3, 1054a. 30*) includes 'the same' and 'the other' in his division of contraries, which implies that Aristotle thinks that they are opposite by contrariety and not by contradiction. Berti has also shown that Aristotle distinguishes clearly 'the other' from not-being, because 'the other' is one of the forms or species of multiple, and it is opposite to 'the same', which is a species of the one.

522 This principle (PNC), which is said by Aristotle to be 'the firmest one', (Met. Γ, 3, 1005b. 19) has the following formulation (1005b. 19-22): "it is impossible for the same attribute at once to belong and not to belong to the same thing and in the same relation." (Transl. H. Tredennick, *Aristotle Metaphysics*, vol. i, p. 161, The Loeb Classical Library, 1933).

523 This principle (PEM), is introduced by Aristotle as a consequence of PNC, and thus he who denies PEM denies PNC too. Its formula (1011b. 23-24) says that "it is not possible that there should be anything in the middle of a contradiction." (Trans. C. Kirwan in *Aristotle's Metaphysics Books Γ, Δ and Ε Oxford 1971*).

524 Aristotle does not only allude to the intimate relation of PNC and PEM (1008a. 2-34), but also calls PNC the firmest principle (ῥεασκοκεῖσθαι ἀρχή: 1005b. 19), and 'that about which one cannot be mistaken' (1005b. 13-14). The logical preeminence is clear from the fact that, as he realizes at the beginning of Γ, it would be a petitio principii to demonstrate its validity, since it is the first axiom. Thus, Aristotle undertakes the task of making an indirect proof of it (ἀποδείξεως ἔλεγχως), or proof by refutation, for which the only need is that the opponent makes some statement (1006a. 12-14). The logical and ontological aspects are treated together in this refutation, even though Aristotle seems to distinguish one from another at the beginning of Γ (1006a. 1-2), when he says that "there are some, however, as we have said, who both state themselves that the same thing can be and not be, and say that it is possible to hold this view." However, the ontological
principles and, according to what Aristotle implies, it should be counted as the simplest and at the same time the truest explanation of what really happens in the ambits of logical reasoning, the physical world, and being qua being.

Preeminence is clear from the fact that Aristotle refers to properties and qualities of substance and says that it is impossible that they belong and not belong at the same time and in the same relation. At 6, 1011b. 15-18, Aristotle seems to imply a relation between these two preeminent levels of explaining the reality: "since it is impossible for the contradiction (ντιντηνσινναν) to be true for the same respect of the same thing, it is evident that the contraries (ναντηναν) cannot exist together at the same time in the same subject either."

The implications of these two principles are also evident in the ambit of generation and corruption. In the same Book 6, Aristotle habitually makes references to this ambit. In order to show instances of these principles he, for example, says: "for change is from not-good to good, or from good to not-good" (1011b. 33). The passage is clearly related to Physics 225a. 1-225b.5, where Aristotle states that there is no change without opposition (εντηνενον), and he mentions here contrariety (ναντηναν) and contradiction (ναντηνιαν) as species of opposition, and therefore as conditions of every change. See also Berti (1983), pp. 125-126.
4. Indefinite Propositions

(i) Chapters 2, 3 and 10

The most important consequence that Aristotle seems to have drawn from his treatment of the nature of the indefinite names and verbs seems to be contained in the following passage:526

\[19b\ 10 \ldots \varepsilon\sigma\tau\alpha\ \pi\acute{a}\sigma\alpha\ \kappa\alpha\tau\alpha\phi\alpha\alpha\varsigma\ \varepsilon\ \varepsilon\ \varepsilon\ \delta\omega\rho\iota\sigma\tau\omicron\upsilon\ \eta\ \varepsilon\ \eta\ \alpha\delta\rho\iota\sigma\tau\omicron\upsilon\ \chi\alpha\nu\varsigma\upsilon\theta\omicron\mu\alpha\tau\omicron\upsilon\ \eta\ \varepsilon\ \varepsilon\ \delta\omega\rho\iota\sigma\tau\omicron\upsilon\ \chi\alpha\nu\varsigma\upsilon\theta\omicron\mu\alpha\tau\omicron\upsilon\ \eta\ \varepsilon\ \eta\ \alpha\delta\rho\iota\sigma\tau\omicron\upsilon\ \chi\alpha\nu\varsigma\upsilon\theta\omicron\mu\alpha\tau\omicron\upsilon.\]

The passage has been translated by J. L. Ackrill thus:527

\[19b\ 10 \ \text{So every affirmation will contain either a name and a verb or an indefinite name and verb.}\]

At first glance, what Aristotle here states is that:

(a) The indefinite name can be present in an affirmation, and

(b) There are no indefinite verbs in affirmations

But this first reading produces justified questions, for: (i) Can 19b. 10 be extended to negations and so to propositions in general? (ii) Should one state that there are, in a way, indefinite verbs in propositions? According to Boethius, 19b. 10 should be interpreted for every simple or categorical proposition.528 So, in

\[526\ \text{cf. Aristotelis Categoriae et liber de Interpretatione, (1949), pp. 58-59.}\]
\[527\ \text{cf. Ackrill (1963), pp. 53-54.}\]
\[528\ \text{in Int. 2, 18-21, p. 255. The sample of proposition that the commentary will use to refer to its observations is 'homo ambulat', ('a man walks'), which is an example of a categorical or simple proposition with two terms. Later, (at 19b.19 f.), Aristotle will introduce another type of categorical proposition: that with three terms, or that in which 'is' is predicated additionally as a third thing; e.g. 'a man is just'. As such, these two groups are called simple propositions, because they predicate one thing from another (in Int. 8-9, p. 127), so that the force lies in the verb (in Int. 2, 10-12, p. 105), or in the predication (in Int. 2, 15-18, p. 105). For this reason,}\]
Boethius' view, what the passage properly implies, through its compressed way of saying, can be expressed in this extended way:

(a') The indefinite name can be present in a categorical proposition.
(b') There are no indefinite verbs in categorical propositions.

Boethius' commentary gives us an impressive argument for grounding this general interpretation, which we will develop in our following paragraphs. But now, in order to appreciate this foundation in its real extent, let us note the following two points:

First: The fact that the indefinite name can be present in a simple proposition does not imply only a syntactic fact, but also a decision about its completeness or rigour in Aristotle. According to Boethius, the indefinite name fulfils with qualifications the function of name, and the denomination of 'name' is given to it only in a homonymous way. Despite this, Aristotle at 19b. 19 reconsiders its nature and considers it apt to form a proposition whether as subject or predicate.529

Second: At 19b. 10, of all the predicative elements that Aristotle has already defined in Chapters 2 and 3, the indefinite verb is the only one absent. The reason for this has been already agreed: the indefinite verb states a negation, so that it does not have any possibility of occurring in a proposition. It is, in fact, clear that it cannot be present in an affirmation, because its presence would produce immediately a negation. Equally, it is also clear why it cannot be present in a negation: because the predication of an indefinite verb is, precisely, what states the negation. However, while a further proof of the first statement would be otiose (because there is no way of seeing an affirmation in an affirmation which has been denied) a further proof of the second statement could be requested in order to see that a negative statement, say \( n \), is one and the same as what was stated by the predication of an indefinite verb. As we will show,

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the simple proposition is also called *predicative, or categorical* (if one follows the Greek language: *in Int. 2, 13-24, p. 186*), since its unity depends on the predication and not on the conjunction (in *Int. 2, 5-6, p. 105*). When it depends on the conjunction, is called *hypothetical, or conditional.*

529 Cf. later Part I, (iii.1), (b) *The categorical proposition with three terms.*
the argument developed by Boethius' commentary satisfies this theoretical need in a significant way.

(ii) A textual problem: the lectio of 19b. 11 in Aristoteles Latinus

At 19b. 10, Boethius' translation does not reveal, and even contradicts, the condensed doctrinal content that his commentary is going to set out: his translation (AL 19b. 11) simply leaves indefinite names out from simple affirmations and negations. According to the text established by this edition Boethius translates this passage as follows:

\[19^b \, 11 \, (...) \, \text{erit omnis adfirmatio vel ex nomine vel ex verbo.}\]

The apparatus criticus shows that the reading \textit{erit omnis adfirmatio vel ex nomine et verbo vel ex infinito nomine et verbo} is documented in five codices and also in the lemma of Boethius' second commentary (C). It must be noted, equally, that the first commentary does not exhibit the lemma in question, but the corresponding explanation by Boethius accepts that the indefinite name can be present in affirmations. Certain doctrinal reasons, on the other hand, indicate that Boethius translated 19b. 11 together with the lectio \textit{et verbo vel ex infinito nomine et}. For if Boethius' version of Aristotle's text at 19b. 11 had been doubtful he could have made a corresponding comment on it just as he made in the case of an obscure gloss that occurs in the text some lines later. And even more decisively, Aristotle would not say

530 cf. \textit{AL} II.1, 10, p. 18.
531 cf. \textit{in Int.} 3-5, p. 128.
532 Boethius mentions a parallel superscription or gloss (\textit{alia inscriptio}) that, according to him, is present in the text that he has before him. This text is, presumably, the same as he employed in his previous translation and first commentary (see here L. Minio-Paluello \textit{Aristoteles Latinus}, Praefatio, p. x), but now to allude to these interlinear words is relevant because of Boethius' purpose of completing and improving his previous commentary. The gloss seems to be a parallel version of \textit{PeriH.}, 19b.19-26, and it is probable that Boethius here mentions it because of the difficulty of this passage. In fact, he warns us, in the introductory notes to 19b. 19-26,
merely, as is suggested, that "Every affirmation will contain names and verbs" in circumstances that he has mentioned some lines before (19b. 8-9), namely, that "An affirmation signifies something about something, this last being either a name or a 'non-name'."  

The future tense of 19b. 10 (ēstoc: erit) is a clear sign that Aristotle here has concluded in accordance with the

that what is said here is very obscure (perobscurum) and it has been commented on by many authors in an inaccurate way. (in Int. 2, 14-15, p. 264.: Quod autem dicitur perobscurum est et exponitur a pluribus incurre)  
The two versions of 19b. 19-26 are thus:

Boethius' text | The Parallel Version
---|---
quando autem est tertium adiacens praedicatur, dupliciter dicuntur oppositiones, ... | idem
dico autem quoniam est aut justo adiacebit aut non iusto, quare etiam negatio. quattuor
ergo erunt. (...) est enim hoc loco et non est iusto et non
iusto adiacet. (...) | dico autem quoniam est aut homini adiacebit aut non homini,
quare etiam negatio. quattuor
ergo erunt. (...) est enim hoc loco et non est homini et non
homini adiacet. (...)

The parallel version is different because 'is' and 'is not' are added to 'man' and 'not-man', and this fact, Boethius reports, has misled the commentators, for they did not know what was the exact sense of this. (Among them are Alexander of Aphrodisias and others, who think that the text must be emended, but Porphyry and Hermenus do not think so: unde Alexander quoque dicit scripturae esse culpam, non philosophi recte dicentis et emendandam esse scripturam. (...) non ergo oportuit conturbari Alexandrum aliosque in hac inscriptione, in qua nos philosophus exercere voluerit, sicut Porphyrium et Hermeminum non turbabat in Int. 2, 14-16, p. 272, and 27-29, p. 272). However, Boethius advises us not to get confused by this change: in his opinion, there is no problem if we replace 'man' by 'just' and 'not-man' by 'not-just' in the parallel version. (in Int. 2, 16-17, p. 272: sed non eum oportuit confundi, si pro homine et non homine iustum et non iustum intulit.) Thus, by means of his reading of the gloss, it should be understood that here is said: 'a man is just'; 'a man is not-just'; 'a man is not just'; and 'a man is not not-just', as his previous reading and translation established. And this is possible, according to Boethius, because the gloss mentions these things as examples or cases (exempla), and not as implicit consequences of the propositions used by Aristotle. (in Int. 2, 19-20, p. 272: haec enim exempla potius sunt quam propositionum necessitas.) Therefore, 'man' and 'not-man' are referred to as examples of indefinite predicates, and Aristotle could have taken any other, because his intention is to exercise our minds. (exercere intellegentiam nostram acumenque philosophus voluit: in Int. 2, 26-29, p. 273).

Cf. PeriH., 19b. 5-6. "Επεί δέ έστι η η κατά τινός η κατάφαυς σημαίνουσα, τούτο 8' έστιν η δύναμι η το αύλωμον, (...), Ackrill translates το αύλωμον by 'non-name', Boethius by inominabile. All these expressions refer to the indefinite name, and therefore, Aristotle unquestionably entails the presence of indefinite names in (at least) affirmations at the beginning of the first passage of Chapter 10.
thesis that admits, at least in affirmations, the presence of indefinite names. Besides, Boethius would not translate Aristotle as at AL. 19b. 11, because this would imply that he disregards the complete consideration of indefinite names and verbs that he is going to give. And, even more, it would be pointless to clarify the sense of this phrase (as we will show he does) in order to give a complete exposition of what Aristotle implies, if he thinks that Aristotle did not say that.

Besides, this reading is attested in the lemma of Ammonius' commentary, so that Ammonius also reads the complete phrase: ἡ ἡστα πάσα κατάφασις ἡ ἡ ἡ ὑνόμισμα ὑα ἡ ἡ ἡ ᾠδήματος ἡ ἡ ἡ ὑνόμισμα καὶ ἡ ἡ ᾠδήματος. So, this passage, just as the other at 16a. 32, which we have discussed above, presents another problem concerning the congruence of the tradition of MSS of the text and the tradition of its commentaries.

(iii) The number of the categorical propositions and the doctrine of the indefinite names

The ground of Boethius' interpretation of 19b. 10, in the extended way that (a') and (b') suggest above, is that Aristotle in what is our Chapter 10 of PeriH. determines the total number of the categorical propositions and it becomes manifest that there are no indefinite verbs in propositions. Boethius' commentary starts to establish this conclusion by stating first that Aristotle's intention in Chapter 10 is to deal with the number of the categorical propositions when these contain either definite or indefinite names.

nunc autem quoniam ab Aristotele supra monstratum est in futuro contingentium propositionum veritatem et falsitatem non stabili neque definita ratione esse divisam et quidquid supra latissima disputatio complexa est, nunc haec eius intentio est, ut

535 We have discussed above the presence of the lectio ἐν ὑμῶν ὑπάρχει καὶ ἡ ὑπάρχει καὶ μὴ ὑπάρχει, at 16a. 32. (Cf. above 1.2, (ii) A textual problem: the lectio of 16a. 32).
536 cf. in Int. 2, 16-23, p. 251.
To include definite and indefinite names in categorical propositions does not mean that Aristotle intends to deal with the number of certain cases of categorical propositions, but —as pointed out above— that he will take them even with this indefinite characteristic to fulfil a complete purpose. In fact, some lines later, Boethius confirms this purpose in the following way:

praedicativae autem et categoricae propositiones sunt quae duobus tantum simplicibus terminis constant: hae sive cum finito nomine, ut est homo ambulat, sive cum nomine infinito, ut est non homo ambulat. harum igitur propositionum categoricarum atque simplicium tradere numerum contendit, quacumque fiunt adiectione nominis infiniti.

At first glance, Boethius' interpretation does not seem justified, and one is led to question the meaning of numerum here. However, Boethius will demonstrate that this is the intention of Aristotle based on the view that the first words in Chapter 10 involve a classification (or division) and a generation of the categorical propositions, and also an arithmetical calculus of their number when these contain indefinite and definite names.

(iii.1) Classification of the categorical propositions

According to Boethius, Aristotle seeks out the number of categorical propositions, and this is indicated by the fact that he attempts to divide and classify these propositions. The first approach that Boethius makes in order to ground his affirmation states a syntactical distinction between a proposition with indefinite name and one with a definite name. The aim is to establish the former as a valid species of categorical proposition. The passage is clearly a preamble. According to him, a categorical proposition, which contains a definite name as subject, (e.g. 'a man walks') is different from one which has an indefinite name (e.g. 'a

537 in Int. 2, 24-5, pp. 251-252.
not-man walks') neither by quality nor by quantity, but by its own characteristic and definition. The preamble serves as a basis to found a first general classification of the categorical propositions, for propositions with an indefinite subject have now a place in the general classification.

(a) The categorical proposition with two terms

The starting-point of the classification is the simple or categorical or predicative proposition, i.e. that which is compounded by a subject and a predicate. Boethius states that here every predication (praedicatio) always will involve a verb or

\[538\] in Int. 2, 5-13, p. 252. sed quoniam propositiones omnes aut secundum qualitatem differunt aut secundum quantitatem (...) secundum quam differentiam hae propositiones quae dicunt homo ambulat et rursus non homo ambulat a se differunt? secundum qualitatem an secundum quantitatem? (...) And he concludes later: secundum definitionem <ergo> potius et propietatem videntur discrepare quam aliquam totam quantitatem vel partem vel rursus aliquam qualitatem. (in Int. 2, 9-12, p. 254). The argument runs as follows: since every proposition can be distinguished from the point of view of its quality and its quantity, the question will be whether a proposition with definite name as subject and other with an indefinite one differ one from another by quality or quantity. According to quality, a proposition is negative or affirmative; according to quantity, a proposition denotes many or few things, and then it is universal, particular, indetermined (i.e. unquantified) or singular. Boethius first intends to clarify whether the propositions in question differ from one another in quality. His first point is to show that in the proposition 'a man walks' a certain quality is predicated of a substance, i.e. to walk (quality) is said of man (substance). On the other hand, when 'a not-man walks' is said, a certain definite thing is excluded (tollere) and an indefinite number of things (innumerabilia) are meant (cf. in Int. 2, 13-19, p. 252). The result of his analysis shows that the propositions in question do not differ one from another in quality, because both are affirmative propositions. Similarly, Boethius will demonstrate that the propositions in question do not differ in quantity. According to him, the relation between (a) 'a man walks', (b) 'a not-man walks', and (c) 'many not-men walk', which is one of quantity, is the same as that between (a') 'Socrates walks' and (b') 'some man walks', and (c') 'many men walk'. Now, if (c') is true, then it is true (b'), but (a') is false, because (a') is true only if Socrates himself walks. Now, the same relation of inclusion is stated in respect of (a), (b), and (c). The argument presented by Boethius assumes that (a), unlike (b) and (c), is an absolutely determined proposition. Therefore, the inclusion between (b) and (c) does not work in the case of (a), because if (c) is true, (b) is necessarily true, but (a) is not necessarily true. The same occurs in (a'), (b'), and (c'). The argument that Boethius maintains is not completely explicit, but it makes known that (a) differs from (b) not by quantity, because the relation of quantity produces an inclusion between (b) and (c), but not between (b) and (a). The same occurs in the case of (a'), (b'), and (c').
something equivalent (*quod idem posset*) to the expression of a verb, like when we say 'A man walks', or 'A rational man' (*homo rationabilis*), because in this last case the verb 'to be' (i.e. 'is'), is assumed, so that the complete sense of this proposition is 'A man is rational'. According to Boethius, it is necessary that a verb always be predicated or something similar to the verb, and equivalent, be put in these propositions.\(^{539}\) Therefore, it must be concluded, Boethius points out, that in every categorical proposition the subject is a name and the predicate a verb:\(^{540}\)

\[
\text{quocirca maxime colligendum est omne in categorica propositione subiectum nomen esse, omne vero praedicatum verbum.}
\]

According to Boethius, Aristotle classifies the categorical propositions from the point of view of the subject, that is, the name, and the criterion that he applies is whether this is definite or indefinite; now, given that every categorical proposition contains necessarily as subject a name or an indefinite name,\(^{541}\) the classification must be this: every categorical proposition with two terms\(^{542}\) holds a subject which is definite or indefinite.\(^{543}\) Now, if we consider the nature of the subject by itself, since this will be either a universal or a singular thing, (like a man or Socrates, respectively), then there will be propositions with an indefinite or definite subject containing a singular or a universal thing. Now, if we consider quantity and quality of propositions, that is, the way in which the subject is predicated, there will also be propositions having a definite or an indefinite name as subject

\(^{539}\) cf. *in Int.* 2, 14-6, p. 255. quocirca necesse est aut verbum semper esse praedicatum aut quod sit verbo consimile idemque in enuntiationibus possit.

\(^{540}\) *in Int.* 2, 18-21, p. 255.

\(^{541}\) *in Int.* 2, 1-4, p. 256. necesse est semper categoricam propositionem aut nomen habere subiectum aut illud quod dicitur infinitum. vero nomen est quod ipse nunc in nomen vocat.

\(^{542}\) This remark is important, because Aristotle will later introduce the categorical propositions with three elements or those in which 'is' is predicated additionally. Cf. *PeriH.* 19b. 19 et ff..

\(^{543}\) *in Int.* 2, 4-6, p. 256. omnis ergo propositio praedicativa in duas dividitur species: aut ex infinito nomine subiectum est aut ex simplici nomine. ex infinito quidem, cum dico *non homo ambulat*, ex infinito autem et simplici, ut *homo ambulat*.
that are universal, particular and unquantified. Finally, since propositions also differ by quality, these mentioned species of propositions will be affirmative or negative. According to Boethius, this is the general division that Aristotle has in mind at the beginning of Chapter 10 and, at the same time, a sign that Aristotle's purpose in this chapter is to determine a general classification of these propositions.

The diagram that Boethius presents is exactly the same as that which we mentioned in Fig. 1, though a reduced one, because he has left aside the singular propositions, that is, those which contain a singular subject. So his table shows only the species of propositions containing a universal thing as subject (e.g. man), and they are definite and indefinite, and —on the other hand— universal, particular or unquantified, and —finally— affirmative or negative. Boethius' scheme is as follows:

UNQUANTIFIED WITH SIMPLE NAME AS SUBJECT

A man walks  A man does not walk

UNQUANTIFIED WITH INDEFINITE NAME AS SUBJECT

A not-man walks  A not-man does not walk

UNIVERSAL WITH SIMPLE NAME AS SUBJECT

Every man walks  No man walks

UNIVERSAL WITH INDEFINITE NAME AS SUBJECT

Every not-man walks  No not-man walks

PARTICULAR WITH SIMPLE NAME AS SUBJECT

Some man walks  Some man does not walk

PARTICULAR WITH INDEFINITE NAME AS SUBJECT

Some not-man walks  Some not-man does not walk

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544 in Int. 2, 3-9, p. 258. Haec ergo partiens et de propositionibus ex duobus terminis constitutis faciens propositionem colligit omnis ex subiecto nomine propositiones et eas tantum ad divisionum sumit, quae ex infinito nomine fiunt, faciens huiusmodi divisionem principalem, ut sit: propositionum aliae sunt ex infinito nomine, aliae ex infinito.

545 cf. in Int. 2, 19-2, pp. 257-8.

546 see here later (iii.4), (a) Fig. 1; (at the end of this Chapter 4).
Boethius' diagram is reduced only because it leaves aside the singular propositions, but it is, anyway, more complete than that introduced by Aristotle, who only lists, says the commentary, the unquantified ones and their corresponding contradictions.\textsuperscript{547}

Therefore, Boethius completes Aristotle's list by adding the contrary and subcontrary propositions, i.e. I and O, (with definite and indefinite subject),\textsuperscript{548} in confirmation that the classification that his commentary gives and that offered by Aristotle are one and the same:\textsuperscript{549}

\begin{quote}
numerus vero propositionum, quorum nos supra quoque descriptimus, ipse [i.e. Aristotle] subiecit: indefinitas quidem prius, post vero contra iacentes. quod si quis vel ad illa revertitur vel hic intendit animum, in quo vel nostra vel Aristotelica dispositio discrepet diligenter agnoscit. nos enim et contrarias proposuimus et subcontrarrias, Aristoteles vero solum contradictorie sibimet contra iacentes oppositasque proposuit.
\end{quote}

According to the commentary, the fact that Aristotle lists only some of the categorical propositions in the first paragraph of Chapter 10 does not imply that his general purpose is not to determine a general classification of these propositions. On the contrary, one proof that here Aristotle by himself proposes this classification is that he lists them in a certain order: first the unquantified (without and with indefinite subject), and then their contradictories—which must be universal propositions. Besides, the commentary observes, another sign that Aristotle proposes a

\textsuperscript{547}That is, first the unquantified: 'a man is' — 'a man is not'; then: 'a not-man is' — 'a not-man is not'. After these, the quantified (of which Aristotle gives only the universal affirmative and negative, i.e. A and E, with definite and indefinite subject), thus: 'every man is' — 'every man is not'; then: 'every not-man is' — 'every not-man is not'. (Cf. \textit{PeriH.} 19b. 15-19).

\textsuperscript{548}i.e. 'some man is' — 'some man is not', (viz. I, O); and then 'some not-man is' — 'some not-man is not'.

\textsuperscript{549}\textit{in Int.} 2, 7-14, p. 263. ("He [Aristotle] himself arranged the number of the propositions which we also described above: in fact, [he placed] first the unquantified and then [their] contradictions. For if anyone either reconsiders those propositions or applies his mind here, he accurately recognizes in what [point] our arrangement differs from that by Aristotle. We, indeed, disposed the contrary and subcontrary propositions, while Aristotle disposed only, in opposition one to another (\textit{contradictorie sibimet}), the contradictory and the opposite negative propositions.").
general classification would be patent in the fact that the philosopher says that the same species exist in respect of the non-present tenses, that is, past and future:\footnote{In Int. 2, 14-19, p. 263. Ammonius, however, (in Int. p. 90, 21-30) takes this point as the proper division of the predicate in the two-term propositions, since here the predicate is a verb, and the verb "additionally signifies time", and time is understood in three ways: present, past and future.}

Sed Aristoteles non solum in praesenti tempore easdem propositionum dicit esse differentias quas proposuit, sed etiam in aliis quoque temporibus quae sunt extrinsecus. extrinsecus autem tempora vocat quae praeter praesens sunt praeteritum scilicet et futurum.

Now, at this point, the commentary wonders pertinently why Aristotle did not go on to make a similar division in the predicate of the simple proposition with two terms, by distinguishing between indefinite and definite verbs:\footnote{cf. in Int. 2, 9-11, p. 258.}

\[\text{oportuerat quidem volentem cuncta partiri ad differentias propositionum non solum infinita sumere nomina, sed etiam verba.}\]

The answer is the doctrine of the indefinite verb that we have mentioned earlier,\footnote{cf. above 2.1, (iii) \textit{Indefinite verb and negation}.} and which is, at the same time, the clearest sign that Boethius' commentary has related the non-existence of indefinite verbs in categorical propositions to the determination of their total number. This crucial point was not mentioned in the first commentary\footnote{As we know, Boethius devoted a twin commentary to \textit{PeriH}. At the beginning of Book Four of his second commentary, (in Int. 2, 2-4, p. 251), Boethius clarifies that the subtleties and more difficult points are treated in his second exposition. The classification of the categorical propositions, their number, and this point in question here are clearly examples of what he considered more difficult and subtle.} and, as will become manifest, Ammonius did not know it in detail.\footnote{Ammonius' commentary agrees with the following explanation given by Boethius, namely, that there are no indefinite verbs in propositions, but the indefinite verb states the negation, because both follow an explanation given by Alexander of Aphrodisias in this sense (cf. Ammonius, in Int. p. 157, 9-24; and Boethius in Int. 2, 8-16, p. 317). However, Ammonius rather agrees with the idea of dividing the predicate, since this is always a verb in}
follows: Aristotle knew, says Boethius' commentary, that the indefinite name keeps, contrarily to the indefinite verb, the quality of the categorical proposition of two terms, so that he kept silent about (reticuit) the indefinite verb in this classification, because the propositions formed by indefinite verbs constitute properly the quality of the proposition (i.e. the negation), rather than affirmations with indefinite verb.\footnote{cf. \textit{in Int.} 2, 22-23, p. 261.} In a word, the indefinite verb states the negation (\textit{perficere negationem}), and it does not appear consequently in negative propositions, but its existence is reserved only to its isolated condition.\footnote{cf. \textit{in Znf.} 2, 21-22, p. 261.} Thus, the commentary concludes that Aristotle, correctly, did not make any difference in propositions regarding the verb.\footnote{cf. \textit{in Int.} 2, 20, p. 64.}

\begin{itemize}
  \item \textbf{(b) The categorical proposition with three terms}
\end{itemize}

Boethius' opinion that Aristotle in what is our Chapter 10 seeks out a general classification of the categorical propositions receives further support from the fact that Aristotle has not limited his analysis only to categorical propositions with \textit{two terms}, but has also advanced to a further group of propositions, namely, those with \textit{three terms} or, as Aristotle's expression establishes, those in which "'is' is predicated additionally as a third element."\footnote{cf. \textit{in Int.} 2, 20, p. 64. in quibus tertium adiacens praedicatur. For this formula, we give the translation of Ackrill on \textit{PeriH.}, 19b. 19-20, that is, "when 'is' is predicated additionally as a third thing."} Boethius refers to the following text: \footnote{\textit{in Int.} 2, 18-20, p. 258. idcirco de his reticuit, quod hae magis quae ex verbo infinito sunt ad unam qualitatem pertinent propositionis id est ad negativam.}
According to Boethius, Aristotle makes a substantial advance in his classificatory purpose when he introduces this second syntactic group of propositions. In fact, since now 'is' is predicated additionally as a third element, one subject and two predicates will be produced, like in the example 'A man is just': here, certainly, 'man' is the subject, while 'just' and 'is' are both predicated.

The fact that in these propositions there exist three terms, and not two as in the former case, advances a crucial question: whether or not this new group of propositions is simple (i.e. categorical). The point is important because, in Boethius' view, the criterion to distinguish a simple proposition from a compound one is based on the number of terms, and not in the signification of the proposition. In fact, the question of whether this kind of proposition with three terms is or not a simple proposition was an open question remaining from Boethius' first commentary.

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560 This change is also stressed by Ammonius. According to him, in this part of the text (i.e. 19b. 19), Aristotle starts the third chapter of his *PeriH.*: Ἀρχέται μὲν οὖν ἐνεκέβην τὸ τρίτον τοῦ βιβλίου κεφάλαιον, ὅτερ ἐξεχώρησαί εἶναί προὶ τῶν ἐκ τρίτου προσκατηγορομένου προτάσεως. (Amm. in Int., p. 159, 24-25).

Ammonius has asserted, in fact, that *PeriH.* is divided into five chapters. In the first one, Aristotle treats of the elements of the simple proposition; in the second, the simple propositions of two elements; in the fourth, the propositions with modality (*ἐκ τρόπων*). (Cf. Amm. in Int. p. 7, 15-p.8, 19). There is a fifth chapter devoted to a particular problem, says Ammonius, and that corresponds to our *PeriH.* 14. (Cf. also later Part I, 4., (iii.3), (a) *Ammonius' calculus*, n. 652).
561 Cf. in Int. 2, 26-29, p. 107. simplex autem et composita non ex significatione, sed ex verborum et nominum pluralitate cognoscitur. si enim ultra duos terminos habet propositio, composita est, sin duos tantum, simplex. It must be noted that Ammonius (in Int. p. 78, 26 - p. 79, 9) also emphasises the number of words compounding the categorical proposition to make a difference between these two syntactic groups of propositions.
562 Cf. in Int. 27-30, p. 129. an vero hae [quae unum subjectum, duo praedicata] quoque simplices sint, in secundae editionis expositione dicendum est.
It is clear that the presence of the added element (i.e. 'is') in these propositions makes one think that they are not simple, however the commentary states that they constitute the other type of categorical propositions, i.e. they are actually simple, because here 'is' is accidentally predicated (accidenter praedicatur).\(^{563}\) Accordingly, in the example 'A man is just', 'just' is the essential predicate, but not 'is'. Rather, as the commentary argues, 'is' is put as a sign of the quality of the proposition, i.e. to distinguish whether it is affirmative or negative.\(^{564}\) Therefore, in this kind of categorical propositions, 'is' is not counted as a term in the proposition: rather, it is not a term absolutely speaking. The proof of this is that if someone wants to resolve (resolvere), into its own terms, the proposition 'A man is just', in order to understand its signification, then one will not understand it by means of 'is', but by means of 'just' and 'man'.\(^{565}\) For this reason, according to Boethius, Aristotle says not only that 'is' is predicated, but also that 'is' is predicated additionally as a third term.\(^{566}\)

According to Boethius, the distinction that Aristotle states can also be understood thus: if we suppose a proposition like 'Socrates-the-philosopher is', we will observe that here 'is' is

\(^{563}\) Cf. \textit{in Int.}\textit{2}, 4-6, p. 266.

\(^{564}\) \textit{in Int.}\textit{2}, 22-28, p. 265. praedicatum autem dico in ea propositione quae ponit hom o iustus est \textit{iustus}. hoc enim praedicatum de homine est, est autem non praedicatur, sed \textit{tertium adiacens praedicatur} id est secundo loco et adiacens iusto, non quasi quaedam pars totius propositionis, sed potius demonstratio qualitatis. Equally, Boethius says later: non inquit tertium praedicari, sed tertium adiacere, ad ordinem scilicet, non ad praedicari, sed tertium adiacere, ad ordinem scilicet, non ad praedicationem, ut tertium quidem adiaceret, adiacens autem praedicatur id est non simpliciter praedicatur. (\textit{in Int.}\textit{2}, 21-25, p. 269).

\(^{565}\) \textit{in Int.}\textit{2}, 26-3, pp. 269-270. atque ideo siquis resolvere propositionem velit in suos terminos, ille non resolvit in \textit{est}, sed in id quod est homo et iustus. et erunt duo termini: subjectus quidem homo, praedicatus vero iustus, \textit{est} autem quod adiacens praedicatur et tertium adiacens non in termino, sed in qualitate potius propositionis (ut dictum est) iustus accipietur.

\(^{566}\) As Ammonius notices (cf. \textit{in Int.}\textit{p. 176, 28}), this doctrine reminds us of Aristotle's words of \textit{Prior Analytics}, I, 24b. 16-18. "I call a term that into which the proposition is resolved, i.e. both the predicate and that of which it is predicated, 'is' or 'is not' being added." (\textit{The Revised Oxford Translation}, A.J. Jenkinson's translation, J. Barnes ed., 1991).

\(^{567}\) \textit{in Int.}\textit{2}, 7 et ff. pp. 266-7. potest autem et sic intelligi: idcirco dixisse \textit{Aristotelem est} in his tertium adiacens praedicari, quoniam (...).
predicated as 'lives' in the proposition: 'Socrates-the-philosopher lives'. Thus, in the latter, 'Socrates' and 'philosopher' are subjects, and 'is' is predicated alone (*solum*).\(^{568}\) However, in this other proposition: 'Socrates is a philosopher', the subject is only 'Socrates', and 'is' and 'a philosopher' are predicates, of which 'a philosopher' is principally predicated (*principaliter*).\(^{569}\) In this last example, Boethius remarks, it is evident what Aristotle means by his formula of 19b. 19, because here 'is' is not absolutely (*simpliciter*) predicated, but additionally predicated (*adiacens, προσκατηγορεῖται*).\(^{570}\)

As a consequence of their peculiar characteristic, Boethius concludes, in these propositions in which 'is' is predicated additionally as a third element, what is principally predicated is a name or an indefinite name,\(^{571}\) for here what is definite or indefinite is not only the subject, as in the former type of categorical proposition, but also the predicate, that is, the name which is attributed to the subject.\(^{572}\) Therefore, since the

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\(^{568}\) cf. in *Int.* 2, 13-15, p. 266.

\(^{569}\) cf. in *Int.* 2, 19-21, p. 266.

\(^{570}\) ibid., 21-23, p. 266.

\(^{571}\) in *Int.* 2, 2-5, p. 267. *quando est tertium adiacens praedicatur*, quod principaliter praedicatur aut nomen erit aut infinitium nomen. et hae aut affirmativa praedicandae sunt aut negative. The following text is also very explicit: facit [sc. Aristotle] igitur nunc in his propositionibus considerationem, in quibus est tertium adiacens secundum praedicatur. et sicut in his in quibus tantum praedicatur est, non etiam adiacens praedicabatur, ut homo est, de subjecto considerationem fecit, quot modis summptum subjectum differentias faceret propositionum (aut enim nomen esse subjectum aut infinitum nomen), sic nunc de praedicato loquitur et de praedicati differentiis tractat. in his enim propositionibus, in quibus *est tertium adiacens praedicatur*, summptum praedicatum alias nomen, alias infinitum nomen facit differentias propositionum.

\(^{572}\) in *Int.* 2, 7-10, p. 267. finitum autem et infinitum hic non subjectum, sed summptur praedicatum, ut in eo quod est homo iustus est iustus praedicatur. hoc autem nomen erit aut infinitum nomen. This phrase seems to disregard propositions with indefinite subject, but his expression *sed summptur praedicatum* implies that he is taking *by now* only propositions with indefinite predicate: hence our reading "for here what is definite or indefinite is not *only* the subject, (...)". The corresponding propositions with indefinite subject could be treated together with those with indefinite predicate, as Boethius acknowledges some lines later (*in Int.* 2, 12-15, p. 268), because they belong to the same type of proposition (i.e. those in which 'is' is added as a third thing), but they are not introduced right now because Boethius' commentary follows Aristotle's text, and here these propositions are presented later (*PeriH.* 19b. 36). This 'text-by-text' characteristic is a common feature of the ancient commentaries. It is certainly manifest in Boethius' commentary, but also in that of Ammonius,
predicate will be a definite or an indefinite name, and these names are to be predicated either affirmatively or negatively, there will arise two affirmations and two negations, that is, four propositions and two oppositions, as Aristotle consequently determined:

<table>
<thead>
<tr>
<th>Simple Affirmation</th>
<th>Simple Negation</th>
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<tbody>
<tr>
<td>A man is just</td>
<td>A man is not just</td>
</tr>
<tr>
<td>Indefinite Affirmation</td>
<td>Indefinite Negation</td>
</tr>
<tr>
<td>A man is not-just</td>
<td>A man is not not-just</td>
</tr>
</tbody>
</table>

Boethius' commentary does not unfold a general classification of this last type of categorical propositions, because his commentary follows Aristotle's text, and Aristotle in the following lines of Chapter 10 (19b. 26-29) arranges these propositions in a way that permits to him to determine certain logical relations among indefinite, simple and privative propositions, as he did also at Prior Analytics I, 46. Nevertheless, the classification would be continued by Aristotle indirectly, because, as Boethius'
commentary observes, what Aristotle determines implicitly in this
diagram at 19b. 27-29 is the general classification of this kind of
proposition, for here Aristotle shows these propositions in their
unquantified form, but later (at 19b. 32-35) these are also shown
with quantification (universal and particular). So that, Boethius
adds, the order in which these propositions are arranged at 19b.
27-29 makes manifest the number and the oppositions:\textsuperscript{576}

\begin{quote}
atque hoc [i.e. the order of 19b. 27-29] quidem in indefinitis. posterius
autem monstrabitur hoc etiam in his esse quae determinationem
habent universalitatis vel particularitatis. nunc autem horum ordo
subjectus numerum oppositionemque declarat.
\end{quote}

\textsuperscript{576} in Int. 2, 13-17, p. 267. 'Posterius' refers here to the following diagrams
introduced by Aristotle where the remaining species of propositions are
presented.

\textsuperscript{577} Zimmermann (1991), p. Ixxxix, n. 2, has argued that Syrianus' result of
144 species of categorical propositions "is an accurate summary of
propositional patterns discussed by Aristotle, except that there is no textual
foundation for patterns with "indefinite" proper names like "not-
Socrates"". According to Boethius' commentary, however, the textual
foundation is the beginning of Chapter 10, where Aristotle would propose a
classification and generation and arithmetical calculus. So the fact that
Aristotle does not treat directly these patterns does not imply that they are
excluded from his intention. The singular propositions are left aside by
the classification of the first group of categorical propositions (singulare
habentibus subjectum simplicibus propositionibus reiectis. \textit{in Int. 2}, 28-6,
pp. 256-7), but this does not mean disregarding them as a valid species of
categorical proposition, which is clear from the fact that the commentary,
when it takes a general view, includes subject-terms which are universal
and singular (e.g. at \textit{in Int. 2}, 8-11, p. 256. huius autem quae ex finito et
simplici est species sunt duae: quae aut universale nomen subicit, ut \textit{homo
ambulat}, aut singulare, ut \textit{Socrates ambulat}).

\textsuperscript{578} As a consequence of their peculiar syntactic structure, the commentary
pertinently remarks that here what is principally predicated is a name or
an indefinite name. (\textit{in Int. 2}, 2-5, p. 267. \textit{quando est tertium adiacens

In fact, if the singular propositions are added, which Boethius does
not consider but recognizes as the fourth species,\textsuperscript{577} there will be
produced a fourfold classification for each of these propositions.
Now, since all of these propositions which have been distinguished
can have an indefinite subject as well as an indefinite
predicate,\textsuperscript{578} the final classification will contain four branches
more for each of these species already established. Finally, as these can be affirmative or negative, the general classification will incorporate a twofold following division for each proposition mentioned above. This classification, therefore, would be implicit in the diagram developed by Aristotle at *PeriH.* 19b. 27-29, and it would confirm Aristotle's purpose at Chapter 10. In fact, one should recall here that Aristotle himself has said at 20a. 1, precisely after he has distinguished the last opposition of this group, that:

"There will not be any more oppositions than these"

Indeed, Aristotle is certain that he has exhausted all the possible cases. This seems to be, by itself, proof that Aristotle has intended a classification of these three-term propositions (and so that he has a general propositional classification in mind). In fact, the ancient commentaries emphasised this phrase as a sign of Aristotle's intention of completeness in classifying categorical propositions.579 (Our Fig. 2 illustrates this classification).580

Furthermore, Boethius has presented indirectly this classification when he transfers Syrianus' calculus of the total number of the categorical propositions, and the proof of this is that the list transferred by Boethius to his commentary, which disposes "these propositions literally",581 reveals all the species distinguished and in the order that Aristotle implied and Boethius comments on. According to Boethius, Syrianus gives the following result:582

praedicatur, quod principaliter praedicatur aut nomen erit aut infinitum nomen).

579 So Ammonius (*in Int.* p. 175, 25-31; and see also his use of τέλειος at p. 176, 1). Also Boethius (*in Int.* 2, 14-16): ut autem quinta oppositio reperei possit, nulla rerum ratione possibile est ("so it is not possible to find a fifth opposition, because it is not in the nature of the things"). And even Syrianus, in Boethius' report at *in Int.* 2, p. 322, 20-21, who uses in his calculus Aristotle's expression of 20a. 1 (*magis plures autem his*, ut ipse ait, propositiones inventi non possunt).

580 See here later (iii.4), (b) Fig. 2; (at the end of this Chapter 4).

581 cf. *in Int.* 2, 24, p. 324. Ha situr propositiones Syriano calculis colligente nos quoque nominatim disposuimus, (...). See translation of this passage here later at (iii.3) *The arithmetical calculus of the number of propositions.*

582 *in Int.* 2, 23-15, pp. 323-324.
'IS' ADDITIONALLY PREDICATED

<table>
<thead>
<tr>
<th>A man is just</th>
<th>A man is not just</th>
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<tbody>
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<td>Every man is just</td>
<td>Every man is not just</td>
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<tr>
<td>Some man is just</td>
<td>Some man is not just</td>
</tr>
<tr>
<td>Socrates is just</td>
<td>Socrates is not just</td>
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<tr>
<td>A not-man is just</td>
<td>A not-man is not just</td>
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<td>Every not-man is just</td>
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<tr>
<td>Some not-man is just</td>
<td>Some not-man is not just</td>
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<tr>
<td>Not-Socrates is just</td>
<td>Not-Socrates is not just</td>
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<tr>
<td>A man is not-just</td>
<td>A man is not-just</td>
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<td>Every man is not-just</td>
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<td>Some man is not-just</td>
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<td>Socrates is not-just</td>
<td>Socrates is not not-just</td>
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<tr>
<td>A not-man is not-just</td>
<td>A not-man is not not-just</td>
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<td>Every not-man is not-just</td>
<td>Every not-man is not not-just</td>
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<td>Some not-man is not-just</td>
<td>Some not-man is not not-just</td>
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<tr>
<td>Not-Socrates is not-just</td>
<td>Not-Socrates is not not-just</td>
</tr>
</tbody>
</table>

First, in the first column, Syrianus presents the subgroup of the categorical propositions with definite subject and predicate in their versions: Indetermined (i.e. Unquantified), Universal, Particular and Singular. After that, in the same column, the same propositions but with indefinite subject. In the second half, he lists, in the same order, the propositions with indefinite predicate. After that, the propositions with indefinite subject and predicate, by maintaining the order proposed earlier. In the second column, Syrianus arranges each respective opposite proposition, that is, every corresponding negation. (Our Fig. 3 shows the classification of the two and three-term propositions).²⁸³

(iii. 2) The generation of the categorical propositions

The opinion that Aristotle in Chapter 10 deals with the number of the categorical propositions receives further support from the fact that he attempts a 'generation' (as we can call this

²⁸³ See here later (iii.4), (c) Fig. 3; (at the end of this Chapter 4).
process attempted by the commentary)\textsuperscript{584} of these propositions from the simplest to the more complex species. To justify this opinion, Boethius' commentary relates the diagram at 19b. 27-29 (cited above) to the last part of the first paragraph of Chapter 10, 19b. 15-18, where Aristotle mentions the expression πρώτη κατάφασις καὶ ἀπόφασις.\textsuperscript{585} The text (19b. 15-18) is the following:

\textit{πρώτη κατάφασις καὶ ἀπόφασις τὸ ἔστιν ἄνθρωπος - οὔκ ἔστιν ἄνθρωπος, ἓτα ἔστιν οὔκ ἄνθρωπος - οὔκ ἔστιν οὐκ ἄνθρωπος, πάλιν ἔστι πᾶς ἄνθρωπος - οὔκ ἔστι πᾶς ἄνθρωπος, ἓτα πᾶς οὐκ ἄνθρωπος - οὔκ ἔστι πᾶς οὐκ ἄνθρωπος τῆς ἐκτὸς δὲ χρώμαν ὁ αὐτὸς λόγος.}

The passage has been translated by J. L. Ackrill thus:

"So a first affirmation and negation are: 'a man is', 'a man is not'; then 'a not-man is', 'a not-man is not'; and again, 'every man is', 'every man is not', 'every not-man is', 'every not-man is not'.\textsuperscript{586} For times other than the present the same account holds."

Boethius' commentary maintains that Aristotle calls propositions with two terms like 'a man is', 'a man is not' 'first affirmation and negation' because they are first in an absolute sense (\textit{simpliciter}), since they are the propositional elements from which propositions of three elements (or where 'is' is predicated additionally as a

\textsuperscript{584} cf. \textit{in Int. 2}, 7-16, pp. 268-269.
\textsuperscript{586} Both this literal assertion of Aristotle that propositions like 'a not-man is' and 'a not-man is not' are a first \textit{affirmation} and \textit{negation} (19b. 16; see also 19b. 10) and the following comments by Boethius seem to contradict Whitaker's opinion (1996), p. 67, that "they [i.e. the indefinite names] fail to form an assertion possessing truth value if the verb 'to be' is added to the word (16b. 1 ff.)." Whitaker seems to take this characteristic from the inflections of name and extend it to the nature of the indefinite name, but an indefinite name can make a proposition true or false if 'is' is added. For inflections of the name and the impossibility of them forming propositions if the verb 'to be' is added, see above 2.1, (ii). Cf. also \textit{in Int. 2}, 19-25, p. 100, and above 1.1, (ii).
third thing), are formed. Therefore, as the commentary points out, these four propositions whose diagram Aristotle builds up at 19b. 27-29, have been reduced from the 6 *simpliciter*: 

\[
\text{hae quattuor propositiones ex senario propositionum numero ad pauciora reductae sunt, si enim simplices et ex duobus terminis fuissent, hoc modo essent: homo est, homo non est, iustus est, iustus non est, non iustus est, non iustus non est, et essent hae sex propositiones.}
\]

As is clear, the 6 propositions *simpliciter* mentioned by the commentary are the following:

(1) A man is  
(2) A man is not  
(3) [He] is just  
(4) [He] is not just  
(5) [He] is not-just  
(6) [He] is not not-just.

As Boethius observes, the propositions with indefinite subject (i.e. 'A not-man is', 'A not-man is not') can also be generated if their corresponding *simpliciter* ones are added to these shown above, but Aristotle will speak about those later. Accordingly, what the commentary strives to clarify by now is a simplified generative process by taking only those propositions *simpliciter* with definite subject. Here, Boethius points out, the 6 initial propositions (which are shown above), have been compressed (*astrictae*) and by conjunction (*coniunctione*) were reduced to the four of 19b. 27-29, by the following mechanical procedure. Let us take from the 6 propositions above the following 4:

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587 i.e. three-term propositions (e.g. 'A man is just'). See above (iii. 1.), (b) *The categorical proposition with three terms.*
588 *in Int. 2, 7-12, p. 268.*
589 The expression "[He]" is required both for the Latin *iustus* (i.e. the masculine singular ending: *he* is *iustus*) and the simple formula *est iustus*, which requires a pronoun in English.
590 *in Int. 2, 12-15, p. 268.* posset quidem adici hoc etiam, ut de infinito nomine subjecto fieren propositiones, ut est non homo est, non homo non est. sed de his posterius dicit.
(1) A man is.     (2) A man is not.

(3) [He] is just. (4) [He] is not just.

Now, these propositions will be reduced to 2, argues the commentary, if 'man' and 'just' are taken in conjunction, namely:

(1') A man is just.     (2') A man is not just.

To understand more clearly what is proposed by the commentary, one should suppose that the reduction always involves a subject (e.g. man) and a predicate (e.g. just). Therefore, what the commentary explains is that from those four mentioned propositions, two will result if 'man' and 'just' are combined, and 'is' and 'is not' are added to the compound 'A man just'. Therefore, in a similar form, if now the term 'man' is taken with the indefinite predicate (i.e. 'not-just'), the other two remaining propositions are logically produced (rationabiliter oriuntur), namely:

(3') A man is not-just.     (4') A man is not not-just.

Consequently, Boethius concludes, from six simpliciter propositions, as is shown above, when 'man' is the subject, and 'just' and 'not-just' the predicates, only four propositions are generated, and two oppositions, as Aristotle correctly determined at 19b. 27-29.591

The procedure used by Boethius' commentary in reducing these 6 simpliciter propositions to the 4 more complex (but simple ones) of 19b. 27-29, as well as the principle on which the commentary relies, is not so much objectionable as dependent on

591 Boethius concludes the exposition by adding a final remark: the position of 'is' and 'is not' in this generation shows more clearly why Aristotle says that "'is' is predicated additionally as a third thing". The reason is that 'is' and 'is not' are simply added to the propositions, and the main role of these additions is to be a sign of their quality. Therefore, Boethius remarks, there is another reason here to think that 'is' is not predicated absolutely, but additionally.
the particular interpretation of coniunctio. However, the idea and results offered by Boethius are plain. As the commentary remarks, (i) the number of the generated propositions (i.e. those in which 'is' is predicated additionally as a third thing) is always fewer than the number of the generative propositions (i.e. those with two terms), if they are generated by coniunctio and (ii) if 'man' is taken as subject and 'just' and 'not-just' as predicate, then only four propositions and two oppositions can be generated, as Aristotle showed in the diagram at 19b. 27-29.

The generation of the categorical propositions, in the self-contained way that Boethius' commentary presents it, is not

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592 The principle stated by the commentary has two formulae: (a) res simplices iunctae naturaliter redeunt pauciores (in Int. 2, 18, p. 268), i.e. "things which are simple become, by nature, fewer in number when they are joined together"; and also (which is equivalent) (b) coniunctio enim ipsa numerum minuit, i.e. "the conjunction itself reduces the number of things". As such the principle seems to be false, because the result of a combination or conjunction is never fewer than the number of things to be combined. For the same reason, the result given by the commentary seems to be wrong, given that there are 15 combinations of 6 things. However, since this is quite obvious, Boethius perhaps does not fail in understanding this, but in explaining clearly that the reduction exercised depends on a special interpretation of coniunctio. This special interpretation (given above, cf. also in Int. 2, 23-10, pp. 268-9) is that 'man' must be taken always as subject, and 'just' and 'not-just' as predicates; similarly 'is' and 'is not' should be taken as additional predicates. If these elements are combined in this way, there will result the 4 propositions mentioned by Aristotle at 19b. 27-29. (A similar procedure will generate the 4 propositions with indefinite subject (i.e. 'not-man') presented by Aristotle later at 19b. 37-39).

593 in Int. 2, 11-16, p. 269. qui vero dixerunt numerosiores fieri propositiones ex his, in quibus est adiacens praedicatur, quam ex his, quae duobus terminis constarent, illos non intellixisse rerum naturam manifestum est, quae ita fert, ut semper ex pluribus simplicibus rariiores redeant res paucioresque coniunctae. ("It is manifest that those [authors] who said that the number of propositions in which 'is' is predicated additionally as a third thing becomes greater than that of those which have two elements, have not understood the nature of this matter, which shows that things that are fewer in number (rariores) always proceed from things that are many and simple, and the fewer things are those which are composed.") This affirmation seems to be polemical. However, its sense depends on Boethius' view of generation by conjunction (coniunctio). The number of three-term propositions is certainly greater that the number of those with two terms, and from here the implicit difficulty that Boethius' commentary shows (qui vero dixerunt) could arise. However, here Boethius refers to the 6 propositions which have been generated, according to his explanation, from the 4 with two terms. Therefore, what Boethius concludes is our (i) above, which shows that by coniunctio 6 simpliciter propositions become 4 composed ones.

594 cf. in Int. 2, 5-10, p. 269.
present in Ammonius' commentary. In the Alexandrian commentator the order in categorical propositions is stated by means of different criteria. The idea of a generation of the categorical propositions, in the way presented by Boethius' commentary, is a far-reaching idea. Not all the consequences are drawn by the commentary. It is worth noting that this idea contains some significant ideas in logic: (i) that a complex proposition can be divided into a simpler one. (Let us note that the kind reduced here is a simple one, but the non-categorical proposition (i.e. the hypothetical) is dependent on the connective, as Boethius has remarked, so that every hypothetical proposition is implicitly defined as one which consists of two categorical propositions). Equally, (ii) that there exists a proposition which is indivisible (or atomic), which is called here simpliciter. And (iii) that there are mechanical procedures in logical reasoning. Accordingly, it is reasonable to think that, in general terms, the generation presented contains the seed of the idea that all the possible species of categorical propositions can be found out by means of a rational procedure. The expression "[given certain propositions] rationabiliter oriuntur (aliae propositiones)", is a remarkable ancient testimony of this important idea in Modern Logic.

(iii. 3) The arithmetical calculus of the number of categorical propositions

When Boethius says that the intention of Aristotle in Chapter 10 is to deal with the number of the categorical propositions, he also implies that Aristotle seeks out a number in a strict arithmetical sense. The proof of this is that he takes over

595 Cf. Ammonius, in Int. p. 78, 26-p. 79, 9. The two-term proposition is called by Ammonius the 'simplest', and 'the most primitive' proposition, because it consists of the minimal terms forming a proposition, i.e. name and verb. In this sense, the two-term proposition is prior to the three-term ones. Ammonius also explains that those consisting of a definite subject are prior to those with indefinite subject. Equally, the affirmation of two terms is prior to the corresponding negation, and the same occurs in the case of three-term propositions.

596cf. in Int. 2, 105, p. 269.
the algorithm and calculus made by Syrianus, where an arithmetical method is developed and a numerical result established: \[597\]

His igitur ab Aristotele decursis nos quoque a Syriano, cui Philoxeno esse cognomen supra rettulimus, propositionum omnium numerum, de quibus in hac libri disputatione perpendit, nimis ad rem pertinentem atque utilem transferamus.

Perhaps, regarding the earlier points, the presence of an arithmetical calculation in Boethius' commentary can seem justified, for the calculus makes sense if the classification and the generation have preceded. So that the determination of an arithmetical result could be conceived as an obvious consequence of the classification and generation of all the possible categorical propositions: if all the possible species can be determined, then the calculus would come to confirm the result of these procedures. This seems to be, besides, the sense of Boethius' words when (in the passage above) he decides to transfer Syrianus' calculus: the point is entirely appropriate and also helpful (pertinentem atque utilem).

But even though Boethius' commentary has transmitted to Western thought the justifiable idea that Aristotle in Chapter 10 deals with the number of the species of categorical propositions (which implies that Aristotle is the first philosopher in calling attention to the importance of this point in Logic), the idea in itself has been relatively neglected. \[598\] The ancient commentators of


\[598\] The most striking fact is that the medieval commentators of Aristotle did not take special note of this interpretation and they rather disregard the point. Equally, early modern logicians and philosophers who intended to found the Combinatorial doctrine on Classical thought and literature seem to be unaware of Boethius' and Ammonius' comments on this point: surprisingly though, for they took from Aristotle another similar example for their purpose: the number of the moods of categorical syllogism. But the point is also unknown to our modern commentators: Ackrill in commenting on Chapter 10 states that "The first part of the chapter is mainly concerned to distinguish different pairs of contradictory opposites according to whether there is or not a copula (an 'is' which is 'predicated additionally as a third thing', 19b.19) and whether terms are or are not negative." (Cf. Ackrill (1963), p. 142). But this purpose should be taken as a subordinate one, if the perspective of the ancient commentators of
Aristotle knew, however, that *PeriH.* contained an implicit calculus of the number of categorical propositions; in fact, not only Syrianus, but also (as far as we know) Ammonius⁵⁹⁹ and Stephanus⁶⁰⁰ explained in detail this point. Syrianus' calculus, which is adopted by Boethius' commentary, is the most ancient extant document containing an arithmetical attempt to determine the number of all the categorical propositions. As such, it is a valuable piece of information not only for the history of Logic, but also a testimony for the history of Arithmetic. The historical importance of this text makes its complete translation imperative:⁶⁰¹

"Consequently, after these things that have been presented by Aristotle, let us transfer, from Syrianus, whose nickname is 'Philoxenus', as we referred to above, the number of all the propositions that are examined in this discussion⁶⁰² of the book [i.e. *PeriH.*],⁶⁰³ a subject-matter entirely

⁵⁹⁹ See next paragraph (iii. 3), (a) Ammonius' calculus.
⁶⁰⁰ See here (iii. 3), (a).
⁶⁰² The expression *in hac libri disputatione* seems to include only the species of proposition presented up to here, and to exclude the following discussion of *PeriH.*, and in particular the modal propositions, which are presented in Book Five. However, cf. the expression at the end of this passage (before the list of propositions) *de quibus hoc libro tractat*, which refers to the 144 species which have been calculated with these three qualities. See also our following discussion of whether or not Boethius thought all the propositions (including the modal ones) were included in this calculus.
⁶⁰³ i.e. *propositionum omnium numerum, de quibus in hac libri disputatione perpendit (...).* It is more difficult to accept that the book referred to here is only Book Four (i.e. our Chapter 10), because later Syrianus inserts the *qualities of propositions* as another classificatory criterion but these qualities have been treated in Book Three (which
appropriate and also useful. And, firstly, it must be considered how many are the unquantified among the categorical propositions. In fact, the number of the unquantified will be as great as that of the universal propositions, the particular ones, and those of individuals [i.e. singular propositions]; and, firstly, let us examine affirmations thus: there are four modes (modi) of propositions: for they are either unquantified, or universal, or particular, or singular [also called] of individuals. Therefore, if it is considered how many are the unquantified affirmations, I infer the number of the affirmations, if I multiply these by four (quaternarium numerum). And if, I make the double of this (duplico), in this way, the number of the negations will be also inferred. Now, 'is' is predicated either alone itself, or additionally as a third, together with another [term]. And, if it is predicated alone, it must be predicated of either a simple and definite name, or of an indefinite one. There are two affirmations from these: 'a man is', 'a not-man is'. Now, when 'is' is predicated additionally as a third thing, there will be four propositions: either 'is' comes together with an indefinite subject, as in 'a not-man is just', or 'is' with an indefinite predicate, as in 'a man is not-just', or with both definite as 'a man is just', or with both indefinite as in 'a not-man is not-just'. Now, "more than these propositions", as he [Aristotle] himself said [20a.1], "cannot be found". Therefore, since there are six affirmations, in two of which 'is' is predicated [alone], and in four of which 'is' is additionally predicated, if they are multiplied by four, they will be 24. And if these are multiplied by 2, the amount will increase to 48. Therefore, this is the number of affirmations and negations, which is generated, whether 'is' comes as the predicate, or is predicated additionally as a third thing (adiacenti). And, given that, as to signification of proposition there are another three qualities of propositions, namely, the necessary [signification], the contingent and that which signifies mere attribution (inessa tantum signifanties), according to which all these propositions are produced (proferuntur), if these 48 propositions are multiplied by 3, i.e. by the

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604 qua in re quoniam (...), i.e. as to the signification of the terms which are predicated. This criterion is given by Syrianus, (Boethius does not speak of 'qualitates propositionum') but they are accepted by Boethius in the introduction to our Chapter 9, in both commentaries (cf. in Int. 20-8, pp. 105-6). See our next discussion.

605 I.e. the simple attribution of a predicate to a subject; also called 'assertoric', or 'hyparctic proposition' (from ὑπαρκτίς).
number of these qualities, the number of all the predicative propositions, about which this book treats, will increase to 144. However, now, apart from these three qualities, these which would be 48 together with their negations (which, if they were multiplied by these three qualities of propositions, i.e. necessary, contingent, and simply attributive, will produce 144), we have set out below:

### IS ALONE

<table>
<thead>
<tr>
<th>Statement</th>
<th>Negation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A man is</td>
<td>A man is not</td>
</tr>
<tr>
<td>A not-man is</td>
<td>A not-man is not</td>
</tr>
<tr>
<td>Every man is</td>
<td>Every man is not</td>
</tr>
<tr>
<td>Every not-man is</td>
<td>Every not-man is not</td>
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<tr>
<td>Some man is</td>
<td>Some man is not</td>
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<tr>
<td>Some not-man is</td>
<td>Some not-man is not</td>
</tr>
<tr>
<td>Socrates is</td>
<td>Socrates is not</td>
</tr>
<tr>
<td>Not-Socrates is</td>
<td>Not-Socrates is not</td>
</tr>
</tbody>
</table>

### 'IS' ADDITIONALLY PREDICATED

<table>
<thead>
<tr>
<th>Statement</th>
<th>Negation</th>
</tr>
</thead>
<tbody>
<tr>
<td>A man is just</td>
<td>A man is not just</td>
</tr>
<tr>
<td>Every man is just</td>
<td>Every man is not just</td>
</tr>
<tr>
<td>Some man is just</td>
<td>Some man is not just</td>
</tr>
<tr>
<td>Socrates is just</td>
<td>Socrates is not just</td>
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<td>A not-man is just</td>
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<td>Some not-man is just</td>
<td>Some not-man is not just</td>
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<tr>
<td>Not-Socrates is just</td>
<td>Not-Socrates is not just</td>
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<tr>
<td>A man is not-just</td>
<td>A man is not-just</td>
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<td>Socrates is not-just</td>
<td>Socrates is not-just</td>
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<tr>
<td>A not-man is not-just</td>
<td>A not-man is not-just</td>
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<tr>
<td>Every not-man is not-just</td>
<td>Every not-man is not-just</td>
</tr>
</tbody>
</table>

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606 cf. Boethius' expression above: *propositionum omnium numerum, de quibus in hac libri disputatione perpendit.*

607 It is worth noting that neither Syrianus nor Boethius mention the criterion of non-present verbal tenses that Aristotle alludes to at 19b. 18, and on which Boethius comments.
Therefore, we have also set out these propositions expressly (*nominatim*), which are inferred by Syrianus' calculus, since it will be easier to have confidence in the number (*facilior fides habebitur numero*), if they are displayed by means of examples, and equally too because he who was ill-informed about these propositions (*male doctus*) discussed them in a very incorrect manner, and distorted the complete order, by putting affirmations instead of negations, and negations instead of affirmations; therefore, that his exposition (*oratio illius*) might not distract anyone from the truth of the correct reasoning, we set out this list as an aid, the better to keep it in the memory (*ad tenacioris memoriae subsidium*). \(^{609}\)

Syrianus' algorithm and calculus of the number of categorical propositions has also a undeniable value by itself and its accuracy is remarkable. It is not an absurd count, as it has been characterized,\(^{610}\) but a complete expression of what the ancient commentators believed was one of the intentions of Aristotle in *PeriH*. Firstly, Syrianus divides types of propositions — according to quantity — into 4: (1) unquantified (or indetermined), (2) universal, (3) particular, (4) singular. Now, since there are — according to quality — affirmations and negations, it is logical to think of multiplying this number by 2, so we have 8, which is the number by which we must multiply the number of all the propositions that can be found among the unquantified, i.e. among one of the types that were distinguished above (another type could also be chosen). There are 6 types of unquantified

\(^{608}\) *simul etiam*. According to Zimmermann (1991), p. xc, n. 3, Boethius must be taken as reverting to translating or summarizing Syrianus from this phrase on. See our next discussion.

\(^{609}\) In *Int. 2*, 24, p. 324. In the expression *ad tenacioris memoriae subsidium*, Meiser has emended the corrupt word *elatioris* by *tenacioris*.

\(^{610}\) H. Chadwick (1981), p. 154 has shown correctly that the algorithm and the whole calculation of this number is one of the differences between the commentaries of Ammonius and Boethius, since the result of this count is different in both commentaries. However, he has not emphasized enough the importance of this calculus either in Boethius' commentary or in the other ancient commentaries of *PeriH.*, and he seems rather to be sceptical about the importance and value of this part of Boethius' commentary. Thus, he has presented this calculus as an absurd count. (*Ibid.*, p. 154).
propositions —according to definite or indefinite aspect—: (a) if 'is'
is predicated alone: (1) with indefinite subject, (2) with definite
subject. (b) if 'is' is additionally predicated as a third thing: (3)
with indefinite subject, (4) indefinite predicate, (5) indefinite
subject and predicate, (6) definite subject and predicate. Therefore,
the total number is calculated by multiplying
4*2*6=48, which is the number of all the categorical propositions.
This number will increase to 144, Syrianus points out, if the three
qualities of propositions are considered, for every categorical
proposition can be (7) necessary, (8) contingent, or (9) merely
attributive.

Obviously not all of the text quoted here belongs to
Syrianus. What is properly transferred by Boethius is Syrianus'
algorithm and the final list of propositions. After that, in the
last passage quoted here, let us call it the epilogue, Boethius
apparently draws his own conclusion. However, Zimmermann
reasonably thinks that "He [i.e. Boethius] must be taken as
reverting to translating or summarizing Syrianus from simul
etiam on [i.e. from 'and equally too because he who was ill-
informed (...) to the end]." Zimmermann (ibid.) thinks that this
conclusion follows from the fact that Boethius translates the
Porphyrian copy of Aristotle's Organon just as Shiel's thesis states
it, and from the fact that "Boethius had no source or partner in
discussion outside the Greek tradition up to Syrianus" (ibid.). The
point seems to be also plausible (in our opinion) because of the
rather strange reference to one who was ill-informed (male
doctus) and the historical imperfect tenses dependent on this
expression: concludebat and confundebat. For Boethius has not
referred to anyone who can have misinterpreted this calculus, so
that he cannot have reasons for preventing an historical error in
explaining this matter. So, rather than his own conclusion,
Boethius could have taken this epilogue from the same text which
contained the calculus of Syrianus, this being either the marginal

\[611\] i.e. from "And, firstly, it must be considered (...)" to the last proposition
of the list.

\[612\] i.e. from "Therefore, we have also set out (...)" to the last phrase ("the
better to keep it in the memory.").

notes of the Porphyrian copy that he normally translates,\footnote{cf. J. Shiel (1990), pp. 349-372.} or an independent text by Syrianus (if one does not follow Shiel's hypothesis).

Now, Boethius thinks that all the categorical propositions have been counted by Syrianus' calculus. It must be noted, however, that while Syrianus' count of 48 species follows a defined and manifest algorithm, the introduction of a further criterion of 3 qualities of propositions (qualitates propositionum) does not follow any reasoning and the fact that all the propositions can be expressed according to necessity, contingency and mere attribution, is simply granted.\footnote{In fact, Syrianus says: qua in re quoniam tres sunt aliae qualitates propositionum, quae sunt necessariae, contingentes et inesse significantes, secundum quas qualitates istae omnes propositiones proferuntur. (in Int. 2, 28-4, pp. 322-323).}

Boethius does not clarify if he is accepting the modal propositions to be included in this further criterion or if he is referring rather to what Ammonius later will call "matter of the propositions" (ctica τῶν πρωτάσεων).\footnote{cf. Ammonius in Int. p. 88, 4-29.} As Zimmermann observes\footnote{cf. Zimmermann (1991), p. lxxxix, n. 3.}

"The words qualitates [ποιότητες] makes it difficult to decide whether Syrianus was thinking of the material modalities ('matters') called relations [γένεσις] by Ammonius (cf. Stephanus in Int. p. 25, 20-7) or of the modal expressions usually called modes [τρόπους-modi]." The expression used by Boethius to transfer Syrianus' calculus\footnote{i.e. propositionum omnium numerum, de quibus in hac libri disputatione perpendit. (in Int. 2, 22-29, p. 321). See our translation above.} seems to include only the species of propositions presented up to Book Four (sc. Chapter 10) and to exclude the following discussion of PeriH. where the modal propositions are presented (sc. Chapters 12 and 13). These reasons seem to indicate that the propositions calculated by Syrianus and Boethius are only those presented up to Chapter 10, but the modal ones are not counted.

However, Boethius thinks that all the categorical propositions have been counted, and this becomes clear from the following facts: (1) The qualitates propositionum do not...
216

correspond to the so-called 'matter of the propositions'. In his commentary, in both introductory notes to Chapter 9, Boethius presents —though without using the formula qualitates propositionum— these three 'qualities' (contingency, necessity and inesse) referred to by Syrianus. So Boethius says:

Propositionum aliae sunt tantum inesse significantes, ut si quis Socrates vivo dixisset Socrates calvus est aliusque negaret Socrates calvus non est. illa enim inesse posuit Socrati calvitium, illa calvitium, illa calvitium a Socrate disiunxit. aliae vero sunt necessariae, ut si quis dicit: necesse est sollem annis amnibus in arietem rursus redire. rem namque necessariam et ex necessitate evenientem praedicans totam fecit necessariam propositionem. aliae autem sunt contingentes, quae cum non sint, eas tamen in futurum evenire possibile est, ut si quis dicit hodie Alexander pransurus est, hodie Alexander pransurus non est. etenim cum ista dicuntur, quoniam illi adhuc prandere non inest, inesse tamen contingit et potest fieri ut hodie prandeat, idcirco eas dicimus contingentes.

The second commentary assumes these three kinds of proposition and develops corresponding subdivisions. But: Does this classification include modal propositions? It does. This positive answer is clear from the fact that (3) Boethius' second

619 In Boethius' report of Alexander's and Porphyry's interpretations of 19b. 22-24, the propositions are said to differ one from another as to the kind of attribution that subject and predicate verify: the predicate is attributed to the subject either by necessity (e.g. 'rational'/'man'), or by impossibility (= necessary separation, e.g. 'stone'/'man'), or by simple attribution (= inesse, e.g. 'just'/'man'). The doctrine is identical in Alexander and Porphyry, but it is not the same as what here is called qualitates propositionum. Let us note also that the mentioned kinds of attribution are a variable used by Boethius in his comments on the logical relations of the square of opposition (PeriH. 7: in Int. 2, 3-16, pp. 148-155). Cf. Part II, A., (ii.1), (d.1) Boethius' report of Alexander in the First Commentary; also ibid., (ii.2), (c) The diagonal relations.

621 The second commentary (in Int. 2, 24-20, pp. 186-189) contains a more accurate examination of the three qualities. Here it is also mentioned: (iv) Inpossibilis (without example); it also includes a sub-division for Necessariae into (ii. 1) Sempiternae, (e.g. 'deus inmortalis est'); and (ii. 2) Necessariae by (strict) signification of terms (e.g. 'ignis calidus est'; 'homo mortalis est'. It also subdivides Contingentes into (iii. 1) Frequent ones (e.g. 'homo in senectute canescere'); and (iii. 2) Non-frequent ones (e.g. 'me hodie esse lavandum').
commentary develops a further explanation on modality of propositions without entailing that he is introducing new species of categorical propositions: rather, he refers to these three qualities as he presented them in his introductory notes on Chapter 9, and in doing so he refers to that comment as a previous discussion on this matter:622

The expression *et superiora quacumque de contingentibus dicta sunt magis liquebunt* shows that Boethius' account of modality is thought to complete his introductory notes to Chapter 9 (*superiora*), where he presents contingent, necessary and *inesse* propositions: therefore, in his commentary there is only one account of modality and this recognises as modalities the three *qualititates propositionum* that multiply the number of the categorical propositions to the amount of 144 species.

This account has two remarkable characteristics: first, to assume *inesse* propositions as one of the modalities distinguished by Aristotle and, second, to consider, in a broad sense, contingency and possibility with identical meaning:623

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622 *in Int. 2, 8-17, p. 382.*
623 *in Int. 2, 17-21, p. 382-383.*
Boethius' idea of identifying 'contingency' and 'possibility' becomes the usual view in earlier medieval logic, and in assuming this broad-sense synonymy Boethius followed Porphyry:

\[ \text{cum igitur contingens esse et possibile esse idem significant, multa in} \]

\[ \text{his diversitas est secundum Porphyrium quae sunt necessaria et} \]

\[ \text{inesses tantum significantia et contingentia vel possibilitia.} \]

Therefore, Porphyry seems to be (if he was correctly interpreted) the source of the idea that inesse propositions are modal and that all the modal propositions can be presented as three: contingents, necessaries and inesse. According to this textual evidence, Boethius could have thought that all the categorical propositions had been counted in Syrianus' calculus, for he was following Porphyry's reduction, and here the modal propositions and the qualities are identical.

If Porphyry is the source of this doctrine, it is clear that not only Boethius adopted it as the correct view, but also Syrianus, for the qualities of propositions that the latter introduces in his algorithm are those that Porphyry proposed. Porphyry's reduction probably followed Aristotle's words of Prior Analytics, especially 25a. 1-5, for in that text Aristotle recognised (if not simplified) only three modes, which are those that Porphyry proposes. Aristotle says:

"Every proposition states that something either belongs or must belong or may belong; of these some are affirmative, others negative, in respect of each of the three modes; again some affirmative and negative propositions are universal, others particular, others indefinite."

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624 As S. Knuuttila shows this identification was "The usual view in early medieval logic, and it can still be found in the squares of opposition for modalities presented by William of Sherwood and Peter of Spain in the middle of the thirteenth century." (S. Knuuttila Modal Logic, in The Cambridge History of Later Medieval Philosophy, Cambridge 1982, p. 342; more references there).

625 in Int. 2, 4-7, p. 383.
The assumption that Porphyry in forming his account of modal propositions followed Aristotle's reduction of Prior Analytics becomes more likely from the allusion to the Analytics (Analytici) in the passage of Boethius (quoted above): to understand, remarks Boethius there, what is 'possible', necessary' and 'inesse' makes clear the things stated (in Chapter 9) about contingent things, and also the sense of the Analytics. Furthermore, this can explain why Boethius recognises a difference between 'possible' and 'contingent' but they can be taken as synonymous in meaning: because this is the general position of Aristotle in Prior Analytics.626

Therefore, Syrianus could be the target of Ammonius' criticism against those who have included inesse propositions as a kind of modality. The criticism is addressed to Porphyry and to his followers, though Ammonius does not identify any in particular.627 Ammonius indeed accepts the identification of 'possible' and 'contingent',628 but rejects the inclusion of 'inesse' as a modality. In fact, Ammonius states first that:629

"Only four modes are taken into account by Aristotle for his theory of modified propositions: 'necessary', 'possible', 'contingent', and also 'impossible'"

But later he asserts:630

"But is there yet another, cognate, mode —taken into account by Aristotle for his theory of propositions elsewhere and neglected here—

626 As W. and M. Kneale observe "In the Prior Analytics Aristotle uses predominantly ἐνδοξὸς κέννον and its related verbal forms, treating it as synonymous with ἐσοφαίτον and allowing it to have two senses, a stricter in which it means 'neither impossible nor necessary' and a looser in which it means simply 'not impossible'". (The Development of Logic, Oxford 1978, p. 84).

627 An explanation of this problem is also in Philoponus' commentary on An. Pr. pp. 44-45. However, Philoponus does not identify any author either.

628 As Zimmermann observes (1991), p. xc, n. 2. "Ammonius explains a little later that out of Aristotle's four modes only three need to be taken into account "because the possible either is the same as the contingent or extends to the necessary, but in no case falls outside [the range covered by] the [remaining] three modes."


or is there not? Most of his commentators hold that there is one, and that it is the hyparctic mode mentioned in the Analytics [25a. 1 f., 29b. 29 ff.] before the necessary and the contingent. It seems to me that they have completely missed the truth as well as Aristotle's meaning; for on no account is hyparctic [τὸ ὑπάρχων] a mode."

Zimmermann has observed that the vagueness of the expression used by Boethius in his report of Syrianus' calculus, namely, *qualitdates propositionum* makes difficult to decide whether Syrianus was thinking of the material modalities, called by Ammonius later 'matters of the proposition', or of the modal propositions. Despite this difficulty, he has confided correctly that here 'qualitdates propositionum' refers to the modal propositions, for the word 'significantes', in the passage where Boethius presents these 'qualities' suggested this. He has been right in his conjecture, and now we can contribute a further reason to think so: Syrianus, like Boethius, included the modal propositions in these three 'qualities' by following Porphyry.

Therefore, Ammonius, if not Iamblichus or Proclus, innovated in considering the inesse or hyparctic propositions as a non-modal proposition. But not only here has Ammonius' commentary innovated, but also in going beyond the doctrine of the three qualities of propositions in itself. In fact, Ammonius introduces a distinction between the matter and mode of the proposition, criteria that were mixed up (though not necessarily in a confusing way) by Porphyry and his followers. Ammonius indeed clearly distinguished between ἰὴ τῆς προτάσεως and τρόπος τῆς προτάσεως as follows:

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631 technical term used by Zimmermann for inesse.
"It must be said that we consider the matters [of the proposition] in the very nature of the facts stated in the proposition (because it is necessary that what is predicated of the subject either always belongs to it, or never, or sometimes belongs and sometimes does not; reason why we call these 'matters': for without these the principle of understanding of propositions (μηδὲ τὴν ἀρχὴν ὑποστήναι τῶν προτάσεως δυναμένων) does not subsist either. On the other hand, we say that the modes are put in the very expression that we make and that they are put from outside to the terms that complete the proposition and maintain what is predicated."

Ammonius, besides, has characterized these matters earlier in a way that suggest that the followers of Porphyry (especially here Boethius and Syrianus) maintained a less developed or technical account:

"I am talking about the relation according to which the predicate term either always holds of the subject term, as when we say the sun moves or man is an animal, or never holds [of it], as when we say 'The sun stands still' or 'Man is winged', or sometimes holds and sometimes does not hold, as when we say Socrates walks or reads. Those who care about the technical treatment of these things call these relations the matters (hulai) of the propositions, and they say that one of them is necessary (anagkaia), another impossible (adunatos), and the third contingent (endekekomenë). The reason for these names is obvious, but they decided to call these relations 'matters' in the first place because they are seen together with the things which underlie (hupokeimena) the propositions and are not obtained from our thinking or predicating, but from the very nature of the things."

Now, the question of whether Syrianus was the first in attempting this calculus or his attempt is derived from earlier efforts cannot be answered absolutely. However, there is good reason to think that a certain sketch of this calculus was already present in Alexander's commentary on PeriH., for when he

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comments on An. Pr. 21a. 1-5,\textsuperscript{636} he embarks on a calculation of the number of the categorical propositions which construe the (categorical) syllogisms that Aristotle is going to present:\textsuperscript{637}

An. Pr. 25a. 1-3. "Now every proposition is either of holding or of holding by necessity or of holding contingently. Of these some are affirmative and others are negative, in respect of each adjunct."

Having mentioned three kinds of proposition —necessary, actual, and contingent— he [sc. Aristotle] says that in respect of each of these kinds some propositions are affirmative and others negative. For there are necessary affirmatives and necessary negatives, as we said, and it is the same with the actual and the contingent. Hence there are six kinds of proposition.

An. Pr. 25a. 3-5. "Again, of affirmatives and negatives, some are universal, some particular, some indeterminate."

With these differences added to the propositions mentioned before, there are eighteen kinds of predicative propositions in all. Three necessary affirmatives, universal, particular and indeterminate; the three negatives which are opposite to these; similarly three actual affirmatives and three actual negatives; and the same for the contingent. Hence there will be in all three times six propositions differing from one another in form. From them predicative syllogisms are construed.


\textsuperscript{637} Alexander of Aphrodisias in An. Pr. p. 26, 25-p. 27, 13. (25a. 1-3), 'Επει δὲ πάσα πρότασις ἐστὶν ἢ τοῦ ὑπάρχειν ἢ τοῦ ἕναν ὑπάρχειν ἢ τοῦ ἐνδεχόμενα ὑπάρχειν. Τούτων δὲ αἱ μὲν καταφατικαὶ αἱ δὲ ἀποφατικαὶ καθ’ ἐκάστην πρόφησιν. — Τρεῖς διαφορὰς προτάσεως ἔχουσιν, ἀναγκαίαν, ὑπάρχουσαν, ἐνδεχομένην, καθ’ ἐκάστην τούτων διαφορὰν τὰς μὲν καταφατικὰς φησὶ γίνεσθαι τοὺς προτάσεις τὰς δὲ ἀποφατικὰς καὶ γὰρ ἀναγκαία καταφατικὴ καὶ ἀναγκαία ἀποφατικὴ ἐστὶν, ὡς εἰρήκομεν, ὑμίν καὶ ὑπάρχουσα καὶ ἐνδεχομένη, ὡσ’ ἐξ διαφορὰς προτάσεων αὐτάς. (...) (25a. 4-5) Πάλιν δὲ τῶν καταφατικῶν καὶ ἀποφατικῶν αἱ μὲν καθόλου αἱ δὲ ἐν μέρει αἱ δὲ ὁδιόρωσι. — Τούτων τὰς ποιημένας προτάσεις προστεθεῖσαν τῶν διαφορῶν γίνονται αἱ πάσαι προτάσεις κατηγορικά ὄντως καθόλου τρεῖς μὲν καταφατικά ἀναγκαία καθόλου, ἐπὶ μέρους, ὁδιόρωσι, τρεῖς δὲ αἱ ταῦταις ὁμοσώσι τοποθετοῦσιν αποφατικά, ὑμίν δὲ καὶ ὑπάρχουσα τρεῖς μὲν καταφατικαὶ τρεῖς δὲ ἀποφατικαὶ, καὶ ἐνδεχόμενα τῶν αὐτῶν τρόπους. ὡστε τρεῖς ἐξ ἑσύνται αἱ πάσαι αἱ κατ’ εἴδους ἀλλήλων διαφέρουσαι, εἰ δὲ τα κατηγορικά σύλλογοι συμπίπτεται.
As the lemmata show, the point is clearly prompted by Aristotle, who in this passage sketched this calculation by a division of categorical propositions which takes the criteria: (i) δακτυλικά προτάσεων (which correspond to qualitates propositionum in Boethius' report of Syrianus' calculus), i.e. necessary, inesse and contingent. (ii) Quality (i.e. affirmative or negative); and (iii) Quantity (i.e. universal, particular and unquantified).\textsuperscript{638} The result is 18, the number of all the categorical propositions from which the syllogisms are constructed.\textsuperscript{639} The point does not seem an exception in Alexander and it probably was not uncommon for his time: a notice by Boethius suggests that the idea that Aristotle looks for the number of categorical propositions is an interpretation of PeriH. 10 as ancient as Herminus' and Alexander's scholarly activity.\textsuperscript{640} Besides, certain other notices in Alexander and Galen show that they somehow already are familiar with problems related to the number of all the elements of a given set\textsuperscript{641} and, more important, that these problems arise in connection with texts of Aristotle, for Aristotle in other contexts than this also intends to classify and count the number of species of a genus. So, for example, at Politics 1290b. 21 ff.; De Gen. 330a. ff.; Met. Δ, 1014 a. 5 ff.; Parts of Animals 643a. 16-24.\textsuperscript{642}

\textsuperscript{638} The passage is clearly a simplification that Aristotle undertook in respect of his overall aim in PeriH.. Philoponus (in An. Pr. pp. 44-45), by following Ammonius (in Int. p. 216, 18-29), takes the point as a simplification undertaken by Aristotle in view of the formation of the categorical syllogism. Porphyry, as we have seen above, takes this passage to interpret modality in his exposition of PeriH..\textsuperscript{639} Cf. also Philoponus in An. Pr. p. 68, 10-32; and also p. 18, 11 ff. and p. 12, 20 ff..\textsuperscript{640} Cf. in Int. 2, 22-26, p. 294; 16-20, p. 292. Also Part II, (i) General considerations.

\textsuperscript{641} Alexander of Aphrodisias (in An. Pr.) strives to determine the number of moods of the categorical syllogisms in each figure. (For the First Figure, in which the point is clearer, cf. Alexander of Aphrodisias On Aristotle's Prior Analytics 1. 1-7; J. Barnes et al. (1991), pp. 113-114). We know besides that Galen at Institutio Logica, xvii, p. 51 refers to his (now lost) book On the Number of the Syllogisms, in which the calculus of this number would be (presumably) clarified. (Galen's Institutio Logica, J.S. Kieffer, Baltimore, 1964). (Greek text at Galeni Institutio Logica, C. Kalbfleisch, Leipzig 1896).

\textsuperscript{642} In the passage of Politics aforementioned, the point is to determine all the possible forms of government starting from the principle already admitted that every state consists of many parts. In the passage of De Gen., Aristotle calculates the number of all the possible pairs contained in the set of the four basic elements. He asserts correctly the arithmetical result of six combinations, because he disregards the order and the repetition of the
This fact makes quite credible the hypothesis that Alexander advanced a similar sketch in his commentary on PeriH. and that, accordingly, he had also maintained the idea that Aristotle's intention at Chapter 10 is to determine the number of the categorical propositions. Equally, the above makes also plausible that in Alexander's commentary already the theoretical foundation that Boethius' commentary advances for this calculus was present. Boethius says that Alexander advanced "together with many others" a substantial part of the thesis that there are no indefinite verbs in categorical propositions, which Boethius' commentary relates directly—as we have seen—to the general classification of these propositions, and this could be interpreted, in accordance with the hypothesis that we follow here, as a fact confirming that Alexander of Aphrodisias is a source of the exegesis maintained by Boethius. On this assumption, therefore, Porphyry's commentary is merely transmitting or, at most, reworking Alexander's previous statement. This explains why


643 In Int. II, 8-16, p. 317. et hoc quidem Alexander Aphrodisius arbitratur ceterique complures. idcirco enim aiant non posse fieri ex infinito verbo adfirmationem, quoniam sicut verbum est infinitum verbum mox totam perficiet negationem, sic etiam verba quae in sese conpectuntur verbum est non facient infinitam adfirmationem, sed potius negationem. The expression "and this is considered by Alexander of Aphrodisias and many other [authors]" could refer perfectly well to commentators before Alexander. They could have developed some or most of the reasons leading to prove that there are not indefinite verbs in affirmations. See also later Part I, 5., (c) Alexander's testimony.
Boethius (or his copy) takes over Syrianus' calculus: because the calculus—in the presentation given by Syrianus—was only present in Porphyry's commentary in a sketched form. Alexander could have pointed out a rough algorithm for this calculus, in the same manner as he does in commenting on An. Pr. 25a. 1-5, or as Ammonius points out the way of constructing the syntactical patterns for modal propositions:²⁴⁴ they can be inferred from his words but the list of propositions must be produced. Boethius (or his copy) could have inserted Syrianus' calculus because it was in agreement with Alexander's and Porphyry's commentary on PeriH. and provided the list of the resultant propositions.

Now, whether Syrianus followed or reacted against a pre-existent model by lamblichus, and whether lamblichus' calculus can be the source of a more complex calculus by Ammonius or Ammonius himself is the only innovator, is something more difficult to answer. Here the fact is that (as we will show later) Ammonius does not follow Syrianus' calculus to establish his own result. Ammonius, rather, introduces the criterion of tense as a proper division of the predicate of a proposition and distinguishes between matter and modality, and even establishes the proper syntactical patterns (τα παρασφήματα) of the modal propositions. It is worth noting that Ammonius does not give evidence of being against a previous calculus when he presents his interpretation and calculus, and this fact suggests that he is following a previously admitted tendency on this matter. Here, too, therefore, he could be remembering (ἀπομνημονεύω) Proclus' oral teaching, since he recognizes that this is the proper characteristic of his comments on PeriH.²⁴⁵ Proclus, accordingly, could have considered the point of a calculus and have advanced (or indicated how to get) the total of the propositions considered by Aristotle in PeriH.

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²⁴⁴ cf. Ammonius in Int. p. 218, 25-p. 219, 7. And see next point (a) Ammonius' calculus.
²⁴⁵ Cf. Amm. in Int. p. 1, 6-11. "Now we have recorded the interpretation of our divine teacher Proclus, successor to the chair of Plato and a man who attained the limits of human capacity both in the ability to interpret the opinions of the ancients and in the scientific judgement of the nature of reality. If, having done that, we too are able to add anything to the clarification of the book, we owe great thanks to the god of eloquence." (D. Blank's translation. Ammonius On Aristotle On Interpretation 1-8, in Ancient Commentators on Aristotle, R. Sorabji (Ed.), London 1996).
The assumption implies that Proclus did not follow Syrianus, his teacher, and it makes plausible that he followed another calculus. This other calculus could have been advanced by Lamblichus. A brief and isolated notice by Simplicius makes plausible the idea that Lamblichus could have advanced a complete division of the propositions, by considering even the non-categorical ones:

"In the same way", says [Lamblichus], "in the case of the propositions some have also made the division into simultaneous species by distinguishing between simple and non-simple propositions, while others [by distinguishing between] the simple and the conditional and the disjunctive [proposition], though incorrectly: for the conditional and the disjunctive proposition are species of the non-simple, which is opposed in division to the simple."

Accordingly, lamblichus could have preceding Syrianus. However, in spite of this, the possibility that Proclus had followed lamblichus is actually difficult to admit, for Syrianus seems to have agreed with lamblichus in every mathematical concern. Syrianus is interested in *pythagorica scientia* and he indicates,

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646 The assumption well might be true. As Anne D.R. Sheppard has observed in her studies on the dependence of Proclus on Syrianus in Proclus' commentary on Plato's *Republic*, "Both the ancient evidence and the modern discussions suggest that Proclus was very largely taking over Syrianus' ideas but he did supplement, develop and criticise them." (Cf. A. Sheppard, *Studies on the 5th and 6th Essays of Proclus' Commentary on the Republic*, in *Hypomnemata*, Göttingen 1980, p. 42.). One must also consider here that the period of personal contact between Proclus and Syrianus cannot be more than five years. Cf. later Part I, 4., (iii.3), (c) *Syrianus' calculus and the school of Proclus in Athens.*

647 cf. Simplicius in *Cat.*, p. 425, 18-24. οὖτω δὲ εὐθὺς, καὶ ἐπὶ τῶν ἀξιωμάτων οἱ μὲν τὰ ἀπλὰ καὶ οὐχ ἀπλὰ διαλύμενοι εἰς τὰ ἀξία τὴν διάρκειαν ἐποιήσατο, οἱ δὲ εἰς τὰ ἀπλὰ καὶ τὰ συνημμένα καὶ διεξευγμένα οὐκ ἡκαίως· τοῦ γὰρ οὐχ ἀπλοῦ τούτου καὶ ἀπλοῦ ἀντιδιαφέρειν έξῆς ἐστὶ το τε συνημμένον καὶ το διεξευγμένον. (We read, as Kalbfleisch (p. 575) corrects, τοῦ τι ἀπλὰ instead of τούτου καὶ ἀπλοῦ). Here, as Simplicius quotes, lamblichus goes on to divide ἀξιωματα, which seems to suggest that lamblichus rather divides *principles* (or *dignitates*, perhaps, as William of Moerbeke translates here, cf. A. Pattin Ed. Louvain/Paris 1971). But (whether principles or propositions) the point is clearly a complete division: lamblichus divides *propositions* into simple (ἀπλά) and not-simple (οὐχ ἀπλά), and the non-simple into conditional and disjunctive *propositions* (τα συνημμένα καὶ διεξευγμένα), and rejects the view that divides *propositions* into simple, conditional and disjunctive ones, because these two last are species of non-simple *propositions*.

as D. O'Meara points out, that in his commentary on Aristotle's *Metaphysics* he has made use in it of Lamblichus' book *Coll. Pyth.*. Syrianus here, in fact, names Lamblichus "the divine Lamblichus (ὁ θεὸς Ἱάμβλιχος)" and in the mathematical concern that Lamblichus' *Coll. Pyth.* introduces (actually perceptible in a great length in Syrianus' comments), he takes Lamblichus as his guide. This fact, therefore, gives us room to assume that Syrianus was not presenting a proposition-count which could have disagreed with Lamblichus' authoritative mathematical view. Therefore, Proclus seems to be the only innovator—if it is true that Ammonius follows his oral teaching. In the same sense, if Lamblichus advanced a calculus this should have been consistent with that of Syrianus and also with the sketch presented by Porphyry and Alexander.

This particular dependence of Syrianus on Lamblichus makes rather unlikely Zimmermann's conjecture that "The writer abused as a *male doctus*", in the epilogue of Boethius' translation of Syrianus' calculus, "was Lamblichus". In the same sense it seems to be inadmissible that Syrianus could have finished his algorithm through an implicit criticism of Lamblichus' arithmetical attempt. On the one hand, the point is inconsistent with his reiterative allusions to the *divine* Lamblichus and, on the other hand, it is hard to conceive that Lamblichus could have gone astray by a rather trivial error of 'putting affirmations instead of negations' and vice versa, which is the essence of the complaint by Syrianus.

The elements presented up to here show that the calculus of the number of all the species of categorical propositions is not an

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649 Dominic J. O'Meara *New Fragments from Lamblichus*, in *American Journal of Philology*, vol. 102 (1981), p. 31. "Syrianus, the teacher of Proclus and self-proclaimed follower of Lamblichus, indicates in his *in Met.* that he made use in it of the later (as well as of the earlier) books of Lamblichus' *Coll. Pyth.*" (The text *Coll. Pyth.* corresponds to *Collection of Pythagorean Doctrines*, which contains the following (extant) treatises: *De vita pythagorica, Protrepticus, De communi mathematica scientia*; and *In Nicomachi arithmeticae introductionem*). Cf. also here O'Meara (1981), p. 27.

650 cf. Syrianus *in Met.* p. 140, 14-15; also p. 103, 4-10.

651 Zimmermann (1991), p. xci, says, indeed, that "It is further tempting to speculate that the writer abused as *male doctus* was Lamblichus, which would make him the likely inventor of the proposition-count and hence the presumable author of the quinquepartition of the De Interpretatione."
isolated digression conceived by Syrianus and reconsidered by Boethius, but the result of a continuous development prompted by a traditional interpretation that sees in Chapter 10 of *PeriH.* a numerical intention in Aristotle. The later interpretation of Syrianus (or perhaps already that of Lamblichus) can be taken as the phase in which the traditional interpretation adopted a calculus (or improved a draft by Alexander and Porphyry). The number of the categorical propositions as a philosophico-mathematical discussion could have become an issue with Lamblichus' interpretation, but Syrianus' calculus could have been the first official result provided for teaching and summarizing *PeriH.* On this view, Proclus seems to be the innovator and responsible for the improvement seen in Ammonius' commentary.

(a) *Ammonius' calculus*

Ammonius' calculus is not a mere arithmetical exercise inserted into his commentary: it is rather, like in Boethius, the consequence of an interpretation of *PeriH.* Ammonius, however, does not present as a point to be proved that Aristotle's intention in Chapter 10 is to deal with the number of the categorical propositions, as Boethius does, but he rather grants this point and extends it to all *PeriH.* According to Ammonius' division of this treatise into five sections (τὰ κεφάλαια), the Fifth is an appendix, and in the four remaining sections—which properly constitute the treatise—Aristotle is concerned with the elements of the categorical proposition and with its number. Ammonius compares explicitly the order of exposition in *PeriH.* to that which is proper to a geometrical treatise, and emphasises not only the

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652 Ammonius' division of *PeriH.* (cf. *in Int.* p. 8, 13-19) can be summarized thus: Section I (from the beginning of *PeriH.* to Chapter 6, 17a. 37): about the elements of the categorical proposition. Section II, Chapter 7 (17a. 38) to Chapter 10 (19b. 18): the two-term propositions. Section III, Chapter 10 (19b. 19) to Chapter 11 (21a. 33): the three-term propositions. Section IV, Chapter 12 (21a. 34) to Chapter 13 (23a. 26): the modal propositions. Section V, Chapter 14 (23a. 27) to the end: Appendix. (See also n. 560).

653 *in Int.* p. 7, 18-22. καὶ δὲ ἄρχας τοῦ ἀποφαντικοῦ λόγου τὰ συμβαλλόμενα πρὸς τὴν τούτου διδασκαλίαν, ὥσπερ ἄρχας ἀν ἐπίσης γεωμετρίας τούς τε θροὺς καὶ τὰ αἰτηματα καὶ τὰς καλουμένας κοινὰς ἐννοιας, ἀπερ ὁ Ἀριστοτέλης ἐν τοῖς Κατηγορίαις στοιχεία τῶν διαγραμμάτων προσαγορευέν ἡξιώμεν. "And I call
impossibility of conceiving more combinations of terms in generating a categorical proposition, but also that there are no more propositions than those presented by Aristotle here. So, after he summarizes the content of each of these three sections, he says:

"Therefore, in this way, after having gone through all the species of propositions, and having shown with assurance that the oppositions are not more than these, Aristotle puts a limit to his exposition."

As a consequence, Ammonius does not refer (as Boethius does) to any particular passage in *PeriH.* to ground his interpretation, but he sees sufficient evidence for it at the start of each of the Sections II, III, and IV. Accordingly, Ammonius introduces his calculus in three parts of his commentary, corresponding to his analysis of the three types of categorical proposition that Aristotle presents in *PeriH. :* the propositions with two terms; those with

'principles' of the categorical proposition the things which contribute to its exposition, just as you could call the terms and postulates and axioms of geometry 'principles', which are the same things that Aristotle considered convenient to call 'elements of the diagrams' in *Categories* (14a. 39)." And after that Ammonius adds: τοῦτο οὖν ἐστι τὸ πρῶτον τοῦ βιβλίου κεφάλαιον τὸ περὶ τῶν εὑρημένων ἀρχῶν τοῦ ἀποφασικοῦ λόγου διαλεγόμενον, τὰ δὲ τρία τὰ ἐφεξῆς αὐτὰς ἴμαν παραδόσασα λοιπὸν τὰς προτάσεις. (p. 7, 27-29) "Therefore, this is the first section of the book, that which discusses the mentioned principles of the categorical proposition. As to the remaining sections, the following three give us the propositions in themselves."

654 in *Int.* p. 8, 4-8; 12-13. ἐπὶ οὖν, ὡσπερ ἐλέγομεν, αἰ μὲν τῶν προτάσεων ἔστω ὑποκειμένου μονὸν καὶ κατηγορουμένου συμπληροῦμαι, αἰ δὲ καὶ τρίτον ἔχουσι προσκατηγοροῦμενον, (....). "Therefore, given that, as we said, some propositions are complete with only subject and predicate, and the others have a third term additionally predicated [i.e. 'is', cf. 19b. 19]." (....) πλείονας δὲ τούτων ὅρους συμπλεκόμενους ἄλλους πρὸς μέσας προτάσεως γένεσιν οὐδὲ ἐπηθείσαι δυνατόν, (....) "(....) and since it is not possible to conceive more terms combined one with another for the purpose of generating a single proposition, (....)" (Ammionius, then, summarises the content of the three sections devoted to the categorical propositions. See above).

655 Ammonius in *Int.* p. 8, 20-23. τοῦτον οὖν τῶν τριῶν πέπλεξα τοὺς ἀξίωμας τῶν προτάσεων ἐπεξεργάζεται ὁ Αριστοτέλης καὶ ἀποφήμισθαι θαρρήσεως ὡς οὐκ ἔχει πλείους τούτων ἀμφίφερσης πέρας ἐπιτίθηκε τῇ προγματείᾳ.

656 Let us note that even Ammonius might disagree with Boethius in the interpretation of the beginning of Chapter 10, for while for Boethius Aristotle here shows his general numerical intention, for Ammonius the passage only adds that the number of two-term propositions with definite subject (e.g. ἄνθρωπος ἡμέρας, homo ambulat, 'a man walks') is as great as that of those with indefinite name. (i.e. οὐκ ἄνθρωπος ἡμέρας, non homo ambulat, 'a not-man walks'). (cf. Amm. in *Int.* p. 155, 24-28). In Ammonius' opinion Aristotle started this count when he starts what is our Chapter 6.
three terms; and the modal ones (which are compounded with two and three terms as well).

Ammonius calculates firstly the number of oppositions in those propositions in which only a subject and a predicate are involved:

"Now, such is the division of propositions on the basis of their subject term. [i.e. Universal, Particular, Unquantified, Singular] But on the basis of their predicate term one must say that all these four kinds are

657 Ammonius does not calculate directly the number of propositions (as Syrius does), but that of the contradictions or oppositions; however the number of propositions is calculated easily from the number of contradictions by multiplying the contradictions by 2, because the propositions involved in every contradiction are 2. What Ammonius does not unfold is, in other words, the criterion of quality of the categorical proposition, (i.e. affirmation or negation). Probably, this is due not only to a strategy to simplify the calculation, but to the fact that Ammonus observes a close relation between Aristotle's logical purpose of determining one negation for every affirmation (PeriH. 17b. 37) and the number of all the categorical propositions. This relation is expressly recalled by Ammonius every time that he starts commenting on one of the three main sections of PeriH. When Ammonius presents the second section (which is devoted to propositions with two terms), and even after this calculus has been completed, he emphasises: 'Αλλ' ἐπεὶ τῶν ἀριθμῶν αὐτῶν παραδεδωκαμεν, ἀκολούθως ἐστιν ἐφεξῆς ἐπικείμεναι τίνες ἐν ταῖς ἀπρομιμημέναις ἀντιθέσεις αἱ ἀντιφατικὰς ἀλληλείποντες προτάσεις, τίνες δὲ οὐ, καὶ τίνες μὲν αἱ πρὸς ἀλληλας σχέσεις τῶν μὴ ἀντικειµένων ἀντιφατικῶς, τίς δὲ ή πρὸς ἑκατέρας τῶν ἐν αὐταῖς προτάσεων ἀντιφατικὰς μαχητὴν προελθέτηρα γαρ ὡς πάθη κατασφάσει ἐστὶν ἀπόφασις ἀντιφατικὰς ἀντικείµενη καὶ πάθη ἀποφάσεις κατάσφασις. (in Int. p. 91, 4-10)." But, since we have given their number, [i.e. that of the two-term propositions] it follows in turn that we should examine which propositions among the enumerated oppositions oppose one another contradictorily, and which do not, and, further, which are the relations among the non-contradictorily opposite, and which the opposition that each of these contradictory opposition has with those. For it has been assumed that for every affirmation there is a contradictorily opposed negation, and for every negation an affirmation."

658 Cf. Ammonius in Int. p. 90, 21- p. 91, 3. (Transl. D. Blank Ammonius On Aristotle On Interpretation 1-8, 1996; in Ancient Commentators on Aristotle). Τοιαύτα μὲν οὖν ἢ ἀπὸ τοῦ ὑποκειµένου τῶν προτάσεων διαφέρει, ἀπὸ δὲ χαὶ τοῦ κατηγορούμενου ταῦτα πάντα τὰ τέταρτα ἐξής τριπλασιάζεται δηλούν: ἐπεὶ γὰρ ἀνάκης τῶν κατηγορούμενων ῥήμα τίνης, τὸ δὲ ρήμα προσημαχοῦσαν ἐλέγχοις χρόνον, ὃ δὲ χρόνος λαμβάνεται τριχώς, κατὰ τὸ παρελθόν τὸ ἑνετός τὸ μέλλον, δήλου ἢ τῶν τετάρτων ἐξής τῶν προτάσεων ἔκατον τριχώς ποικίλει ἢ τοῦ κατηγορούμενου διηνεάτων, ονὶ ἐπὶ τῶν καθ' ἐκάστα λέγοντας ἡμικλίτης ὑγιαίνει ἡμικλίτης ὑγαίνει, ὡς ἵδι τοῦτο διδέκιν γίνεσθαι τὰ τῶν ἐν προτάσεως ἀντιθέσεως ἐξής ἢ πάρο ποτὲ καὶ παρὰ τοῖς χρόνοις γίνεται τὰ τῶν προτάσεως διαφορά, διδάσκοντος διακυβεύοντα τοῦ Ἀριστοτέλους, ἐπὶ δὲ ἐκάστην τῶν διδάσκοντος τῶν ἀντικειµένων τριχῶς λαμβάνεται διηνεάτων κατὰ τὰς τρεῖς ὀδοὺς, ἢ καὶ τριάκοντα γίνεσθαι συμβαίνει τὰς πάσας αὐτῶν ἀντιθέσεις ἀριθμοῦ ὑποκειµένων ὅταν τοῦ ὑποκειµένου, ταὐτάς δὲ ἢς ἀνάκης γίνεσθαι τὰς ἢς οἰκίστου τοῦ ὑποκειµένου, καθ' ἐκάστην γὰρ τῶν ἀριθμῶν χρωμάτων τὰς ὑποκειµένων τὸ ἀριθμοῦ μόριον τῶν ὑποκειµένων προθέσεις τὴν ἢς οἰκίστου πολύσεις, ὡς ἤδη καὶ ἑρώτημα γίνεσθαι τὰς πάσας ἀντιθέσεις τε καὶ ἀντίφασες τῶν προκειμένων ἢς ὡς ἐπίσκεψιν προτάσεως.
trebled. For, since, it is necessary that the predicate term be a verb, and we said (47, 23) that the verb additionally signifies time, but the time is understood in three ways, according to the past, present and future, it is clear that it is possible to vary each of the four kinds of proposition on the basis of the predicate term, saying, for example, in the case of singular propositions, 'Socrates was healthy' [rather: 'Socrates recovered'], 'Socrates is healthy' [rather: 'Socrates recovers'], 'Socrates will be healthy' [rather: 'Socrates will recover'], so that for this reason the kinds of opposition in propositions become twelve. For we shall hear Aristotle teach that sometimes a difference arises among propositions regarding the time as well (19b. 12f.). But, since it is possible to understand each of these twelve oppositions in three ways according to the three matters [αἵ ὑμα τῶν προτάσεων], it happens that all their oppositions total thirty-six, if the subject is definite. And it is necessary that those containing an indefinite subject term be equal to these (for you will make the indefinite one for each of those which use a definite subject term by adding the negative particle to the subject), so that all the oppositions and contradictions of the propositions which we are here examining total seventy-two.

Ammonius has established earlier a fourfold criterion of quantity. According to this criterion, propositions are either unquantified, or singular, or particular, or universal. After that, the text is self-explanatory: the criteria of the three tenses (which is proper to

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659 This and the following two brackets are ours and correct Blank's translation of propositions with two terms. Ammonius gives the example Ἐλευθέρεια, etc. because he is illustrating a categorical proposition with two terms. The translation by Blank ('Socrates is healthy', etc.) transforms those two-term propositions into a three-term ones, which Ammonius counts later.

660 Particular propositions are also named by Ammonius, 'universal as particular' because in these propositions the subject term is a universal thing (e.g. man), but it is taken particularly. To make this fourfold division, Ammonius follows a general division of the subject. According to Ammonius (in Int. p. 88, 29-p. 90, 20) the subject term can be a universal or a singular thing. But if it is universal, it can be taken with or without quantification. And if it is quantified, it can be universal or particular (= universal as particular). And each of these species can be affirmative or negative, from where the quantifiers 'every', 'none', 'some' and 'not every' (= 'some not') arise. Now, this division is summarized in four species: the propositions can be (i) Unquantified, (ii) Quantified; and here (ii.1) Universal, or (ii. 2) Particular (= universal as particular); (iii) Singular.
the predicate), the three matters (which is proper to the terms), and the proper syntactic division of the subject of these two-term propositions in definite and indefinite, will increase the number of oppositions to 72, which are 144 propositions, since every opposition contains two propositions.

Ammonius understands clearly that Aristotle distinguishes systematically this type of proposition with two terms from the type introduced at 19b. 19, which predicates 'is' as a third element. So he proceeds to calculate this corresponding number when he comments on this type of proposition. In this case, the number of oppositions (and propositions) will be logically duplicated in respect of the earlier established ones, for the three-term propositions have not only a definite or indefinite subject, but also a definite and indefinite predicate, as Aristotle himself expressed at his diagram of 19b. 19. Accordingly, Ammonius concludes that the total is 144 oppositions (or 288 propositions) when 'is' is predicated as a third element.

The sum of the number of propositions with two and three terms is up to here 216 oppositions, (i.e. 512 species of categorical proposition). However, according to Ammonius, this is not the total number, for Aristotle in PeriH. also considered modal propositions. As Ammonius shows, this number is not calculated by multiplying the number of the propositions with two and three terms by the number of modalities, because a modal proposition with two and three terms is syntactically different from those corresponding non-modal ones with either two or three terms. In fact, as Ammonius explains, the negation of a modal proposition with two terms like 'Σωκράτης μη βασίζει συνατόν' is not 'Σωκράτης μη βασίζει συνατόν', but 'Σωκράτης βασίζει ού δυνατόν', and in the case of the three-term modal propositions the negation of 'Σωκράτης μουσικόν εἶναι δυνατόν' is neither 'Σωκράτης μη μουσικόν εἶναι δυνατόν' nor 'Σωκράτης μουσικόν μη εἶναι δυνατόν', but 'Σωκράτης μουσικόν εἶναι ού δυνατόν'. For the negation of a modal proposition, in both cases, is stated by the mode. Therefore, apart from the mode, since the terms to be varied in the two-term propositions are not (as in the

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661 Cf. in Int. p. 160, 17-32.
662 The following calculation at in Int. p. 218, 23- p. 219, 21.
663 cf. in Int. p. 218, 8 - p. 219, 7.
corresponding non-modal one) only the subject (definite/indefinite), but also the verb (βασίζει/οὐ βασίζει), the basic patterns or, τὰ παραδείγματα as Ammonius calls them, will be 4. Again, they will be 8 for the three-term modal propositions, for here the terms to be varied are 3: the subject (definite/indefinite), the predicate (definite/indefinite), and the verb 'to be' (ἐίναι/οὐκ ἐίναι), and not 2 as in the corresponding non-modal proposition, where only the subject and the predicate vary (for here the verb 'to be' states the negation). Ammonius does not list the corresponding patterns, but gives a sufficient aid to form them. For two-term propositions, we will have:

**Affirmation / Negation**

(i) Σωκράτης βασίζει δυνατόν. Σωκράτης βασίζει οὐ δυνατόν. (DD)

Socrates walks, possible / Socrates walks, not possible.

(ii) Ό Σωκράτης οὐ βασίζει δυνατόν. Ό Σωκράτης οὐ βασίζει οὐ δυνατόν. (II)

Not-Socrates does not walk, possible / Not-Socrates does not walk, not possible.

(iii) Σωκράτης οὐ βασίζει δυνατόν. Σωκράτης οὐ βασίζει οὐ δυνατόν. (DI)

Socrates does not walk, possible / Socrates does not walk, not possible.

(iv) Ό Σωκράτης οὐ βασίζει δυνατόν. Ό Σωκράτης οὐ βασίζει οὐ δυνατόν. (ID)

Not-Socrates walks, possible / Not-Socrates walks, not possible

And for three-term propositions:

**Affirmation / Negation**

(i) Σωκράτης μουσικόν εἶναι δυνατόν. Σωκράτης μουσικόν εἶναι οὐ δυνατόν. (DDD)

Socrates is musical, possible / Socrates is musical, not possible.

(ii) Ό Σωκράτης οὐ μουσικόν οὐκ εἶναι δυνατόν. Ό Σωκράτης οὐ μουσικόν οὐκ εἶναι οὐ δυνατόν. (III)

Not-Socrates is not not-musical, possible / Not-Socrates is not not-musical, not possible.

(iii) Σωκράτης μουσικόν οὐκ εἶναι δυνατόν. Σωκράτης μουσικόν οὐκ εἶναι οὐ δυνατόν (DDI)

Socrates is not musical, possible / Socrates is not musical, not possible.

664 In Ammonius' calculus it is easier to see that, in general, the number of propositions increases in accordance with the number of variables multiplying a given set of elements. However, there is no reason to see in the ancient commentaries any allusion to combinatorial concern, in particular to the formula $m^n$, which indicates the number of possible variations of $n$ elements among $m$ properties.
(iv) Σωκράτη οὐ μουσικὸν εἶναι δυνατόν. Σωκράτη οὐ μουσικὸν εἶναι οὐ δυνατόν. (DID)
Socrates is not-musical, possible / Socrates is not-musical, not possible.
(v) Οὐ Σωκράτη μουσικὸν εἶναι δυνατόν. Οὐ Σωκράτη μουσικὸν εἶναι οὐ δυνατόν. (IDD)
Not-Socrates is musical, possible / Not-Socrates is musical, not possible.
(vi) Σωκράτη οὐ μουσικὸν οὐκ εἶναι δυνατόν. Σωκράτη οὐ μουσικὸν οὐκ εἶναι οὐ δυνατόν. (DIII)
Socrates is not not-musical, possible / Socrates is not not-musical, not possible.
(vii) Οὐ Σωκράτη οὐ μουσικὸν εἶναι δυνατόν. Οὐ Σωκράτη οὐ μουσικὸν εἶναι οὐ δυνατόν. (IDD)
Not-Socrates is not-musical, possible / Not-Socrates is not-musical, not possible.
(viii) Οὐ Σωκράτη μουσικὸν οὐκ εἶναι δυνατόν. Οὐ Σωκράτη μουσικὸν οὐκ εἶναι οὐ δυνατόν. (IDI)
Not-Socrates is not musical, possible / Not-Socrates is not musical, not possible.

Now the calculus flows correctly if the four patterns of the propositions with two terms are multiplied by the 4 different kinds of quantity, the three tenses and the three matters and the three modalities that Ammonius recognizes in categorical propositions. The total number for two-term propositions will be 432 oppositions (i.e. 864 species of modal propositions). Again, to calculate the number of modal propositions with three terms the procedure is similar: the eight mentioned patterns are multiplied by the same criteria to obtain the result of 864 oppositions (i.e. 1728 modal propositions).

Now, since Ammonius has determined the number of all species of categorical propositions, either modal or non-modal, for two and three terms, he proceeds to give the final count: 1512 oppositions (3024 propositions): these are all the oppositions and propositions distinguished by Aristotle at PeriH.665

The following diagram will help us to understand more easily Ammonius' algorithm and calculus:666

665 in Int. p. 219, 20-21. ἀρα πάσα αἱ ἐν τῷ Περὶ ἐρμηνείας παραδειγμάτων ἀντιφάσεις ἔσονται χίλια πεντακόσια δέκα καὶ δύο. προτάσεις δὲ δηλοιωτὶ διπλάσια τούτων.
666 Let us adopt the following convention: (i) [UPIS] : division by quantity; (ii) [Tense] : by verbal tense; (iii) [Matter] : by matter; (iv) [Mod.] : by
Ammonius' and Syrianus' calculi: similarities and differences

Ammonius' calculus is similar to that adopted by Boethius, for it follows a common tendency in ancient commentaries on *PeriH.*: the idea maintained already (as it seems) by Alexander and followed by Porphyry that one of Aristotle's intentions in *PeriH.* is to determine the number of the categorical propositions. However, Ammonius' calculus, in its particular consideration, presents significant differences in respect of that adopted by Boethius. Ammonius does not relate Aristotle's numerical intention (as Boethius does) to the question of existence of indefinite verbs in propositions, and he rather maintains these points as independent from one another. And that occurs because, in Ammonius' commentary, the negation is stated, not by the indefinite verb, but by the placement of the negative particle (πο τηρητακον μαίρον) to the more important part of the proposition. Equally, Ammonius grounds his calculus on different.modalities; (v) [IS]: by indefinite subject; (vi) [IP]: by indefinite predicate. Thus:

<table>
<thead>
<tr>
<th></th>
<th>with two terms:</th>
<th>with three terms:</th>
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<tr>
<td></td>
<td>non-modal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with two terms:</td>
<td></td>
</tr>
<tr>
<td>Categ. Props.</td>
<td>72 (a)</td>
<td>144 (b)</td>
</tr>
<tr>
<td></td>
<td>with two terms:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>modal</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with two terms:</td>
<td></td>
</tr>
<tr>
<td></td>
<td>432 (c)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>with three terms:</td>
<td>864 (d)</td>
</tr>
</tbody>
</table>

For (a) cf. *in Int.* p. 90, 21 - p. 91, 3; (b) at p. 160, 17-32; (c) and (d) at p. 218, 30 - p. 219, 24.

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667 cf. later Part I, 5., (ii) *The decline of the doctrine of the indefinite names in Ammonius' commentary.*
classifications of the categorical proposition, and not (as Boethius) on a unique classification and generation.\textsuperscript{668}

It is also manifest that Ammonius maintains a more elaborated calculus of the number of the categorical propositions. And there are some reasons here, for (a) Ammonius introduces the tenses of the propositions. (b) Ammonius distinguishes between the \textit{matter} and \textit{modality} of the proposition, which were not distinguished by Boethius and Syrianus (though not necessarily maintained in a confused view) in the notion of 'quality of proposition'. It is also clear that the difference between Syrianus’ calculus and that of Ammonius is not only due to the consideration of a greater number of criteria by Ammonius, but also to the fact that (c) he determines the syntactical patterns of the modal proposition, as we explained earlier. This is perhaps one of the most important results in Ammonius’ commentary concerning the point of the calculation of the number of categorical propositions. For the multiplication by three qualities that Syrianus made over the 48 syntactical species is not correct if he intended (as is seems that he does) to include the modal propositions, for the modal ones, as Ammonius shows, have another syntactical structure, and its number needs to be calculated independently: in fact, here it is not the indefinite verb that produces the negation, but the mode, and therefore the number of the oppositions has been duplicated.

\textit{(c) Syrianus’ calculus and the school of Proclus in Athens}

The marked difference between Syrianus' and Ammonius' calculi creates difficulties for Shiel's\textsuperscript{669} and Minio-Paluello's\textsuperscript{670}

\textsuperscript{668} Let us recall that Ammonius \textit{(in Int. p. 90, 21-30)} takes the three tenses as the proper division of the predicate in two-term propositions, since the predicate here is a verb, and the verb "additionally signifies time", and time is understood in three ways: present, past and future.

\textsuperscript{669} It is worth noting that J. Shiel in his article \textit{Boethius and Eudemus} \textit{(in Vivarium 12, (1974), p. 17)} does not specify a more exact period for the Greek source used by Boethius, and he rests content with indicating that this material comes "from some Greek book later than Porphyry but anterior to Ammonius." However, in the revision of his article \textit{(in Aristotle Transformed, London 1990) 'Boethius' commentaries on Aristotle' (originally in Medieval and Renaissance Studies 4, 1958, pp. 217-44)}, Shiel
opinion that the Greek material that Boethius translates is a codex which originated in the school of Proclus in Athens. Both Shiel and Minio-Paluello produce a parallel between the commentary on Categories and that on PeriH. (De Interpretatione), but while for the former commentary Shiel has shown certain limited evidence for this dependence, it does not seem possible to do the same for the latter, so that here he can only refer to a post-Porphyrian source.

In spite of this relative uncertainty, both Shiel and Minio-Paluello have explained the similarities between Boethius and Ammonius in the same way: dependence on a common Proclan source. However, as far as we are concerned here with the

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670 Cf. L. Minio-Paluello et al. Severino Boezio in Enciclopedia Italiana, Roma 1970, p. 15. In Minio-Paluello's opinion "all seems to indicate Athenian comments (Proclan and non-Proclan) as the source of what Boethius writes." Besides, he adds: "L' opera di B. quale commentatore di Porfirio e di Aristotele sembra essersi limitata a una traduzione (...) Per le Categorie quasi tutto proviene dal commento di Porfirio in forma di dialogo (conservato in greco solo parzialmente); il resto risale probabilmente tutto al perduto commento di Giamblico. I riferimenti ad altri autori greci provengono con ogni probabilità sempre da questi due commenti greci: non c' è dunque ragione di credere che B. abbia conosciuto altri commenti. Analoga è la situazione per il De Interpretatione: tutti e due i commenti sono basati sullo stesso materiale greco: B. stesso dice che si è principalmente basato su Porfirio, e tutto converge a indicare commenti ateniensi (procliani e post-procliani) come la fonte di quanto B. scrive."

671 cf. Shiel (1990), pp. 354-355. The evidence here is based on the number of headings used by pre-Proclan and post-Proclan commentators: while the early Aristotelian commentators have only two or three such headings (Porphyry's Kata Peusin has only two), the commentators later than Proclus have an elaborate arrangement of from six to eight headings: Boethius' in Cat. has a complete set of six headings. Besides, as Shiel has also noted, the late commentator Elias remarks that the organiser of these didascalica was Proclus (Elias in Cat. 103, 24; cf. also Shiel (1990), p. 354). But even so other possible evidence must be carefully considered. Shiel himself recognises that the oral teaching of Proclus continued the tradition of Syrianus (ibid., p. 354) and also that "There were several Aristotelian schools and a connection with Proclus is difficult to substantiate because his teaching on the Categories was oral, and so there are no quotations from him in Simplicius." (Ibid., p. 369, n. 76).


calculus of the number of the categorical propositions, their habitual reference to this source does not work. It is not so much the fact that in Ammonius' commentary the result of the calculus has increased the number of propositions to 3024 unities (against 144 in Syrianus' calculus), but the fact that this increment is due to a real improvement: the discovery of the 12 modal patterns (τὰ παραθέματα) which were unknown to Syrianus and a fortiori to Boethius. It is not possible, thus, to think that Alexander, Porphyry, Syrianus and Boethius knew these patterns and they decided not to adopt them, because these patterns (as we say) lead the calculus to its proper end. And now, since we (and also J. Shiel and L. Minio-Paluello) have accepted the dependence of Ammonius' commentary on Proclus, and these 12 patterns are exclusive to Ammonius' commentary, it follows that the material that Boethius had cannot be exclusively Proclan. This result suits in well with the dates of Syrianus' death and Proclus' scholarly activity in Athens: there are only about five years between Proclus' arrival at Athens and Syrianus' death (Syrianus is said to have died c. 437⁶⁷⁴ and Proclus to have arrived at Athens in 432).⁶⁷⁵ The view that Proclus taught Syrianus the correct calculus during these first five years of academic contact is harder to defend than the idea that this teaching was later, after Syrianus' death, and during the middle period of Proclus' career, for this last possibility agrees with a 20 year-old Ammonius listening to Proclus (Ammonius' birth-date is between in 435/45,⁶⁷⁶ and Proclus is said to have died in 485).

It could be argued that Ammonius, and not Proclus, is responsible for this innovation, but this possibility clashes with other clearer evidence: that the calculus is a central point in Ammonius' whole explanation of PeriH, and that he recognises at the beginning of his commentary that he is recalling Proclus' teaching. If one would defend the view that Ammonius attributed to Proclus the 12 modal patterns, and also the complete calculus and its interpretation, then Ammonius' words acknowledging

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dependence on Proclus would be unjustified, for Ammonius means that his contribution to clarify the doctrines of PeriH. — if any (εἰ δὲ τι — is rather incidental.677

Accordingly, if the material that Boethius had here (i.e. Syrianus' calculus) cannot be derived from Proclus' teaching, (and so is not Proclan at all), the idea maintained by J. Shiel and L. Minio-Paluello concerning a unique Proclan codex is put at risk: because while some points of Boethius' in Cat. show a connection with the school of Proclus, Boethius' in Int. does not show any connection with it, and rather it shows that it contains a non-Proclan element where it precisely should contain it: the calculus of the number of the categorical propositions. It is worth noting that a similar conclusion can be obtained if one analyses Boethius' unawareness of the so-called 'canon of Proclus', and of other important points in his commentary.678

677 cf. Ammonius in Int. p. 1, 6-11. εἰ δὲ τι καὶ ἡμέρας δυσφημείην ἐσευγκέον περὶ τὸν τοῦ μυθλοῦ σοφήματι, ἀπομηνοιεύοντας τῶν ἔνθησεων τοῦ θεοῦ ἡμῶν διδασκαλοῦ Προκλοῦ τοῦ Πλατανικοῦ διαδόχου τοῦ εἰς ακον τῆς ἀναφοβίας φύσεως τῆς τε ἔνθητικην τῶν δοκίμων τόσως παλαιοῦ δύναμιν καὶ τὴν ἐπιστημονίαν τῆς φύσεως τῶν ὄντων κρίον ἁγκήσατος, πολλὴν ἀν τῷ λόγῳ θεῖ χάριν ὁμολογήσαμεν.

(See translation in n. 645).

678 At PeriH. 20a. 20 f. Aristotle states a particular logical relation ("'No man is just' follows from 'every man is not-just', while the opposite of this 'not every man is not-just' follows from 'some man is just' (for there must be one).""). Here the material that Boethius possesses seems to be very limited, because he only describes in a square the respective relations that Aristotle mentions, and adds their corresponding proofs (cf. Part II, C., (iii)). Ammonius, on the contrary, starts his comments by citing the authority of Proclus (ὁ ἡμέρας ἐκατονμενόν καὶ εὐκρατέτας, p. 181, 30 f.), and also his rule (cf. Part II, C., (iv)). The importance of this rule makes hardly plausible the idea that Boethius would have dismissed it (cf. Part II, C., (vi)). The same occurs, on the other hand, in respect of 19b. 22-24, a passage which became a sort of crux logicorum, as Boethius describes it (cf. in Int. 23 ff., p. 131; and also here Part II, A., (ii.5)). Here, the logical relations that Ammonius states depend on Proclus' teaching: Boethius should have named this interpretation, whether with Proclus' name or without it, just as he names Alexander, Aspasius, Herminus and Porphyry (cf. in Int. 23-8, pp. 131-2), but his complete unawareness shows again that he is not in touch with Proclan elements in his comments on PeriH. Further points can also be added: Ammonius adopts the interpretation that Aristotle in PeriH. gives many senses of name and verb, and he refers to this interpretation as one of his school (cf. Part I, 1.2, (vi. 4)). Boethius, on the contrary, maintains the interpretation known already by Herminus that Aristotle gives strict and non-strict definitions of name and verb (cf. Part I, 3., (iii)). Further differences at Part II, A., (ii.1), (b). See also n. 219. (Independent grounds for the same conclusion have also advanced by G. Abbamonte at the Warburg Institute seminar, 23.10.96).
(iii.4) Diagrams

(a) Fig. 1. The classification of categorical propositions with two terms: PeriH. 19b 14-19

<table>
<thead>
<tr>
<th></th>
<th>Subject</th>
<th></th>
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<tbody>
<tr>
<td></td>
<td>Definite</td>
<td>Indefinite</td>
</tr>
<tr>
<td>Univ. Subj.</td>
<td>Sing. Subj. #</td>
<td>Univ. Subj.</td>
</tr>
<tr>
<td>U.</td>
<td>P.</td>
<td>I.</td>
</tr>
<tr>
<td>A†</td>
<td>N†</td>
<td>A</td>
</tr>
</tbody>
</table>

The categorical proposition with two terms: e.g. 'A man walks'.

U.: Universal Proposition
I.: Indetermined (=Unquantified) Proposition
P.: Particular Proposition
A.: Affirmative Proposition
N.: Negative Proposition
#: Classified neither by Boethius nor by Aristotle
†: Classified by Aristotle
A† N†: Added by Boethius

Total: 16
Added by Boethius: 4
Distinguished by Aristotle: 8
Unclassified: 4
Fig. 2. The classification of categorical propositions with three terms

The categorical proposition with three terms: e.g. 'A man is just'.

DI: Definite subject/indefinite predicate
ID: Indefinite subject/definite predicate
II: Indefinite subject/indefinite predicate
DD: Definite subject/definite predicate
A.: Affirmative Proposition
N.: Negative Proposition
Total number: 32.
(c) Fig. 3. The general classification of categorical propositions

Unquantified  Singular  Quantified

Unquantified  Singular  Quantified

Unquantified  Singular  Quantified

Unquantified  Singular  Quantified

A: affirmative proposition
N: negative proposition
I S: indefinite subject
D S: definite subject
I I: indefinite subject - indefinite predicate
I D: indefinite subject - definite predicate
I D: indefinite subject - definite predicate

Total number: 48

D I: definite subject - indefinite predicate
D D: definite subject - definite predicate
1: Propositions with two terms e.g. 'a man walks'
2: Propositions with three terms e.g. 'a man is just'
5. The Doctrine of the Indefinite Names and its Sources

(i) The doctrine of the indefinite names

L. M. De Rijk\(^{679}\) has observed in Book Four of Boethius' second commentary on *PeriH.* the existence of a doctrine devoted to indefinite expressions or, as he calls it, "The doctrine of the infinite terms." De Rijk has also pointed out that Boethius devotes this complete book to the doctrine.\(^{680}\) Similarly, "The inclusion of a detailed consideration of negative terms" in Boethius' commentaries on Aristotle has been also emphasised by J. Barnes.\(^{681}\) However, while these two remarks show that the existence of a doctrine of the 'indefinite' or 'infinite' or 'negative' terms is an admitted fact, the question of what is the genuine sense that the doctrine expresses in Book Four has not been raised. There are good reasons to think that the genuine and most proper sense in which a doctrine of the indefinite terms exists in Book Four of Boethius' commentary on *PeriH.* is that of a self-contained body of teaching which completes what Aristotle left implicit in *PeriH.* concerning the nature and logic of the indefinite name and verb. In this sense, this doctrine is not conceived as a


\(^{680}\) *Ibid.* p. 19. "The author [sc Boethius] devotes the whole fourth book (...) to the doctrine of the infinite terms." It is worth noting that Boethius has been sufficiently exact in devoting Book Four of his second commentary to this doctrine and conferring unity on this material. Aristotle devotes the totality of what is our Chapter 10 to the consideration of certain aspects of the nature and logic of the indefinite names and verbs except for the final passage (20b. 1 to the end of the chapter). In this last passage, the point is that the conversion of subject and predicate in a proposition does not necessarily change the meaning of the proposition. However, in Boethius' commentary this last passage is part of the following Book, so that the whole of Book Four revolves around indefinite names, verbs and propositions. This fact can naturally make one to think that the commentary has made a special consideration of the theme, and some points confirm this: first, Boethius' commentary makes an important introduction to this Book Four, in which some syntactical and semantic aspects of the indefinite names and verbs are treated. Second, the idea of these longer introductory notes seems to have been already put into practice earlier, when the commentary goes on to examine the other self-contained theme of Chapter 9, that is, the future singulars.

\(^{681}\) J. Barnes *Boethius and the Study of Logic,* in *Boethius. His Life, Thought and Influence,* M. Gibson (Ed.), Oxford 1981, p. 82.
subsidiary part of a wider logical doctrine (e.g. the doctrine of the conversion of categorical propositions), but as a direct explanation of the text.

It is not possible to think of the genuine sense of this doctrine without considering the fact that Boethius' commentary never uses the expressions 'indefinite terms', or 'negative terms', or other similar ones, but always 'indefinite names', to refer to indefinite expressions standing for the subject or predicate in a categorical proposition. He is absolutely consistent in this respect through Book Four. The fact can be contrasted with his habitual practice of naming the elements of a proposition or phrase 'terms' (termini) in many other places of his first and second commentary.682

At first glance, the reason for the denomination 'indefinite names' seems to be related to Aristotle's statement (16b. 19-20; 19b. 21-22) that verbs are names,683 but in fact the only reason is that there are not indefinite verbs in propositions, and therefore the only indefinite terms compounding the proposition are names, and never indefinite verbs. In this sense, had the doctrine received a name, this would have been an exact one, i.e. one which

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682 For example: in Int. 7, p. 77; 14, p. 86; 4, p. 103. And also in Int. 2, 9, p. 100; 21, p. 101; and in general through the text.
683 According to Boethius, the definition of verb and name is common (communis), for name and verb are a spoken sound (vox) significant by convention. So the name's definition implicitly includes that of verb (in Int. 2, 6-8, p. 66). But Boethius explains what the difference is between them: the name can signify time too, but the main aspect of the verb is to signify action and process (nomina enim significant tempus, verbum autem cum principaliter actus passionesque significet, cum ipsis actibus, et passionibus temporis quoque vim trahit, ut in eo quod dico lego. in Int. 2, 14-5, p. 66). He also adds the fact that the verb signifies something, but that which is signified is predicated of something else, as an accident is predicated of a substance (ita verbum significat aliquid ut id quod significat de altero praedicetur, sed ita ut accidentis. in Int. 2, 7-9, p. 68). Thus, Boethius explains, Aristotle's statement at PeriH., 16b. 19-20, namely, that verbs in themselves are names, is not said in the commonly accepted sense that every part of a phrase (oratio) is said to be a name, but in the sense that every verb by itself and without any other addition is a name (nunc autem Aristotelis huiusmodi sententia est: verba, inquit, ipsa secundum se dica nomina sunt, non secundum id quod omnis pars orationis commune nomen vocatur, ut dicimus nomina rerum, sed quod omne verbum per se dictum neque addito de quo illud praedicatum tale est, ut nomine sit adfine. in Int. 2, 18-24, p. 71). Thus, what Boethius states is that the verb is said to be a name when is taken in isolation (et quod Aristoteles ait: ipsa quidem secundum se dicta verba nomina sunt, tale est ac si diceret: ipsa quidem sola neque cum aliis iuncta nomina sunt. in Int. 2, 8-11, p. 72).
shows its genuine sense, and this unique name is: 'The Doctrine of the Indefinite *Names*'.

(i. 1) *Historical antecedents of the doctrine*

The doctrine of the indefinite names is the theoretical figure that explains in its universality the theme of the nature of indefinite names and verbs and their predication on the basis of what Aristotle kept implicit in Chapters 2, 3, and 10 of *PeriH*. As such, this doctrine seems to have been developed further by Porphyry on a basis already given by the first Peripatetics, and this development, or part of it, seems to be what Boethius collects in Book Four of his second commentary.

Despite this obvious Peripatetic connection, we do not know specifically what sources this doctrine has, and this point does not seem to have been directly studied yet. We know that Theophrastus,\(^684\) and Porphyry's commentary on Theophrastus' *On Affirmation and Denial*,\(^685\) are alluded to by Boethius at the beginning of his second commentary. Moreover, Alexander of Aphrodisias,\(^686\) and a discussion with the Stoics\(^687\) concerning negation and indefinite verbs in propositions, are directly related to this doctrine and the explanation that Boethius gives us of it.

It is worth noting that Porphyry is not named at all by Boethius in connection with the doctrine of the indefinite names,\(^688\) but only when Boethius comments on the *logical* consequences stated by Aristotle among the categorical propositions with or without indefinite names. Accordingly, we have three relevant points to consider concerned with Boethius' sources of this doctrine. These points are: (a) Theophrastus and 'transposed propositions'; (b) the Stoic discussion about negation;

\(^{684}\) *in Int.* 2, 3 ff., p. 12.

\(^{685}\) *in Int.* 2, 24-26, p. 17.

\(^{686}\) *cf.* especially *in Int.* 2, 7-2, pp. 314-8.

\(^{687}\) *cf.* *in Int.* 2, 26-2, pp. 261-2. Text cited and commented on later.

\(^{688}\) Porphyry's name is not cited by Boethius at any moment of the development of this doctrine. At least Boethius does not cite him as he does in connection with logical matters, where he is said to be a *doctissimus vir* (*cf.* *in Int.* 2, 15, p. 276), and his name is clearly the direct source of what Boethius states there.
(c) Alexander's testimony on the non-existence of indefinite verbs in affirmations.

(a) *Theophrastus and transposed propositions*

The possibility of a considerable activity involving monographs or particular treatises in Aristotelian logic is at least directly suggested by a notice of Philoponus, already emphasised by K. Dürr, that Theophrastus, Eudemus and others, and also the Stoics, wrote lengthy books on hypothetical syllogisms. This point suggests not only that the material that Boethius possessed for his commentary on hypothetical syllogisms, which is described by himself as brief and confused information, was material remaining from these comprehensive books that Philoponus reports, but also the fact that certain monographs about other Aristotelian logical points could have been written in the Peripatetic school and known before Boethius' time. Now, there is good reason to think that one of these issues was a development concerning indefinite names, since we know

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689 cf. Philoponus in *An Pr*, p. 242, 14 ff.: "Since, after saying this much about hypotheticals, Aristotle stopped and taught us nothing about them, but put all his energy into the categorical syllogism, on the ground that they're perfect and need nothing external, but hypotheticals need categoricals, let us say a little about them. You should know that Aristotle's students, those associated with Theophrastus and Eudemus and the others, wrote lengthy works about them, and also the Stoics. (...)". (= 111B in FHSG, p. 237).


691 Cf. *De Hypotheticis Syllogismis*, I, 3, 24-30. L. Obertello (Ed.), Paideia Editrice Brescia, 1969. (And also K. Dürr (1951), p. 4). Boethius indeed says here: "What, then, among the Greeks, I have found treated by very few, and by them briefly and without order, and not at all by Latin writers, my toil, long indeed but sufficient to fulfil the undertaking, has brought to perfection, and I dedicate it to your knowledge. For when you had fully absorbed a knowledge of categorical syllogisms, you often enquired about hypothetical syllogisms, on which there is nothing written by Aristotle. Theophrastus, however, a man in possession of all knowledge, deals with the chief point of these matters: Eudemus advances along a broader path of teaching, but in such a way as to appear to have scattered some seeds on his plot, but not to have reaped any harvest." (Transl. from FHSG, 111A, p. 237. The dedicatee is uncertain. De Rijk rejects Symmachus and suggests Patricius: cf. *ibid.*, p. 237).
through a notice by Ammonius and Alexander of Aphrodisias that Theophrastus called what we could call 'categorical propositions of three terms with indefinite predicate' (e.g. 'a man is not-just') 'transposed propositions' (i.e. ἐκ μεταθέσεως and elsewhere κατὰ μετάθεσιν).

There is no evidence that Theophrastus makes this denomination in his book On Affirmation and Negation, but this assumption is consonant with the notice that Boethius gives himself, namely, that Theophrastus in this book treats, on similar points, things that had been treated earlier by Aristotle. If Theophrastus treated indefinite names and verbs in this book, or in another, or even through his oral teaching, the general point concerning indefinite names and verbs would seem to have been included among the specific developments that the first associates of Aristotle made in Logic.


693 Cf. Alexander of Aphrodisias in An. Pr. p. 396, 34-397, 4. "He (Aristotle) says that for syllogizing and for being able to argue constructively or destructively by means of a syllogism, it makes a difference to know how to distinguish and separate propositions which have a negative form but are in fact affirmations from negations. He is talking about propositions which Theophrastus calls 'by transpositions'; he himself also spoke about these in De Interpretatione, showing that they are not negations of affirmations." (Cf. also FHSG, 87A, p. 149. The expression 'by transposition' corresponds here to κατὰ μετάθεσιν).

694 Cf. in Int. 2, 3-16, p. 12. Clearly, as I. M. Bochenski has already observed, this book that Boethius mentions must correspond to the Peri Kataphæos and Apophæos, or 'On Affirmation and Denial', which seems to have been commented on by Porphyry, since, as Bochenski also has already pointed out, Boethius mentions this fact at in Int. 2, 24-27, p. 17. ait sese docuisse species enuntiationis esse affirmationem et negationem in his commentariis quos in Theophrastum edidit, (...).

695 Alexander of Aphrodisias sometimes cites Theophrastus' book On Affirmation, while some other sources sometimes write the title On Affirmation and Negation. This fact opens the possibility that we could be dealing with two different books of Theophrastus. Cf. Alexander in An. Pr. p. 11, 13-16 (= 81A, in FHSG), and also here 82A, 88, 110A, etc. For complete references cf. FHSG, 68, 3c, p. 115).

696 As a matter of fact, Theophrastus has used many 'personal names' to identify some aspects already distinguished by Aristotle. The sense of these re-denominations could be due to his teaching, and if this is so, many of these names could be 'pedagogical names'. Cf. FHSG, p. 251, 113A, p. 249; 91A, p. 157; 90A, p. 155; 113C, p. 251.
Ammonius' report mentions two reasons for this denomination, which suggests that he had neither a final explanation for it nor Theophrastus' text present at the time of writing his commentary. In the relevant part of this text, Ammonius says:

"This is why Theophrastus called these propositions [i.e. these with an indefinite name in the predicate] 'transposed', because the order which they describe in the diagram has been interchanged, so that the negation of these [i.e. of these with indefinite predicate] is arranged under the simple affirmation, and the affirmation [with indefinite predicate] under the simple negation, or even (καὶ) because they are generated when the definite predicate is replaced by the indefinite one."

One of the reasons mentioned by Ammonius is that the propositions of the second line in the diagram of *PeriH.* 19b. 27-29, which is the first diagram that Aristotle presents in Chapter 10, are transposed by Theophrastus. Aristotle's diagram is thus:

<table>
<thead>
<tr>
<th>Simple affirm.</th>
<th>Simple neg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. 'A man is just'</td>
<td>2. 'A man is not just'</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indefinite affirm.</th>
<th>Indefinite neg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. 'A man is not-just'</td>
<td>4. 'A man is not not-just'</td>
</tr>
</tbody>
</table>

As Ammonius observes, the transposition consists in locating the indefinite negation (i.e. 4.) under the simple affirmation (i.e. 1.), and the remaining indefinite affirmation (i.e. 3.) under the simple negation (i.e. 2.). Thus:

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697 The complete report at *in Int.* p 161, 9-32.

698 *in Int.* p. 186, 27-32. ὁδὲ καὶ ἔκαλεσεν αὐτὰς Ἡθόφραστος ἐκ μεταθέσεως, ὅτι μετατέθεται αὐτῶν ἐν τῇ διαγράμματι ή τάς καὶ ὑπὸ μὲν τὴν ἀπλὴν κατάφασιν τέτακται ἡ τούτων ἀπόφασις, ὑπὸ δὲ τὴν ἀπλὴν ἀπόφασιν ἡ κατάφασις, καὶ καὶ ὃτι μετατεθέντος τοῦ ἱματισμοῦ κατηγορούμενον καὶ τεθέντος τοῦ αἵρεσιν γεγοναν.

699 i.e. the second opposition in this diagram. There is no doubt that this is the diagram referred to. On the one hand, the unquantified contradictions to which Ammonius alludes are those of three-term propositions (e.g. 'a man is just'/"a man is not just"). Besides, they are the unique kind of proposition with indefinite predicate, as we have shown above. See, for instance, Part 1, 4., (iii.1) and (iii.2).
1. A man is just

2. A man is not just

4. A man is not not-just

3. A man is not-just

According to Ammonius, in this new square, Theophrastus discovers (εὑρήκειν) that it is not 3., but 4., the proposition which lies on a logical relation with the simple affirmation (i.e. 1.).

He adds that Theophrastus discovers that 4. follows from 1. (Ἐπεταλέω) and that in every case that 4. is true, 1. is also true, just as 'animal' and 'man'; 'animal' follows from 'man'; for in every case in which 'man' is true, 'animal' is also true (συμβάλλει). According to the logical relations that Aristotle states both at An. Pr. I, 46 and at PeriH. 19b. 22-24, 4. follows from 1., and 2. follows from 3., but these logical sequences are not convertible (so they cannot be equivalences as Bochenski observed incorrectly).

Therefore, the explanation that Ammonius sketches will be, in its complete sense, that Theophrastus names 3. and 4. 'transposed propositions', since if they are transposed, as is indicated, the mentioned logical sequence (i.e. x follows from y, but y does not follow from x) will result in each column.

The other explanation, which is mentioned by Ammonius, is documented in Stephanus' commentary on PeriH., and also in

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700 *in Int.* p. 186, 16-18. καὶ εὑρήκειν οὐτως ἠχοῦσαν οὐ τῆν ἔξ ἀνθρώπου καταγραμμένου κατάφασιν, ἀλλὰ τὴν ἀνάφασιν αὐτήν.


702 *PeriH.* 19b. 22-24 is a difficult text, and the ancient commentators do not maintain complete agreement on its interpretation. However, none of these ancient commentators interpreted the relations in question as equivalences. Cf. Part II, 1. A., 1.1, (i).

703 According to Bochenski (1947), p. 47 "le raiso [of this Theophrastean denomination] serait que les propositions mentionnées doivent être "trasposées" dans le schéma du Per 10, de sorte que pour avoir en ligne verticale deux propositions équivalentes, il faut placer la formule κατὰ μετάθεσιν négative sous la formule "simple" affirmative, et l' affirmative sous la négative." It is clear, however, that 4. is not equivalent to 1., nor 3. to 2..

Alexander of Aphrodisias, Porphyry, Ammonius, and the Anonymous Comm. offer evidence that these relations are entailments (one follows from another). Cf. Part II, 1. A., 1.1, (i).

704 Cf. Stephanus *in Int.* p. 40, 22-8: "There is an indefinite affirmation (ἀόριστος κατάφασις), which Theophrastus called 'from transposition' [ἐκ μεταθέσεως], either because the negative 'not' is transposed away from the 'is', which is an additional element in the predicate, making three elements in all" —i.e. the subject, the predicate and 'is', observes the translator— "to the predicate proper, or because their order is transposed in the diagram;
the *Anonymous Commentary*,\(^\text{705}\) and the *pseudo-Magentinus*,\(^\text{706}\) and refers, as Stephanus explains more clearly, to the point of the position of the negative particle in propositions. Indeed, although Stephanus' report mentions transposed *affirmations*, it is clear that the name 'transposed' is also applied to *negations*, and hence to *propositions* in general, as Ammonius, the *Anonymous* and the *pseudo-Magentinus* take it. Thus, in transposed propositions (for example 3. and 4.) the negative particle or negation is put, by contrast, after the verb *ἐστι* (= *est*, = 'is') and thus it is attached to the name (or indefinite name) which is predicate in the proposition.

The first opinion reported by Ammonius has been preferred by Bochenski as the most likely explanation.\(^\text{707}\) He argues that this first account is more based on the documents, but the fact is that neither of these possible explanations reported by Ammonius is more documented than the other, for Ammonius, like all the ancient commentators, did not have further evidence on this subject.

Ammonius' use of a '(...) ὁ τι [...] ἢ κἂ ὁ τι [...]’ in reporting the possible explanation of this Theophrastean denomination, seems to suggest that he understood these explanations as contrary, and

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\(^{705}\) cf. *Anonymous Commentary* (Tarán, 1978.), p. 71, 1-7: "Aristotle calls these (propositions) for transposition '<indefinite'> because the predicate is indefinite, but those associated with Theophrastus call them 'from transposition' because transposition occurs in their order. For the negation from transposition is placed under the simple affirmation, and the affirmation from transposition under the simple negation; for in this way they will be found to follow one another.'" (Cf. FHSG, 87D, p. 151).

\(^{706}\) cf *pseudo-Magentinus* on Aristotle's *de Interpretatione* (CAG, vol. 4.5, p. xlv, 11-14, Busse): "And these (propositions) from transposition Aristotle himself called 'indefinite', but his pupils, those associated with Theophrastus, 'from transposition' either because the terms of the propositions are transposed, or because the diphthong 'not' < όυ > does not remain with its own terms, or because the whole proposition is transposed." (Cf. FHSG, 87C, p. 151).

\(^{707}\) cf. I. M. Bochenski (1947), pp. 47-48. Bochenski (ibid. p. 48) thinks that the first of these two explanations "est mieux attestée vu l' époque plus ancienne d' Ammonius." And, he adds, the fact that Stephanus cites two possible explanations seems to indicate that he did not know which was proposed by Theophrastus. (Ibid., p. 48). For a position similar to Bochenski, see L. Repici, *La logica di Teofrasto*, Bologna 1977, pp. 66-7.
his report seems to have been taken by Bochenski in this sense. However, there is no reason to suppose that this is the sense of Ammonius' report. Let us note, on the one hand, that both explanations are not incompatible. On the other hand, Ammonius is justifying why he will adopt in his following explanation of 19b. 22-24 the term 'transposed' as a technical name for referring to the propositions with indefinite predicate. Ammonius is justifying his decision, and his argument works, in this case, by accumulative evidence: two reasons for preferring Theophrastus' usage are better than one. In other words, on one or the other explanation, the term 'transposed' is correctly applied to propositions with indefinite predicate. Accordingly, the expression '(...) δτι (....) ἢ καὶ δτι (....)' does not seem to mean 'because of this or because of that', i.e. an exclusive disjunction, but an inclusive one, which allows us to take it as meaning 'because of this and also because that', i.e. because if they are interchanged in the square there will be a determined logical sequence between them and simple propositions, and also because the negative particle is attached to the predicate after the verb 'is' and so an indefinite predicate is generated.\(^{708}\)

Ammonius considers it pertinent to give an explanation concerning the name 'transposed', for he seems to prefer or like this denomination. Besides, according to him, this is not the name that Aristotle gave to the propositions with indefinite predicate:\(^{709}\)

"Of these two unquantified oppositions which have been proposed for us in these propositions which are set out [i.e. those of 19b. 22-24], Aristotle calls the one having a definite predicate 'simple', as it is in itself simpler than the other, and the other 'indefinite', for the

\(^{708}\) It worth noting that William of Moerbeke (cf. Verbeke ed. (1961), p. 304) takes the text in our sense. He says: "Propter quod et vocavit ipsas Theophrastus ex transpositione, quia transpositus est in descripione ipsarum ordo et sub simplici quidem affirmatione ordinata est horum negatio, sub simplici autem negatione affirmatio, et quia transposito finito praedicato et posito infinito factae sunt." (in \textit{app. crit.} : \(\hat{\text{r}}\) \textit{add.Codd.}).

\(^{709}\) in \textit{Int.} p. 161, 5-11. τῶν ὑπὸ γνωμῶν ἐν ταῖς ὡς προκειμέναις ἡμῖν προτάσεως. δίῳ αὐτοίς ὑποβασιλεύοντας ἡμῖν ἐπίδειξιν ἐκ ἄριστην καὶ ἐκ ἀριστοτελῆς ἀπήλθη, τὴν ύπομονὴν τὸ καταγγελθέντος ἔχουσαν ὡς κατ' αὐτὸ τοῦτο τῆς ἐπιστήμης ἀπλωστέραν ὁσιάν, τὴν δὲ ἐντερὸν ἀφράστον διὰ τὸ ἀφράστον ἐννα ὡς ἐν αὐτῇ καταγγελθέντος. ἡ μέντοι ἐπίστασιν αὐτῷ Θεοφραστος ὑνομάζει αὐτὴν ἐκ μεταθέσεως, δι' ἡν ἐξ ἑξῆς ἐρεύμην αἰτίας.
predicate in it is indefinite. However, Theophrastus, the associate of Aristotle, names it 'transposed', and we shall give the reason in the following."

Ammonius grounds his preference not on a disagreement with the name adopted by Aristotle, but on the fact that Theophrastus, as said earlier, discovers the logical relation in the square of 19b. 27-29 when indefinite propositions (i.e. 3. and 4.) are transposed. Ammonius' remark is, however, enigmatic. He says that Aristotle calls propositions with indefinite predicate 'indefinite', but this is attested neither in *PeriH.* nor elsewhere. Equally, Ammonius seems to suggest not only that the name 'transposed' but a certain logical analysis and exegesis on the logic of the indefinite names is due to Theophrastus. This notice does not occur in Boethius, and no allusion is made by Alexander's report of Theophrastus. So, F.W. Zimmermann is right to talk of "Theophrastus' theory of metathesis", because, as he remarks, "Ammonius' account (p. 161 ff.) would suggest that to Theophrastus belonged not only the term 'metathesis' (...) but also the broader framework of ideas of which it forms a part."710

Ammonius' report, however, seems to limit the influence of Theophrastus' discovery to the explanation of what kind of logical relation is found at 19b. 27-29 when the indefinite propositions are transposed. In fact, there is no reason to think that Aristotle does not transpose the propositions here, for he says later (19b. 30) that "This is how these are arranged (as is said in the *Analytics")", and in *Analytics* (I, 46) he certainly transposed them. Accordingly, Ammonius would imply only that Theophrastus was the first in explaining the sense of the logical relations contained at 19b. 27-29, and therefore in giving an important elucidation of the difficult preceding passage at 19b. 22-24. So Ammonius' report could be taken as if Theophrastus already knew that the propositions with indefinite predicate are indefinite because of their indefinite predicate (i.e. because 'not' is placed after 'is' and attached to the predicate, as Stephanus explains it), and he accepted it, but he also added (ἡ καὶ) the characteristic of being

710 Cf. F. W. Zimmermann(1991), p. lxiii. (The term 'metathesis' is used by Zimmermann for 'transposed proposition').
transposed in the diagram (19b. 27-29) and he makes this characteristic a particular sign of his exegesis of 19b. 22-24. (Something which could be counted as another instance of the well-known originality and independent reflections of Theophrastus.)

On the other hand, it is worth noting that to find a new name for propositions with indefinite predicate could have been justified for Theophrastus, because it was a question of nomenclature. In another passage, Ammonius reports that Theophrastus called particular propositions ἀδόραστα, i.e. 'indefinite', and if this is so, Theophrastus faced the difficulty that propositions are 'indefinite' because they are particular, and also 'indefinite' because they have an indefinite predicate. Under these circumstances, it is reasonable to suppose that Theophrastus needed to avoid the ambiguity of naming two different characteristics by the same name (i.e. ἀδόραστος), and this might have prompted in him the need of calling propositions with indefinite predicate (i.e. 3. and 4.) by another name, which he

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711 Theophrastus' characteristics of "freedom" and "undue subservience to any of the schools of Greek philosophy" have been already remarked by W. D. Ross and F.H. Fobes in Theophrastus: Metaphysics, Oxford, 1929. R. Lynch (1972), p. 77, by referring to this metaphysical fragment has said that "Theophrastus shows clearly that he often went beyond Aristotle and sometimes rejected Aristotelian formulations." Probably, the point cannot lead to a generalization. In fact, from this surviving fragment, one cannot deduce a general and habitual criticism of Aristotle's doctrines. As Ross and Fobes observe, "The essay asks many interesting questions, but does not suggest that the author had any better answer to them than the earlier thinkers he criticizes." (p. xxiv). Similarly, A. Laks and G. Most (Theophraste. Metaphysique, Paris 1993) maintain the view of a "position philosophique autonome" in Theophrastus. Marlein van Raalte, Theophrastus. Metaphysics, Leiden/New York/Köln, 1993, (pp. 8-9), has suggested that this fragment of Theophrastus' Metaphysics corresponds to personal notes of the philosopher. By contrast, for Laks/Most (1993), pp. xviii ff., the text in question is explainable as the expression of a radical doubt plus the accepted independent thought of Theophrastus.

712 Cf. Ammonius in Int. p. 90, 12-20: "Particular (propositions) differ from singular ones in that singular ones make their statement about some one definite thing like Socrates, but particular ones, even if they show that they are looking towards some one thing, indicate nothing definite, but are capable of being true of any chance thing, as when we say, 'Some man is just'; for this proposition is true no more aequum of Socrates than of Plato or Aristides. Therefore, Theophrastus is correct in calling the singular definite [Ἀδόραστος] but the particular indefinite [ἄδόραστον]": (Cf. FHSG, 82E, p. 145). There is no textual evidence in Busse for thinking that the name ἀδόραστον should be read ἀ<δ<θ>όραστον, as W. Cavini takes it. (Cf. Cavini (1985), p. 32).
discovered in a characteristic of the diagram that Aristotle proposed at 19b. 27-29.\textsuperscript{13}

According to the scanty evidence on this point, the explanation of why Theophrastus called propositions with an indefinite name in their predicates 'transposed' is clearly something that cannot be determined with certainty. In any case, as far as we are concerned with this point, Ammonius' report of this denomination is enough to make it plausible that Theophrastus intended to interpret the exposition of Aristotle on indefinite names, and therefore that a development on indefinite names could certainly have originated in the ancient Peripatetic school from its very beginning.

(b) \textit{The Stoics and Peripatetics on negation}

The discussion between the \textit{secta Peripatetica} and \textit{Stoica} seems to have been connected also with the theme of indefinite names and verbs. This fact can be assumed from the disagreement that these schools maintained in respect of what is negation. We know that Boethius thinks that an indefinite name is syntactically formed by a definite name and a negative particle, which he always identified with 'non'.\textsuperscript{14} The example largely employed has been: 'non homo', i.e. 'not-man'. When Boethius analyses this syntactical expression, he considers it appropriate to make a passing allusion to the Stoics, who attempt, according to him, to

\begin{footnotes}
\item[13] Besides, this incompatibility of expressions will be more serious (and consequently the attitude of Theophrastus more justified) if it is true that Aristotle also called propositions with indefinite predicate 'indefinite', as Ammonius and also the \textit{Anonymous} and the \textit{pseudo-Magentinus} refer to. This opinion, certainly not impossible, could receive additional support from the fact that Porphyry uses, as Boethius indicates, the same expression to refer to them, though Boethius' point is not that Aristotle called these propositions 'indefinite', but that these (or as he says 'these with indefinite name in their predicate') will be called by himself 'indefinite' in the rest of his exposition, as Porphyry did. Cf. \textit{in Int.} 2, 16-18, p. 62; also Part II, 1., A., (ii.2).
\item[14] The point of the syntactic nature of the indefinite name has been already discussed (above 1.1). Boethius maintains this opinion not only in his double commentary on \textit{PeriH.}, but also in the treatises \textit{ISC} and \textit{DSC}.
\end{footnotes}
attach the negative particle to the name as the expression of a
negation:

si ergo, quemadmodum Stoici volunt, ad nomina negationes
ponerentur, ut esset non homo ambulat negatio, ambiguum esse
posset, cum dicimus non homo, an infinitum nomen esset, an vero
finitum cum negatione conjunctum. sed Aristoteli placet verbis
negationes oportere coniungi, infinita magis verba ambigui
intellectus sunt, an infinita videantur, an cum negatione finita.

Boethius' report of Stoic negation disregards (or perhaps there
was not in Boethius' knowledge) the amply established fact
that the Stoics apply the negation to the proposition, not to
the name in particular, although apparently the result of this
operation will be the denial of the name-subject. For example,
the proposition:

(a) 'Aenepomos βασίλεια / 'a man walks'

is denied by the Stoics thus:

715 Cf. in Int. 2, 26-5, pp. 261-2.
716 Alexander of Aphrodisias (in An. Pr. pp. 401-404) refers to the system
that the Stoics use for denying a categorical proposition. The context of this
allusion is given by the logical considerations that Aristotle makes in An.
Pr. I, 46, (51b-10). Alexander discusses how the Stoics state the negation of
the categorical proposition (he takes two-term propositions like 'a man
walks' and also three-term ones like 'a man is just'). Since in his comments
on PeriH. Boethius is unaware of the mechanism of Stoic negation as
Alexander explained it at in An. Pr., one can assume that Boethius does not
know Alexander's comments on An. Pr. I, 46. This makes more likely that
Boethius does not follow a continuous copy of the commentary made by
Alexander on PeriH., for here a relation to Alexander's own comments on
An. Pr. I, 46 would be expected. (Cf. also Part II, 1., A., (d.2), where Boethius
seems to imply that he has only brief material (sententia) stemming from
Alexander).
717 The fact has been already established clearly by B. Mates, Stoic Logic.
Berkeley/Los Angeles, 1961, p. 31
718 At first glance, indeed, all what one can see in a Stoic negation is an
expression like oik Aenepomos βασίλεια, where the negative particle oik seems to
deny the name Aenepomos, and not the whole sentence. Probably, Boethius
faced cases like this, and hence it is explainable why he says that the Stoics
apply the negation to the name. The fact is also remarkable that the Stoics
did not use any specific nomenclature to express their examples of
negation.
The point of the Stoics presumably is, as I. Mueller observes,\textsuperscript{719} to introduce a drastic simplification of the various linguistic mechanisms that exist, in Greek as in English, for negation, but Boethius does not seem aware of this. According to Boethius' commentary, the Stoics sustain a confused point of view about this matter, and they incur an ambiguity in attempting to express a negation by denying the name, because if they were right, in the proposition 'non homo ambulat', the expression 'non homo' could be interpreted as an indefinite name or as a definite name with an added negation, with the result that the mentioned proposition would be an affirmation in the first case, and a negation in the second.

The commentary states that, on the contrary, Aristotle considers it convenient (\textit{placet}) to attach the negative particle to the verb to constitute a negation, and although this practice could make the difference between an indefinite verb and a negation more ambiguous, Aristotle's position is not ambiguous because it establishes, according to Boethius, in a univocal way, that the expression 'non ambulat' taken with a subject 'homo' composes the proposition 'non ambulat homo', which is a negation, not an affirmation of an indefinite verb. Accordingly, when Aristotle denies this simple affirmation, he does not say that the subject 'homo' does something indefinite (sc. non ambulare), but that it does not do something definite (sc. ambulare). In other words, as it is explained by Boethius' commentary, the indefinite verb exists only when it is isolated, but not when it forms a proposition.\textsuperscript{720}

According to Boethius' commentary, there are two and only two ways of expressing the negation in the simple or predicative proposition:\textsuperscript{721}


\textsuperscript{720} Cf. above 2.1, (iii) \textit{Indefinite verb and negation}.

\textsuperscript{721} The two possibilities which are considered by Boethius' commentary represent the two relevant cases arising from 6 permutations of order (i.e. those produced by 3 things: \textit{οὐκ}, \textit{ἀνθρώπος}, and \textit{βασίλει}) for the negative particle is attached either to the name or the verb. The complete list of these 6 permutations is thus: (i) \textit{οὐκ} \textit{ἀνθρώπος} \textit{βασίλει}, (ii) \textit{βασίλει} \textit{οὐκ} \textit{ἀνθρώπος}, (iii) \textit{ἀνθρώπος} \textit{οὐ} \textit{βασίλει}, (iv) \textit{οὐ} \textit{βασίλει} \textit{ἀνθρώπος}, (v) \textit{βασίλει} \textit{ἀνθρώπος} \textit{οὐ}, (vi)
Aristotle states that the negation of ὄνομα καὶ λόγος is (b), not (a). But, at the same time, his position on negation permits him to define (a). Now, to define (a) he requires the existence of indefinite names and verbs, since (a) is defined as an affirmation with indefinite name.

In this part of his commentary, Boethius does not introduce the case of propositions with three terms, i.e. when 'is' is added as a third element, but it can be shown, accordingly, that the doctrine of the indefinite names is also the theoretical support of its syntactical structure. In fact, if Aristotle placebo to attach the negative particle to the verb, then the six different positions that the negation can take in the proposition (i) ὄνομα καὶ λόγος ἐστι will be:

(a) S P is: ὄνομα καὶ λόγος οὐ̄κ ἐστι
(b) S is P: ὄνομα καὶ λόγος οὐ̄κ ἐστι δικαίος
(c) P S is: δικαίος ὄνομα καὶ λόγος οὐ̄κ ἐστι
(d) P is S: δικαίος οὐ̄κ ἐστι ὄνομα καὶ λόγος
(e) is S P: οὐ̄κ ἐστιν ὄνομα καὶ λόγος δικαίος
(f) is P S: οὐ̄κ ἐστι δικαίος ὄνομα καὶ λόγος

In these 6 possibilities, (iii) and (iv) represent the Peripatetic negation; (i) and (ii) are cases of affirmation with indefinite subject; and (v) and (vi) are elliptical cases in which the negation is posed at the end of the categorical proposition. The commentary does not consider this possibility to be relevant in analysing the categorical proposition (i.e. a declarative sentence). However, the existence of this third position is possible in the Greek language, as A. Moorhouse (cf. Studies in the Greek Negatives, (1959), p. 86) has shown: "The positions in the sentence where I shall note the occurrence of the negative are (a) initial (both absolute and modified); (b) second; (c) medial (i.e. all positions not otherwise covered); (d) penultimate; (e) final. A large number of sentences consist of only three units, that is two in addition to the negative (so Aristoph. Nub. 125 σοῦ δ’ οὐ̄ φροντίω), and in these the number of positions is small, since (b), (c), (d) coincide." However, even though an expression like: 'βαδίζει ὄνομα καὶ λόγος οὐ̄' can be counted as an expression of a Greek phrase (though, perhaps, an elliptical construction), it cannot be counted as a well-formed expression of the categorical negation.

722 These six positions correspond, as Ch. Kahn also sees, to the six permutations of order of six things (3! = 1*2*3 = 6), (Cf. Ch. Kahn The Verb Be in Ancient Greek, in The Verb Be and its Synonyms, Dordrecht/Boston, 1973, p. 426).
Now, given that Aristotle says that an affirmation has one and only one negation, he discards the following propositions, in any order of their terms, as negations of (i):

(g) οὐκ ἄνθρωπος ἐστὶν ὁ δίκαιος
(h) ἄνθρωπος ἐστὶν οὐ δίκαιος

Here, as well as in the case of the propositions of two terms, Aristotle will be able to determine again what (g) and (h) are because of his notions of indefinite name and verb. In the first case, there will be an affirmation with indefinite name as subject, while (h) will be an affirmation with indefinite predicate, or 'transposed' as Theophrastus called it. Again, the doctrine of the indefinite names is the ground at this point too, since it is a principle of it that there are not indefinite verbs in propositions (but only indefinite names).

The passage quoted above is far from containing a complete explanation of what is negation for the Stoics, because its main concern is to explain that the Aristotelian negation is not ambiguous, and that the syntax and semantics of the indefinite names and verbs square with this operation and complement it. The context of this passage is the categorical proposition expressed in spoken Greek and Latin. In this context there could be more room for ambiguity in written expressions. If we think that Boethius faced expressions like 'non homo ambulat' and

723 This context is given by all the possible permutations of order for propositions of two terms and those of three terms. Kahn (1973), p. 426, and also W. Cavini (1985), p. 17, have shown the list of the three-term propositions, to which we can add the other one (i.e. 7. and 8.). The possible permutations for 'S is P', are as follows:

1. S P is: ἄνθρωπος δίκαιος ἐστὶ /homo iustus est
2. S is P: ἄνθρωπος ἐστὶ δίκαιος /homo est iustus
3. P S is: δίκαιος ἄνθρωπος ἐστὶ /iustus homo est
4. P is S: δίκαιος ἐστὶ ἄνθρωπος /iustus est homo
5. is S P: ἐστὶν ἄνθρωπος δίκαιος /est homo iustus
6. is P S: ἐστὶ δίκαιος ἄνθρωπος /est iustus homo

To these, as we say, the permutations of the two-term propositions should be added. Accordingly, there will be another two variations:

7. S P: ἄνθρωπος βαδίζει /homo ambulat
8. P S: βαδίζει ἄνθρωπος /ambulat homo
'οὐκ ἀνθρώπος βασίζει', and consider that the Stoics seem to have applied no rule of formation to their negations, but, as Mueller observes, relied on the context to indicate the logical extent of a negation,\textsuperscript{724} the concern of denying a simple proposition was by itself a non-evident matter and it needed to be established in an univocal way.

The fact of attaching a negative particle to one of its terms or to the whole proposition to express the logical force of negation requires a complete settlement of grammatical and logical rules and definitions. Boethius' expression 'but Aristotle considers it convenient to attach negations to the verbs' is both an indication that this set of rules and definitions has been established in univocal terms by Aristotle and that it has been done historically. This decision of attaching the negative particle to the verbs taken by Aristotle seems to be consonant with the other historical notice given by the commentary concerning Aristotle as the first in establishing a coherent position about the nature of the indefinite names and verbs.\textsuperscript{725} Thus, the commentary seems to suggest that Aristotle in \textit{PeriH.} has stated, first of all, a syntactical operation for denying a simple proposition (with and without 'is') in the Greek language according to his definitions of indefinite name and verb.

The point shown by Boethius' commentary is that the simplest scheme of negation is established in relation to the nature and predication of indefinite names and verbs, and thus the question of why Aristotle in \textit{PeriH.} defines indefinite names and verbs and not simply names and verbs is explained by this reason: because indefinite names and verbs are required to state a consistent mechanism of negation in its simplest expression. In fact, the negation of propositions like ἀνθρώπος βασίζει, that is, those compounded by name and verb, (or 'two-term ones'), is the first and most basic point to be established; only once the negation of these propositions is established, the next ones, those in which 'is' is added as a third element (or 'three-term ones'), can be


\textsuperscript{725} Cf. in \textit{Int.} 25-31, pp. 52-53; and in \textit{Int.} 2, 5-14, p. 63. And also our earlier chapter 3., \textit{Antiqui et antiquiores.}
produced consistently. It is important to realize, then, that the syntactic consideration of negation that Aristotle presents at *PeriH.* is based on his definitions of indefinite name and verb. Hence, it seems that the existence of these indefinite expressions as a fact in language must be one of the non-declared axioms of Aristotelian logic.

The reason that Boethius gives for rejecting this position of the Stoics, implies that the theme of indefinite names must have been a theme directly or indirectly alluded to in logical discussion between Peripatetics and Stoics. In fact, what this passage shows is only a part of the whole, which seems to have included comprehensive books on this topic, as Philoponus reports in respect of the hypothetical syllogisms,\(^\text{726}\) and Alexander of Aphrodisias attests by means of his discussion of some semantic interpretations of negation in his commentary on Aristotle's *Prior Analytics*,\(^\text{727}\)

(c) **Alexander's testimony**

Alexander of Aphrodisias is introduced by Boethius' commentary as the source (or perhaps the chief source) in which the *semantic* equivalence between propositions with two terms (e.g. 'a man walks') and those with three terms (e.g. 'a man is just') is considered.\(^\text{728}\) According to Boethius' report, this equivalence is

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\(^\text{726}\) If one considers what B. Mates (1961), p. 32, has already observed, namely, "There would be much more to say about them [atomic propositions] if the Stoics' works were extant, for Chrysippus alone wrote at least one book on each kind of atomic propositions and three on negation (see Diog. L. *Vitae* VII, 190)\(^\text{a}\), one could be more assured of the possibility, at least, of the existence of monographs on the subject of indefinite names in ancient Peripatetic scholarship as a reaction to Chrysippus' works on negation.


\(^\text{728}\) The context in which this passage referring to Alexander is introduced is that of a question: dubitabit autem aliquis an sicut ex infinito verbo fieri adfirmatio non potest, sed semper negatio ex hoc praedicamento fit, ita quoque si eadem propositio solvatur in participium atque verbum, an ex infinito participio possit adfirmatio fieri: *in Int.* 2, 29-3, pp. 315-6. Boethius says that a negation will be produced in any proposition where expressions like 'does not read', 'does not run', etc., occur, i.e. where an indefinite verb occurs. Now, since every proposition of two terms can be resolved into a proposition with participle and the verb 'is' without altering its
possible by transforming the verb predicated in a two-term proposition (e.g. 'a man runs') into the corresponding participle plus the verb 'is' (i.e. 'a man runs' into 'a man is running'). Now, since this exposition includes the example of a syllogism that Plato made in *Theaetetus*, it is clear that Boethius has also taken from Alexander the syllogism mentioned, which illustrates that this transformation allows us to infer correctly a conclusion from two negative premisses if one of them is expressed by an indefinite participle and the verb 'is'. In fact, this is what Boethius means when he writes *hoc* in the following passage:729

signification, the question will arise whether or not the negative quality of a negation will be maintained when a negative proposition is resolved into participle and the verb 'is'. For example, 'a man does not walk' into 'a man is not-walking' (by replacing 'does not walk' by 'is not-walking'). The alternative is then the following: either this replacement maintains the quality of the initial proposition or its quality is transformed into its contrary. The surprising result is that the quality changes and, consequently, a negation of two terms can be transformed into an affirmation of three terms by replacing the indefinite verb by an indefinite participle and the verb 'is' (e.g. 'a man does not walk' is equivalent to 'a man is not-walking'). A proof of this, as Alexander presents it in Boethius' report, is that some, Plato (at *Theaet.* 186c. 5—e. 10) among them, have proposed some conclusive syllogisms with two negative premisses, which is impossible according to Aristotle's laws of syllogism, but possible if (at least) one of these negative premisses is transformed (by the method indicated) into an affirmative one. (Cf. further details Part II, 2., (ii), (iii), (iv)).

729 *in int.* 2, 8-15, p. 317. "And certainly Alexander of Aphrodisias considers this and also many others. In fact, they say that there cannot be an affirmation with indefinite verb, because the verb 'to be', just as an indefinite verb, states immediately the negation in full, in the same manner as the verbs which contain the verb 'to be' do not make an indefinite affirmation, but rather a negation." The passage is difficult, and the apparatus shows hesitations and corrections trying to get the correct sense. But it is clear that the first term of comparison must be the verb 'to be', and the second term the indefinite verb. If not, there is no comparison at all, since the indefinite verb and the verb which contain the verb 'to be' are alike. The point is therefore that the verb 'to be' in its negative form (i.e. 'is not') states the negation as an indefinite verb ('does not read', 'does not read', etc.), because the indefinite verb contains the verb 'to be'. That this is the sense becomes clear from the following passage (*ibid.*, 15-22, p. 317): si quis enim sic dicat homo currens non est, nullus hanc dixerit adfirmationem. si quis vero sic homo non currit, idcirco nec haec propositio adfirmatio est quoniam currit est verbum intra se continet et sicut ad est verbum iuncta particula negativa non facit adfirmationem, sed potius negationem, ita quoque ad illud verbum iuncta negatio quod intra se continet est verbum plenam perficit negationem. (The emendation of the text in *PL* 64, 551 B-C seems plausible: Idcirco enim aiunt non posses fieri ex infinito verbo affirmationes, quoniam sicut ad verbum est iuncta particula negativa mox totam perficiet negationem, sic etiam verba quae sunt
Alexander seems to be introduced, therefore, as one (or the chief) of many other authors that affirm that there is no indefinite verb in affirmations.\(^{730}\) According to this, Alexander should have maintained too what is indicated by the following phrase of the passage, i.e. that the indefinite verb denies the proposition of two terms in the same manner as the expression 'is not' in the three-term propositions does. This equivalence is explained because the verb predicated in a two-term proposition contains already the verb 'is' \((\text{in sese com} \text{plectuntur verbum est})\). Thus, one can infer that an indefinite verb will contain an 'is not', and this 'is not' states the negation (not an indefinite affirmation) just as any other indefinite verb does.\(^{731}\)

As the passage shows, Alexander of Aphrodisias is referred to in connection with a central point of the doctrine of the indefinite names, in particular with the predication of the indefinite verbs. The sense of the information taken from Alexander is clearly concordant with the position that Boethius' commentary develops, so that, no doubt, Alexander agrees with the essentials of this doctrine. However, the presentation of this, as Boethius strives to do it, namely, by showing that Aristotle

\(^{730}\)Although Boethius says also that many other authors have considered the point, he does not identify them, and more likely Boethius is following Alexander when he refers to this information. The sense of the expression that Boethius uses "and this is considered by Alexander of Aphrodisias and also many other [authors]" could refer perfectly well to commentators before Alexander. They could have developed some or most of the reasons leading to the proof that there are no indefinite verbs in affirmations.

\(^{731}\) Cf. also above Part I, 2.1, (iii) \textit{Indefinite verb and negation.}
intends to determine the number of all the categorical propositions and that in this attempt he assumes that there are not indefinite verbs in propositions, seems to be not entirely implied by this information that Boethius takes from Alexander.\textsuperscript{732} In other words, the passage above cited seems to be sufficient evidence to state that Alexander maintains the same position as Boethius' commentary, but not to state that Alexander maintains the same \textit{formulation} as Boethius' commentary does.

The direct information that can be extracted in this respect seems to be insufficient to ascribe that formulation to Alexander. For example, the passage in Ammonius' \textit{in Int.} where Alexander maintains the essential point of the doctrine of the indefinite names, but in terms slightly different to those used in Boethius' report.\textsuperscript{733}

"And clearly he [sc. Aristotle] says this\textsuperscript{734} in respect of the simplest affirmation, that which consists of only a subject and a predicate, which he also proposes to discuss: so that it is not necessary to inquire how this is consistent with either those propositions in which a third [term] is predicated or with the modal ones. However, how does he add, in the following line, that without verb not only there is no affirmation but also no negation, if it is true that the negations are generated from indefinite verbs? Well, it must be said, as Alexander says, that the indefinite verb and what is denied of the subject (τὸ τοῦ

\textsuperscript{732} It is worth noting that this presentation is also valid in its converse: there are no indefinite verbs in \textit{propositions}, because the list of all the categorical propositions produced by the calculus shows the non-existence of indefinite verbs in propositions.

\textsuperscript{733} cf. Ammonius, \textit{in Int.} p. 157, 9-24. Λέγεται δὲ τούτο δελονντί περὶ τῆς ἀπλούστης καταφάσεως τῆς ἐς ὑποκειμένου μονὸν καὶ κατηγορούμενου, περὶ ής πρόκειται αὐτὶ νῦν ἀδιάκαιν, ἐστὶν οὐ χρὴ δεῖται πᾶς οἱ ἐφορμώσας τούτῳ ἡ τὰς ἐκ τριτοῦ προσκατηγορούμενοι καταφάσεως ἡ τὰς μετὰ τρόπον, ἀλλὰ πᾶς ἐξῆς τοῦτος ἐπεφέρε τὸ ἀνεύ ῥήματος μηδεμένων εἶναι οὐ μόνον κατηγοριμένοι ἀλλὰ καὶ ἀπόφασιν, ἐπεὶ τὰς ἀποφάσεις ἐκ τῶν ἀρχῶν συμβαίνει γίνεσθαι ρημάτων ἢ ῥητῶν, οπεὶ Ἀλεξανδρὸς φησιν, ὅτι τὸ ἀρχῶν ῥῆμα καὶ τὸ τοῦ ὑποκειμένου ἀποφασκόμενον καὶ τὴν ἀπόφασιν ποιοῦν τῷ μὲν ὑποκειμένῳ τὰ αὐτὰ δυτικα τυχανοὺς, τῇ μὲν τοῦ σχέσα διαφέρουσι πιὸ ἀληθινῷ τὸ γοῦν 'οὐ βαδίζει καὶ' εἰσὶν μὲν λεγομένων ἀρχῶν εἰ το ρήμα ἦν τι θεωρούμενον καὶ συδεν μέρος καὶ 'εἰσιν σημαντικὸν ἔχοι, καθάπερ εἰρητὶ πρὸτερον, ἐν μὲν τῇ ἀποφάσιν τῇ λεγομενή συμφράτης οὐ βαδίζει οὐκ ἐν ἐπομεν ἀκριβολογεῖται, μεταξύομεν τῷ οὐ βαδίζει, ῥῆμα εἶναι ἀρχῶν, ἀλλὰ μᾶλλον ρήμα καθ' εἰσὶν μὲν ὑποκειμένῳ ἀποφασικῶς κατηγορούμενον καὶ διὰ τοῦ ἀρνητικοῦ μορίου διακρινόμενον αὕτη, ὡς εἰναι κατέχει μὲν ἦν τοι ὡς ἦν ἀλλ' ὡς δύο λαμβάνεσθαι (τὸ ὅπις υγιαίνει) τοῦ ἀρνητικοῦ μορίον τὸ διακριθεῖ τὸ κατηγορούμενον ἀπὸ τοῦ ὑποκειμένου ἐμφανόντος.

\textsuperscript{734} i.e. 19b. 10: "So every affirmation will contain either a name and a verb or an indefinite name and a verb". (Ackrill (1963)).
The point reported by Ammonius corresponds to that emphasized by Boethius, according to which the indefinite verb seems to be the negation of the proposition and at the same time the indefinite verb.\(^{736}\) Thus, while in expressions like 'ἀνερωπος ἑαύτης' the verb ἑαύτης is simply the verb and the predicate of the subject, in expressions like 'ἀνερωπος οὔ ἑαύτης' the expression 'οὔ ἑαύτης' seems to be ambiguous, since it is, in Ammonius' report, what is denied of the subject and what makes the negation. Equally, Alexander maintains that an indefinite verb differs from a negation by ὀξεος, i.e. by relation, because the indefinite verb is such a verb when is by itself (καθ ἑαυτό). Indeed, Alexander adds, in a proposition like 'ἀνερωπος οὔ ἑαύτης' the expression 'οὔ ἑαύτης' is rather a definite verb that is predicated negatively of the subject, and therefore it is not one thing, but two. Hence it must be understood that, in the proposition there exists a subject, a definite verb, and a negative particle separating these two elements.

\(^{735}\) The expression written in brackets by A. Busse (τὸ οὔχ ὑψαίνει), with a certain basis in the MSS, does not seem helpful to understand what Ammonius says; and, at any case, the change of example of indefinite verb leads rather to confusion. The expression, if it is genuine, seems to be rather 'οὔ ἑαύτης', which is the example used by Ammonius in this passage.

\(^{736}\) in Int. 2, 4-9, p. 261. In hoc illud quoque noverat quod verbum infinitum et negationem significaret et infinitum verbum. Id enim quod dicimus non ambulat et infinitum verbum est et negatio, sed per se quidem si dicatur simplex sine aliquibus aliis adiectionibus infinitum verbum est.
The reports that Ammonius and Boethius give on this point are different only in the terms employed, but clearly both coincide in their doctrinal terms, since both imply that the indefinite verb is such a verb when it is not compounding a proposition. Therefore, Ammonius' passage confirms that Alexander is a source for Boethius in respect of the doctrine of the indefinite names. However, none of these reports gives enough evidence to ascribe the presentation that Boethius has made of this doctrine to Alexander. According to our scanty evidence, this ascription does not seem possible in its entirety. However, two different notices from Alexander's commentary on Prior Analytics show Alexander's familiarity with two essential concepts of Boethius' presentation of this doctrine: the idea of a generation and that of a calculus of the categorical propositions.

It has been noticed already by some scholars that Alexander in commenting on An. Pr. maintains the idea that the second and third syllogistic figures are generated (ἡ γένεσις) from the first figure by conversion of the major and the minor premises respectively. As A. Lloyd sees correctly, Alexander here maintains the view that the first figure is first because it generates the others. Alexander also implies that this first figure is perfect (τὸ θέλειν) and more authoritative (κυρίωτέρον) than the second and third ones. Alexander at in An. Pr. does not generate categorical propositions as it is seen in Boethius' commentary on PeriH., but syllogistic figures: however the idea underlying in both generations, namely, that what is perfect and first generates what is more imperfect and secondary, makes it difficult not to think of a common idea for both contexts.


738 “For each of the two premises in the first figure, when converted, produces one of these figures, as we have already said —when the major is converted, the second figure is generated and when the minor the third.” (Cf. in An. Pr. p. 94, 10 ff.; and also p. 48, 10 f. And see J. Barnes et al. (1991), p. 109, n. 41).

739 A. Lloyd (1990), p. 23.

740 Since Boethius comments on this generation (nascere) at De Syll. Cat. 812D-813B, the objection could be raised that Boethius himself should have made this relation. However the point seems to be no more than another
Alexander might have maintained a general conception about generation of logical elements: the perfect and simple elements generate what is more complex and able to be reduced. The idea might be a common belief for him and other "modern Peripatetics", as Themistius implies, and it might play a role similar to the one that harmony plays in post-Renaissance logicians: a doctrine is correct, but it is preferable if it expresses harmony among its constitutive parts. A second feature of Alexander's comments on An. Pr. also allows us to think that his commentary on PeriH. contained or suggested the presentation that Boethius makes of the doctrine of the indefinite names: namely, the fact that Alexander has outlined a calculus of the categorical propositions in order to construct the syllogisms. It makes him the oldest author of whom we could assume that he outlined a calculus of the number of the categorical propositions in commenting on PeriH..

instance of the fact that Boethius is rather translating Greek material and he has not intended at this first stage of his work to make relations of content, even when these relations are obvious.

741 As J. Barnes et al. (1991), p. 109, n. 41, has observed, Themistius (Traité de Thémistius en réponse à Maxime au sujet de la réduction de la deuxième et la troisième figures à la première, in La Transmission de la philosophie grecque au monde arabe, A. Badawi. Paris 1968, p 170) reports that the idea that the second and third figures are generated from the first is neither in Aristotle nor Theophrastus nor Eudemus, "mais elle provient des peripatéticiens modernes", but it is "très juste".

742 Since H. Macony (1985), pp. 95-98, has raised the question of whether Alexander was or not taking this generation of the syllogistic figures as a criterion of correctness in logical reasoning (see also A. Lloyd (1990), pp. 21-23), it could be important to note that 17th c. philosophers valued 'harmony' as an element to assess theories, though not as one proving that a theory is correct. Let us note, for example, the following text by William Leibniz: Hi sunt modi figureae IVtae, quibus addo Celanto et Colanto. Erunt simul 6 modi (...). Imae sunt 6. Modi IIdae 6: (...) Modi IIIiae etiam 6. (....) Ita ignota hactenus figurarum harmonia detegitur, singulae enim modis sunt aequales. "These are the moods of the fourth figure, to which I add Celanto and Colanto. There will be, equally, six moods (...). The moods of the second figure are six (...). And the moods of the third figure are also six. In this way, the harmony of the syllogistic figures, which was unknown up to now, is revealed, for each figure is alike in respect of the moods." (William Leibniz De arte combinatoria, p. 52, §27; in Die philosophischen Schriften, vol. iv, C.J. Gerhardt Ed., 1960). Like 'harmony' here, 'generability' could be an aesthetical criterion in Alexander and his immediate predecessors, and it could be an implicit idea of what they valued as a 'fine' logical doctrine.

743 The text has been discussed above, and it is the most probable origin of the later development made by Syrianus and Proclus in the school of Athens. Cf. above (iii. 3) The arithmetical calculus of the number of the categorical propositions. (Cf. also Part II, (i) General considerations).
The above suggests that Alexander's commentary on *PeriH.* is at the basis of both the doctrine of the indefinite names and the *presentation* made of it in Boethius' commentary. One cannot think, however, that here Boethius' commentary reflects directly Alexander's comments on *PeriH.* There are reasons to think that Boethius gives us rather a reworking of that presentation. Let us note, firstly, that Boethius does not present Alexander as the author whom he follows in formulating the doctrine of the indefinite names. The unique reference to Alexander on this concern is that which we have quoted above. In that passage Boethius properly introduces Alexander as an authoritative commentator who, together with many others, has considered some points concerning the predication of the indefinite verb, which Aristotle did not consider. Secondly, the passage in which Alexander is named implies that Alexander himself found this doctrine already in a certain degree of development when he commented on it. The evidence of this traditional line of teaching makes it difficult not to think of a later reworking of Alexander's own exposition. Thirdly, it seems possible to identify Alexander's peculiar concepts and formulae by which he commented on these points, and thus it seems possible to distinguish his own analysis from that which Boethius presents. In fact, in the passage in which Alexander is referred to by Boethius, there occur the following formulae: (i) *verba quae in sese complectuntur verbum est*; (ii) *'currit' est verbum intra se continet*. These formulae, which have been used by Boethius in this only place of his Book Four, come to replace his normal terminology of calling verbs other than the verb 'to be' simply 'verbs'. Indeed, these formulae are absolutely absent from Boethius' presentation of the doctrine of the

744 At least not as Boethius presents Porphyry, or even Alexander himself, when he states the logical consequences of simple, privative and indefinite propositions with their help. There, Boethius declares that he will follow Porphyry (*in Int.* 2, 8, p. 276), and Alexander (*in Int.* 2, 8, p. 292) in their complete exposition of these logical sequences, and Boethius here, if he does not reconstruct by logical deductions a great part of this material, seems to follow a more continuous material. Cf. Part II, 1., A., (ii), (ii.1) and (ii.2).

745 *in Int.* 2, 22-2, pp. 317-8. Aristoteles autem non videtur ista discernere sed similiter arbitrari, sive cum participio ponatur est verbum sive sine participio verbum illud quod verbum est intra se claudit atque complectitur.

746 The complete passage at *in Int.* 2, 7-2, pp. 314-318.
indefinite names. The formulae in question must proceed from Alexander, and it confirms not only that he maintains the essential principle of the doctrine, but gives also support to the assumption that Boethius' presentation of it does not directly come from Alexander's exposition, but from an intermediate reworking on it. So the point seems to be the following: when Boethius cites literally Alexander, one discovers that the presentation of the doctrine cannot be a literal translation of Alexander's comments.

The above seems to indicate that Boethius does not take his presentation of the doctrine of the indefinite names directly from Alexander's exposition. This result is a serious obstacle to the belief of J. Bidez that Boethius also had direct access to the commentary of Alexander. The point rather leads us to ask for the immediate source that Boethius uses for his full presentation of the doctrine. As we have noted, Boethius does not say whom he follows in presenting the whole of the explanations on indefinite names and verbs, and our analysis arises from this point. However, the results seem to indicate that this direct source must be a further version of Alexander's exposition of this topic. J. Bidez, P. Courcelle and J. Shiel agree with the idea that

747 In any case, the formulae are completely congruent with the requirement of the doctrine, since (as explained above) Alexander's point is that the predicate of a proposition of two terms, which is always a verb, can be expressed by a participle plus the verb 'is', and therefore the simple verb, or the indefinite one, will contain either 'is' or 'is not'. This explains, in Alexander's opinion, why an indefinite verb transforms the predication into a negation—not into an indefinite affirmation. Cf. also above 2.1, (iii).

748 It is worth noting that these formulae occur later (Book Five, cf. in Int. 2, 29-1, pp. 405-6; and also in Int. 2, 24-30, p. 397; 7-21, p. 401), and become common in Boethius' account of modal propositions. But the formulae are common here because they are prompted by Aristotle's text (21a. 38-21b. 4: τῶν συμπλεκομένων = eorum quae conlectuntur).

749 Cf. also here above 5., (b); n. 716. And Part II, 1., A., (ii.1), (d.2).

750 According to J. Shiel (1990), p. 358, this was sustained by J. Bidez in Unpublished Papers, cahier 16, 535-6.

751 Cf. J. Bidez Boèce et Porphyre, in Revue belge de Philologie et d' Histoire, N°2, 1923, p. 198. "Cet ouvrage de Porphyre [the commentary on PerlH.] est perdu, mais Boèce nous fait savoir qu' il s en est copieusement servi pour composer ses deux commentaires du même traité." Bidez has cited also C. Prantl's Geschichte der Logik (Leipzig 1855, p. 680, n. 74) in support of this view.


753 cf. J. Shiel (1990), p. 358
Boethius' principal source is Porphyry, although they differ from one another in respect of how Boethius had access to this source. J. Bidez thought that Boethius had direct access to Porphyry's commentary on *PeriH.*, while Courcelle and Shiel claimed that this access was indirect. However, Shiel and Courcelle disagree one with another in interpreting certain allusions that Boethius makes to Syrianus. These allusions suggested to Courcelle the hypothesis that Boethius followed Ammonius' commentary on *PeriH.*, while Shiel suggested that "Boethius was not following an exact or complete copy of Porphyry's work", but marginal notes "from some Greek book later than Porphyry but anterior to Ammonius." Courcelle's hypothesis has been rejected solidly by many scholars and we also have shown many instances where

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754 *ibid*, p. 358
755 As Shiel observes (1990), p. 358, Courcelle derived this conclusion from *in Int.* 2, 27, 293. In this part of the text, in effect, Boethius reports that Porphyry says that in his time and also earlier (he mentions Hermimus, Aspasius, and Alexander), there were many attempts to explain the doctrines of *An. Pr.* I, 46, where a relation between simple, privative and indefinite propositions is presented by Aristotle. According to Porphyry, these commentators contradicted one another, so that this book of *Analytics* was considered to be unexplainable and they forgot its doctrines. Shiel refers to Courcelle's book *Les Lettres Grecques en Occident de Macrobe à Cassiodore*, 1948 (= P. Courcelle (1969), p. 28).

756 Courcelle interpreted the occurrences of post-Porphyrian authors (sc. Syrianus) as due to Boethius' dependence on Ammonius' commentary on *PeriH.*. He argued that Boethius' commentaries had been written between 500 and 524, and for that time the school of Athens had decayed by Proclus' death (i.e. 485). Accordingly, Alexandria, where Ammonius, (Proclus' disciple), taught ever since, was transformed into the centre of philological, medical and philosophical studies. Courcelle showed a series of textual parallels, but these, as he himself saw, implied only a common source. Then, Courcelle proposed that: at *in Int.* 2, 9, p. 361, the corrupt word *audivimus* in the phrase *sicut audivimus docet*, should be emended thus: 'sicut *Ammonius* docet'. Courcelle knew that the complete absence of the name *Ammonius* in Boethius' commentaries on *PeriH.* (and even in the rest of his logical commentaries) was the main objection that his hypothesis had, but this emendation made it more convincing. Therefore, Courcelle rejected the previous emendation that K. Meiser had made in his critical edition of Boethius' commentaries to *PeriH.*: in fact, Meiser had proposed the reading: 'sicut *Eudemus* docet'. (Cf. Meiser (1877-1880), Praefatio, p. iv).

759 See especially Shiel (1974), and Tarán (1978). Shiel's rejection is particularly significant. Shiel (1974), pp. 14-17, proved that Meiser's emendation was correct, because the doctrine in question is founded in some fragments of Eudemus. So, in fact, in Alexander's *Commentary on Topics*, p. 69, 13-23. Also Tarán (1978), p. xvii, cites Eudemus fr. 25 (= F.
it fails. Shiel's hypothesis seems objectionable in implying a unique Proclan codex, but it seems to be safe in claiming that Boethius follows post-Porphyrian material, and so it seems to be helpful in clarifying our present difficulty. In fact, the material which Boethius takes over (a post-Porphyrian but a non-Proclan one) could have contained this further version of Alexander's comments, and even the same presentation of the doctrine of the indefinite names as Boethius gives it in Book Four. This post-Porphyrian material could have been based on Porphyry's commentary on *PeriH.* or have been largely derived from this exposition. And thus, it seems to be safe to conclude that this reworking of Alexander belongs to Porphyry.

It is worth recalling, however, that Boethius does not mention Porphyry at any stage of this exposition, and his name only occurs later on to preside the logical arrangement of simple, privative and indefinite propositions, and thus his name is omitted from the first self-contained unity of Book Four, which is devoted to introducing the doctrine of the indefinite names. However, this fact rather agrees with our results: Porphyry reworks a doctrine in respect of which he has no authoritative opinion but only a general agreement. Plausibly, then, the absence of his name is due to his tacit acceptance of this Peripatetic doctrine. Accordingly, Boethius limits himself to setting out as clearly as possible the doctrine which he accepts by translating it faithfully from his Greek material.

This seems to be, therefore, the safest explanation to give in respect of the sources of the doctrine of the indefinite names: its last formulation belongs to Porphyry, but it was developed earlier by Alexander and many other Peripatetics and even, presumably, not unknown to Theophrastus and the Peripatos.


760 Cf. above 4., (iii. 3), (c) Syrianus' *calculus and the school of Proclus in Athens*.

761 On the other hand, the feature recognized by Courcelle (1969), p. 283, which is accepted by Shiel (1990), p. 358, that "Boethius regularly ends the exposition of their theories [i.e. Alexander of Aphrodisias, Aspasius and Herminus] with an opinion from Porphyry" does not work in this case, i.e. when Boethius presents the doctrine of the indefinite names in Book Four, Porphyry is not named at all, as we have noted.
(ii) The decline of the doctrine of the indefinite names in Ammonius' commentary

As the point (b) shows above, the doctrine of the indefinite names, as presented by Boethius' commentary, comprehends the earlier theory of negation. In this theory, the generation of the negative categorical proposition seems to have occupied a section of its own. Ammonius' and Boethius' reports indicate that Alexander concentrated his attention on this aspect of the theory. In spite of this evidence, the generative aspect in constituting a negation has been a theme absent from modern accounts of Peripatetic negation.\footnote{Recently, some scholars have paid attention to a passage in Alexander's comments on Aristotle's An. Pr. I, 46 (cf. Alexander's in An. Pr. p. 402, 1-p. 405, 16). Alexander here deals with Stoic negation. The passage has been studied from different angles, but J. Barnes (cf. Peripatetic Negation, in Oxford Studies in Ancient Philosophy, iv, 1986, pp. 201-214) has attempted to give a general account of it. He has indicated that the disagreement between the Stoics and the Peripatetics is syntactic (cf. p. 202), but if one follows his article, one will find out that Alexander's discussion is properly related to a semantic disagreement. It is true that the basis of the problem is syntactic, since the Stoics and the Peripatetics deny a proposition by stating a different arrangement of the categorical proposition, (as we also have shown by following Boethius' commentary in this respect), but what Alexander strives to prove here is properly that the Stoic negation leads to difficulties in interpreting the sense of the propositions which are denied by the Stoic mechanism, and the discussion clearly revolves around this point. Thus, in Alexander's discussion the only syntactic point is the starting-point, but the discussion is entirely led to a semantic end. This view is confirmed by the fact that Aristotle's An. Pr. I, 46 explains the sense that affirmations and negations with an indefinite predicate make, so that he is interested here in a semantic consideration. The first words of this chapter (I, 46) confirm it: "In establishing or refuting, it makes some difference whether we suppose the expression 'not to be this' and 'to be not-this' are identical or different in meaning, e.g. 'not to be white' and 'to be not-white'." (An. Pr. I, 46, 51b. 5-10; A.J. Jenkinson in The Revised Oxford Translation). The real syntactic discussion about Peripatetic negation is in Boethius' Book Four of his second commentary on Perih., as we have pointed out. And so, Alexander's remarks here must be taken as the syntactic counterpart of his semantic observations made at in An. Pr. p. 402, 1 ff.). It is also a pity that W. Cavini (1985), who has treated in detail Peripatetic negation has made no allusion to the doctrine of the indefinite names in Boethius' Book Four. The papers by Barnes and Cavini are independent one from another, and that reveals the relative neglect that Boethius' Book Four has received in modern times, despite its relevance in this discussion.}
negation and the relation between this principle and the correct calculus of the number of the categorical propositions is not in Ammonius. These two ideas are independent in the Alexandrian commentator. It is also clear that Boethius' commentary follows Alexander's idea of a parallel between the indefinite verb and 'is not' in generating a negation, while Ammonius does not. The passage quoted above shows rather that Ammonius makes an ad hoc use of Alexander and that he is not inclined to see a parallel between the indefinite verb and 'is not' in constituting negations in categorical propositions.

In fact, in Ammonius' commentary all of this calls for another explanation: it is not the indefinite verb, but the negative particle, placed at the more important part of the categorical proposition, that states the negation. Ammonius' regular usage is to give the negative particle this function, and he even gives a short explanation of this point in explaining the point about two-term propositions:

"Now, that the negation arises when the affirmation takes on the negative particle, is clear. But where in the affirmation one must place it, in order to make the negation, and why this is so, we must specify. I say, therefore, that one must not join it to the subject, but to the predicate; first, because the predicate is more important, as has been said (70, 4f.), and prior to the subject, which is also why the whole sentence is called 'predicative' (so, if we want to destroy the affirmation and make a negation, we must not attach the negative particle, which is the cause of the destruction, to the less important of...

763 For two-term propositions the more important part is the predicate, which is the verb (cf. in Int. p. 87, 8 ff.). For three-term propositions the more important part is the verb 'to be', i.e. 'is' (cf. in Int. p. 160, 14-15). For modal propositions, the mode (cf. ibid., p. 218, 8-9).
764 cf. especially in Int. p. 67, 26; p. 95, 9-10; p. 116, 19 ff.; and p. 218, 8-9.
The earlier theory of negation seems to have explained the constitution of the negation through the expedients of (i) place of the negative particle and (ii) generation of the negative proposition (i.e. predication of the indefinite verb). In Ammonius' commentary, (ii) is practically absent, in Boethius' commentary we get a more balanced account of both aspects. The earlier theory of negation, with its still generative considerations, was superseded by Ammonius' commentary, and the doctrine of the indefinite names, in the presentation given by Boethius at the beginning of Book Four, experienced a decline. Our natural idea that the negative particle states the negation, without any appeal to the expedient of the indefinite verb seems to be a simplification of a

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766 in Int. 2, 18-2, pp. 377-8; and 23-27, p. 378.
more integral theory of the negation maintained by the earlier Peripatetics.
PART II

THE LOGIC OF THE INDEFINITE NAMES

(i) General considerations

In *PeriH.*, Aristotle did not only consider the nature of the indefinite names and verbs, but he also developed a logical analysis of the propositions containing these indefinite terms. This analysis by itself shows the non-existence of indefinite verbs in categorical propositions of either three or two terms, and hence, to be exact, the logic that Aristotle develops is one of indefinite names, that is, a logic of propositions which contains indefinite names either in their subjects or in their predicates, or in both.

This logic, which Aristotle develops chiefly in Chapter 10 of *PeriH.* and extends slightly in other determined contexts, has

767 Especially at *An. Pr. I*, 46. *Topics* 113b. 15-27. The occurrences of propositions with indefinite names in the context of the *Metaphysics* seem to be correctly classified as applications of this logic rather than developments of it. For relevant occurrences of these propositions cf. *Met.* N 2, 1089a. 29 ff.; *Γ* 4, 1007b. 28 ff. For evidence of these applications cf. Alexander of Aphrodisias in *Met.*, 287, 18; 292, 32; 293, 14; 293, 26-33. (in Alexander of Aphrodisias *On Aristotle Metaphysics* 4, (Trans. A. Madigan SJ, London, 1993). It is worth noting that at *Physics* V, i (225a. 1-225b. 9), Aristotle uses indefinite names (*μὴ ὑποκείμενον*) to define all the forms of change (*μεταβολή*). Cf. also above Part I, 3., (iv) *Antiquiores*. Equally, at *Topics* 113b. 15-27 Aristotle seems to mention the law of contraposition, namely, if 'a man is animal', then 'a not-animal is a not-man'. A. N. Prior (*Formal Logic*, Oxford, 1962, p. 126) has commented on this point that Aristotle states the convertibility by contraposition of the kinds of proposition A and O, which was not mentioned in *Analytics*. Prior's interpretation, though stable from a logical view, does not seem to square entirely with the sense of the text. But the commentators of this text have not reached an agreement on what is the extent and the force of this rule and not it can be counted as a logical rule at all. J. Brunschwig (*Aristote Topiques*, Paris 1967, p. 149) and Th. Waitz (*Aristotelis Organon Graece*, Leipzig, 1846, p. 463) are inclined to see a logical rule here (so Brunschwig, *ibid.*, p. 149: "La suite du texte montre clairement (cf. 18-19 ὑμοίως δὲ καὶ ἐπὶ τῶν ἀλλων et 22 ἐπὶ πάντων οὕν τὸ τοιοῦτον ἀξιωτέου) que l'objet précis de cette induction est d'établir universellement la loi d'inversion (...)"). Against this, however, A. Zadro (*Aristotele I Topici*, Naples 1974, pp. 384-5) claims that the allusions to the inductive process (*ἐπαγωγή*) and a universal rule are contradictory, but realizes that most of commentators follow Brunschwig's view. In this discussion, one notices, however, a lack of further reflection on how the rule varies in relation to the type of terms which are included in the oppositions which are to be converted by transposition, which is something that Aristotle analyses
the notable characteristic of being one largely commented on by
the ancient commentators, and one where their different and even
contradictory views are common. The explanation of this fact
becomes evident once one considers the difficulty of the subject-
matter and the condensed style that Aristotle maintains especially
in this part of PeriH.

Aristotle does not say anywhere what is the aim of this
logic, and the ancient commentaries lack a general interpretation
in this sense. There exists, however, the opinion that this logic
intends to be an extension introduced in the elementary theory of
the categorical definite propositions. This opinion makes sense
when taken with Boethius' comments, for here—as explained
above— it is shown that Aristotle in Chapter 10 reconsiders the
indefinite name, which is only homonymously a name, in order to
include every term able to be subject or predicate in a categorical
proposition. The idea, then, makes sense in relation to the
intention of syntactical universality that the ancient
commentators say Aristotle maintained in determining all the
categorical propositions.

Book Four of Boethius' commentary presents an exposition
of the main points involved in Aristotle's logical discussion at
PeriH. 10, which, in contrast to Ammonius' exposition, gives
habitually the respective opinions, or even long expositions, of the
ancient commentators. Boethius, in particular, gives those by
Herminus, Alexander of Aphrodisias and Porphyry, and recognises
that, among these expositions, that by Porphyry is more accurate
and refers to him as the guide for treatment of logical
matters.

Prima facie, the Fourth Book is not a unity. However, the
deep structure of this book reveals two main lines: the
determination of the number of the categorical proposition/;

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carefully here: "Converse sequence is, however, rare in the case of
contraries; usually the sequence is direct." (Top. 114a. 2-3). This seems to
suggest that Aristotle at Top. 113b. 15-27 is rather trying to get a universal
law of contraposition, but his doctrine of four modes of opposition (cf. Cat.
11b. 17; Top. 113b. 15 ff., 135b. 7 ff.; Met. 1054a. 23, 1055a. 38, 1057 a. 33)
presents difficulties of generalization and getting the logical norm, given
the variety of cases to be considered.

769 Cf. Part I, 4., Indefinite Propositions, (i) Chapters 2, 3 and 10.
770 Cf. in Int. 2, 23-8, pp. 131-2.
through a classification and generation of their species; and the logical consequences of these propositions containing definite and indefinite names. That these two lines constituted a unity in interpreting our Chapter 10, and that this unity of number and logical order of the categorical propositions was an ancient twofold interpretation, is clear from the following two passages:

quod vero ait [sc. Aristotle] similiter autem se habet et si universalis nominis sit adfirmatio, alii ita intellexerunt, ut quod ait similiter referant ad numerum oppositionum et propositionum.

alii vero qui Aristotelis animum penitus inspexerunt non aiunt similiter solum se habere determinatas propositiones ad numerum oppositionum et propositionum, sed etiam ad consequentiam.

When Boethius passes on to consider the logical consequences of the universal propositions, that is, in the middle of his logical comments, he tells us that some took wrongly this 'similiter' (ὁμολογεῖ) as referring to the number of the oppositions and propositions, but others not only do so, but also, more profoundly, took the point in a logical sense. The passages show that the logical and the numerical interpretations of Chapter 10 were already in the sources of Boethius' commentary. Let us note that the first alii can be neither Herminus, nor Alexander nor Porphyry, for Boethius has their interpretations and they take the point in the profound way (pentit inspexerunt). So, Who are they? Whoever they are, the point shows that the exegetical line of Aristotle looking for the number of the categorical propositions and their logical relations is as ancient as Herminus' and Alexander's scholarly activity, and that the deep unity of Book Four cannot be understood without these two lines.

In order to present a clearer exposition of this logic, it is helpful to have in mind the general classification of the categorical

771 In Int. 2, 22-26, p. 294. And in Int. 2, 16-20, p. 295.
772 As Aristotle does so too at 19b. 30 f., for after showing how the unquantified propositions are arranged, he says "Similarly, too, if the affirmation is about the name taken universally (...)."
propositions mentioned above. We present it now in a more appropriate diagram:

THE CLASSIFICATION OF CATEGORICAL PROPOSITIONS

C. P.

1. Three terms

1.1 Unquant.

1.1.1 D - I
1.1.2 I - D
1.1.3 I - I
1.1.4 D - D

1.2 Quant.

1.2.1 Univ.

1.2.1.1 D - I
1.2.1.2 I - D
1.2.1.3 I - I
1.2.1.4 D - D

1.2.2 Part.

1.2.2.1 D - I
1.2.2.2 I - D
1.2.2.3 I - I
1.2.2.4 D - D

1.3 Sing.

1.3.1 D - I
1.3.2 I - D
1.3.3 I - I
1.3.4 D - D

2. Two terms

2.1 Quant.

2.1.1 Univ.

2.1.1.1 DS
2.1.1.2 IS
2.1.2 Part.

2.1.2.1 DS
2.1.2.2 IS

2.2 Sing.

2.2.1 DS
2.2.2 IS

2.3 Unq.

2.3.1 DS
2.3.2 IS


This classificatory diagram is congruent with that given earlier, and gives the 48 species of categorical propositions if the affirmative and negative quality of the propositions are added to
each terminal branch. One of the uses of this complete classification can be noted now: Aristotle does not make a logical analysis of all that his classification of categorical propositions includes, and this is a task which has been attempted neither by the ancient commentators nor by any other.773

We have put in bold type the items which are not mentioned by Aristotle at all (neither by Boethius nor Ammonius), and it must be observed that:

1° Singular propositions are treated only in one aspect, namely, when the subject is definite (DS), and even here Aristotle does not follow his habitual division which appeals to the two- and three-term propositions.
2° Propositions marked (DD), that is, *definite* subject and *definite* predicate, are not treated *directly* by Aristotle because, as is natural, they do not present any relevant aspect for the logic of the indefinite names, unless as an element for comparison.
3° Particular propositions (of two and three terms) are treated by Aristotle only indirectly, that is, as negations of those which are universal.
4° Regarding clarity, the order of exposition followed by Aristotle in Chapter 10 (and Boethius in his commentary) has been slightly modified by a reorganization under the classificatory items which are seen in this work (see Contents).

1. The Three-term propositions

A. The Indefinite Predicate

1.1 Unquantified Propositions

(i) Aristotle's introduction to logic of the indefinite names

Aristotle in PeriH. 10 neither announces a logical treatment of propositions with indefinite subject or predicate nor follows the general classification of categorical propositions in its one-by-one order. Rather, he simply introduces certain logical relations among simple, privative and indefinite propositions in a diagram that supposes a similar one which was mentioned at An. Pr. 1, 46, though not explicitly made up there either. The situation is worse if we consider that the phrase by means of which Aristotle presents these mentioned relations is, as Boethius says, "not only constricted by its great conciseness, but also it is hard to understand it because of its extreme obscurity and subtlety".\(^{774}\)

The passage is the following:

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\text{"Οταν δὲ τὸ ἐστὶ τρίτον προσκαταγορηθῇ, διχῶς λέγονται ἀλλὰ ἀντιθέσεις. λέγω δὲ οἷον ἐστὶ δύκας ἄνθρωπος, τὸ ἐστὶ τρίτον φημὶ συγκείσθαι ὄνομα ἢ ῥῆμα ἐν τῇ καταφάσαι. ὥστε διὰ τούτο τέτταρα ἐσται ταῦτα, δὲν τά μὲν δύο πρὸς τὴν κατάφασιν καὶ ἀπόφασιν ἐξεῖ κατὰ τὸ στοιχεῖον ὡς αἱ στερήσεις. τὰ δὲ δύο οὐδὲ λέγω δὲ ὅτι τὸ ἐστὶν ἢ τῷ δικαίῳ προσκείσεται ἢ τῷ ὅπι δικαίῳ, ὥστε καὶ ἡ ἀπόφασις. τέτταρα οὖν ἐσται. νοώμεν δὲ τὸ λεγόμενον ἐκ τῶν ὑπογεγραμμένων"}

\[19\text{b} \, \text{19} \]

\[\text{19 προσκαταγορηθῇ ἢ βδόμεναι ΑΔΣ αδ \, 22 ταῦτα ἐσται αδ, ?ΔΛΓ 25 et 30 δικαίῳ (quater) ἀνθρώπῳ Alex. Aphr., Herminus, Porph. teste Boethio, multi teste Amm.: *ς 26 νοούμεν Βλαλβεία \[ΔΣΓ\]}

\[774\] cf. in Int. 2, 25-26, p. 274. locus enim magna brevitate constrictus est et nimia obscuritate ac subtillitate difficilis.
According to what is suggested by the commentary, this passage is a sort of *crux logicorum*, not only by its *difficillimum sensum*, as Boethius' expression says, but also because there are several interpretations of it, and these were already many (*multas*) in Alexander of Aphrodisias' time, because he is said to have discussed them. In fact, the task of interpreting this passage is seen by Boethius as a challenge for the human mind, and the fact that he postpones the more complex interpretations of this passage to his second commentary is due to the intrinsic difficulty of the passage. Equally, this difficulty seems to have caused the fact that Boethius in his first commentary gives us only a part of Alexander's exposition, and postpones the rest to his second exposition.

The passage is certainly obscure, but if we consider that Aristotle has been referring to the two-term propositions with definite subject some lines before, then a part of it becomes clearer: Aristotle refers now to those of three terms, where the

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776 *in Int.* 23-8, pp. 131-132. quod autem sequitur continet difficillimum sensum, quem ipsae solita brevitate perscrinxt. in medio namque totius sensus addidit [Aristoteles]: *quare idcirco quattuor istae erunt, quarum duae ad affirmationem et negationem sese habebunt secundum consequentiam, ut privationes, duae vero minime. huius sententiae multiplex exposition ab Alexandro et Porphyrio, Aspasio quoque et Hermio proditur. in quibus quid excellentissimus expositorum Porphyrius dixerit, alias dicemus. quoniam vero simplicior explanatio Alexandri esse videtur, eam nunc pro brevitate subiecimus.
777 Cf. *in Int.* 2, 8-10. est alia quoque simplicior expositio, quam Alexander post multas alias expositiones in quibus animum vertit eddit hoc modo. ("There also exists another simpler exposition [of this passage], which Alexander gave, after applying his mind to many other interpretations, in the following way.").
778 cf. *in Int.* 2, 1-4, pp. 274-275. nunc autem quid in se sensus habeat veri, quid hac brevitate latitet, quantum facultas suppetit, nos ipsi patefaciemus, et quantum valet animum lector intendat. ("But now we shall make clear what is its genuine sense in itself [i.e. of this passage] and what is hidden in its brevity, and how much talent is needed, and how much is the power of the mind that the reader should embody.").
779 *in Int.* 2, 25-29, p. 274. locus enim magna brevitate constrictus est et nimia obscuritate ac subtilitate difficilis. et hunc quidem in prima editione huius operis transcurrentes exposuimus et [in] brevissimam ut in alii quoque dedimus expositionem. ("This passage, indeed, is constrained by its extreme conciseness, and it is difficult because of its excessive obscurity and subtlety. And, in fact, in the first commentary of this work we treated this [passage] by touching briefly upon it, and we also made a brief exposition on other topics.").
oppositions are two, and not one as in the former case. Indeed, for two-term propositions we had:

(i) a man walks    (i') a man does not walk.

In this case, there is only one affirmation and its negation, i.e. two propositions and one opposition, but in the case of three-term propositions, we will have:

(i) a man is just    (i') a man is not just
(ii) a man is not-just (ii') a man is not not-just.

Namely, two oppositions and four propositions, since now we can add as predicate 'just' and 'not-just' to the subject, because of the added predication of 'is'.

So it is clear what Aristotle means by the first phrase of his puzzling passage, namely, "But when 'is' is predicated additionally as a third thing, there are two ways of expressing opposition", and so too when he adds later "Because of this there will be four cases". But when Aristotle adds immediately how these four propositions are arranged in a diagram, and what is the relation of sequence among them, he is extremely laconic and perhaps confused too. Indeed, what does he mean by the following phrase (19b. 22-24)?

"(two of which [i.e. of these four cases] will be related, as to order of sequence, to the affirmation and negation in the way the privations are, while two will not)."

It is certain that Aristotle himself, whether or not aware of his condensed expression, in order to make more explicit its content, adds the following:

"I mean that 'is' will be added either to 'just' or to 'not-just', and so, too, will be the negation."

---

and even:

"Thus there will be four cases. What is meant should be clear from the following diagram:

(a) 'a man is just'
(b) 'a man is not just'

This is the negation of (a)

(c) 'a man is not-just'
(d) 'a man is not not-just'

This is the negation of (c)

'Is' and 'is not' are here added to 'just' and 'not-just'.

This then is how these are arranged (as is said in the Analytics).

But, in spite of this clarification, the point remains obscure and it even tends to be more complex, because what is the position of the privative propositions, and even the role of the Analytics here?

(ii) *The ancient expositions of PeriH. 19b. 22-24.*

In order to explain this passage, Boethius' strategy is to introduce first the exposition made by Alexander of Aphrodisias. Boethius seems to have at his disposal the expositions of Alexander, Porphyry, Aspasius and Herminus, but for the purpose of the first commentary he decides to introduce that of Alexander because, as he says, it is simpler and briefer. However, it is worth remarking that, in the first commentary, Boethius' report of Alexander's exposition is not complete, but he postpones its full sense to the second report:

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784 cf. *in Int.* 3-5, p. 132. huius sententiae multiplex exposition ab Alexandro et Porphyrio, Aspasio quoque et Hermino proditur.
785 *in Int.* 6-8, p. 132. in quibus excellentissimus expositorum Porphyrius dixerit, alias dicens. quoniam vero simplicior explanatio Alexandri esse videtur, eam nunc pro brevitate subiecamus.
786 *in Int.* 17-21, p. 135. ("However, we have postponed now setting out how these [propositions] are similar one with another and how they hold their own consequential order, though these things will be described later so that the property of these propositions becomes evident.")
In the first commentary, Boethius only explains the arrangement (dispositio) of the mentioned propositions, but he does not introduce any explanation of the place of the privative propositions in the corresponding diagram: he leaves for the second commentary this task, and also a more comprehensive interpretation of Aristotle's passage. So when he comes to his second exposition, he tells us:

This case sheds light more clearly on the work that Boethius undertook for almost two years, as he says, in commenting on *PeriH*. J. Shiel does not consider these passages, but he has noticed a similar one where Boethius says that the best idea for him was "to open up the closely argued meanings of Aristotle through a double sequence of commentary." Shiel has doubted, however, that the idea of splitting up the Greek comments in a twin commentary is an original plan of Boethius, and tends to believe that this idea "was probably suggested by the lay-out of his Greek manuscript." But the passages where Boethius postpones Alexander's exposition do not establish Shiel's belief, and rather show that the idea of postponing material for a better understanding is entirely a decision taken by Boethius, and that his dependence on this Greek material is not so mechanical or

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787 The second commentary contains this explanation at *in Int. 2*, 8-18, pp. 292-293.
788 *in Int. 2*, 5-8, p. 294. ("We excluded this passage in the first commentary, and there what we treated was brief in the interest of the simplicity of understanding, but now [i.e in the second commentary] we have discussed in its complete breadth all the force and extent of this passage.").
789 *in Int. 2*, 3, p. 421.
790 cf. *in Int. 2*, 2, p. 186.
servile as Shiel suggests. If Boethius says that he attempted the twin commentary to understand Aristotle better, then he postpones a part of Alexander's exposition for the same purpose. Whether or not the idea of a twin commentary is his, it is clear that Boethius uses this idea as a strategy for understanding and comprehension of his material (*sententiae*). If one followed the interpretation of a mechanical translation of *sententiae*, then the case of the postponement of Alexander's arrangement would lead us to the thesis that this postponement or a similar deferral was in the Greek material and that there were two commentaries here. There is no reason to accept this conclusion, which is odd, and the idea that Boethius maintains (or at least tries to) a strategy for understanding the content of what he translates is an idea that works perfectly well, and it does not lead to contradictions.

(ii.1) *Alexander's exposition*

Alexander presents a self-contained interpretation of the passage in question, which follows the following points:

(a) Alexander determines the meaning of a privative proposition
(b) He states that 'to be unjust' is equivalent to 'to be not-just'
(c) He makes up a diagram by following the similarity of an indefinite and simple proposition.
(d) He determines logical relations in the diagram

(a) *Form and meaning of a privative proposition*

According to Boethius' report, Alexander asserts that privative propositions are all those which predicate a privation. Alexander seems to have commented on the meaning of a privative proposition.

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792 Cf. also Shiel's idea that it even may be an overstatement to believe that "The translation of these various marginalia and the arrangement of them into a continuous commentary according to the order of Aristotle's words would seem to be Boethius' only title to originality." (J. Shiel (1990), p. 361, n. 42).

793 cf. *Int.* 8-9, p. 132.
privation by mentioning immediately an example: there is privation when someone says 'a man is unjust', because in this case, a man is deprived of justice. By following Alexander, Boethius now establishes examples of privative affirmations and negations. A privative affirmation is that which asserts, for example, that a man is unjust. A privative negation is that which maintains that a man is not unjust.\(^{794}\)

When we say 'a man is unjust', that is, when we make a privative affirmation, we do not make, the commentary will say, an affirmation in an absolute sense (plena adfirmatio), because in a certain way, we deny something of something. In this case, we certainly deny 'justice' to the subject, which is 'man'.\(^{795}\) Similarly, a privative negation is not an absolute negation (pura), since in such a proposition the negation maintains the positive meaning, as in the case 'a man is not unjust': the quality of justice remains in the subject, and thus a privative negation expresses a positive meaning but is called 'negative' because it takes the privation away.\(^{796}\)

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\(^{794}\) in Int. 8-13, p. 132.

\(^{795}\) Although Boethius in his logical commentary on PeriH. does not use systematically the distinction of matter and form of a proposition, it is not possible to think that he ignores this distinction because what he is distinguishing here is precisely that a privative affirmation, although it is an affirmation because of its form, it is not an absolute affirmation because of its matter or meaning. Indeed, its matter includes a privative element which deprives the subject of a positive and absolute attribution, as in the case of a simple affirmation. I. M. Bochenski recognizes a "fairly clear distinction between form and matter in a proposition" in Boethius's treatment of logical matters and he has pointed out the importance of this distinction in the later history of logic. (Cf. I. M. Bochenski A History of Formal Logic, University of Notre Dame Press, 1961, pp. 137-140). Now, if this is so, it is clear that we must to ascribe this distinction already to Alexander, since here Boethius is following Alexander.

\(^{796}\) in Int. 13-24, p. 132.
sed neque illa in significacione plena adfirmatio est (aliquid enim tollit), sed privatoria adfirmatio, quoniam formam quidem adfirmationis tenet, sed privationem praedicat et aliquid ab eo cui privationem copulat abiungit, ut in propositione est iniustus homo ab homine iustitiam, nec haec rursus pura negatio. fugans enim privationem, ut in ea quae est, non est homo iniustus, habitum retinet id est iustitiam, sed quoniam quod adfirmatio praedicabat, hoc aufert negatio, licet habeat talis negatio quasi reponendi habitus significacionem, tamen, quia ipsa privationem subtrahit, privatoria negatio nominatur.

(b) 'To be unjust' and 'to be not-just'

Alexander maintains that in the same manner as the privative affirmation (e.g. 'a man is unjust') is said to be not only an affirmation, but a privative affirmation —since it denies the disposition of justice in man,— the proposition with indefinite name in the predicate, that is, 'a man is not-just' is not only an affirmation, but one with an indefinite name and with a privation. The same occurs in the case of the negation, says Alexander, because in 'a man is not unjust' there is not only a negation, but one made of an indefinite name, which denies what is indefinite.

Alexander's point is that a privative affirmation is similar to that which contains an indefinite name in its predicate because both are affirmations of negative meaning. In the same sense, a privative negation is similar to a proposition with indefinite predicate because both are negations of positive meaning. In Boethius' report, Alexander seems to have confirmed the similarity of these kinds of proposition by stating the principle

797 In Int. 8-12, p. 133. nam quemadmodum privatoria quae dicit est iniustus homo non solum adfirmatio est, sed privatoria adfirmatio, ita quoque ea quae dicit est non iustus homo non solum est adfirmatio, sed cum infinito nomine et cum aliqua privatione adfirmatio.
798 In Int. 14-19, p. 133. et rursus quemadmodum non est iniustus homo non est solum negatio, sed privatoria negatio, quoniam quamquam det habitum tamen privatoria negat, ita quoque et ea quae est ex infinito nomine, non est non iustus homo, non solum est negatio, sed ex infinito facta nomine infinitum negans.
that 'to be unjust' and 'to be not-just' (and their negations too) signify the same,\textsuperscript{799}

\[\text{idem enim valet ad intellectum quod dicitur iniustus, tamquam si dicatur non iustus. (\ldots) nam si idem valet iniustum esse quod non iustum, idem valebit non esse iniustum quod non esse non iustum.}\]

This semantic equivalence which is inserted in the argument without any proof of its validity, seems to be an idea maintained by the earlier commentators. It certainly appears here in Alexander, but also Porphyry maintained it,\textsuperscript{800} and it is equally clear that it was already the position of Herminus.\textsuperscript{801} Ammonius, however, who in this point surely follows Proclus, did not maintain the same opinion.\textsuperscript{802}

(c) \textit{The arrangement}

As a consequence of Alexander's thesis of formal similarity between privative propositions and those with indefinite name in their predicate,\textsuperscript{803} one is able to give an arrangement for all the kinds of proposition that Aristotle mentioned at 19b. 22-24. According to Alexander, the affirmation and negation of the propositions with an indefinite name in their predicate are to be arranged similarly in respect of the affirmation and negation of the privative propositions.\textsuperscript{804}

\begin{footnotesize}
\textsuperscript{799} \textit{in Int.} 12-14, p. 133; 21-23, p. 133.
\textsuperscript{800} cf. \textit{in Int.} 2, 1-12, p. 281.
\textsuperscript{801} cf. \textit{in Int.} 2, 18-19, p. 275.
\textsuperscript{802} Cf. here later (ii. 4) \textit{Ammonius' exposition}; and also (ii. 5) \textit{Porphyry's and Ammonius' expositions}. About Proclan tendencies in Ammonius' commentary, cf. above Part I, 4., \textit{Indefinite Propositions}, (c) \textit{Syrianus' calculus and the school of Proclus in Athens}, (especially n. 678).
\textsuperscript{803} Let us note that this awkward expression translates 'affirmatio [\textit{negatio}] habens infinitum nomen' (cf. \textit{in Int.} 1-3, p. 133). This expression must proceed from Alexander, for Porphyry uses (equivalently) the expression 'indefinite proposition' (\textit{propositio infinita}). Cf. here later (iii. 2) \textit{Porphyry's exposition}.
\textsuperscript{804} \textit{in Int.} 23-25, p. 133. (There is an error in the use of the word \textit{affirmationes} in \textit{PL} 64, A. 16, p. 345. The right expression must be \textit{privatoriae propositiones}, or to add \textit{et negationes} (to \textit{affirmationes}'), as Meiser's emendation does correctly).
\end{footnotesize}
igitur hae duae quae infinitum nomen habent, quantum ad speciem formamque affirmationis et negationis, similiter se habent his quae sunt privatoriae affirmationes et negationes.

Therefore, the result of Alexander leads us to a diagram where this similarity is manifest:

\[
\begin{align*}
\text{Privative} \\
\ \text{a man is unjust} & \quad \text{a man is not unjust} \\
\text{With Indefinite Predicate} \\
\ \text{a man is not-just} & \quad \text{a man is not not-just}
\end{align*}
\]

After that, Alexander's explanation goes on to clarify that the two simple propositions are absolutely different from the privative ones and that they, in fact, are separate (seclusae) from the two pairs in the diagram above: \text{805}

\[
duae vero illae quae simplex definitumque praedicant nomen, ab omni similitudine privationum seclusae sunt
\]

Therefore, the final diagram that Alexander and Boethius have in mind is this: \text{806}

\[
\begin{align*}
\text{Simple Proposition} \\
\ \text{a man is just} & \quad \text{a man is not just} \\
\text{Privative Proposition} \\
\ \text{a man is unjust} & \quad \text{a man is not unjust} \\
\text{With Indefinite Predicate} \\
\ \text{a man is not-just} & \quad \text{a man is not not-just}
\end{align*}
\]

In this diagram, consequently, a good part of what Aristotle says at 19b. 22-24 becomes clearer, because now one can determine how privative propositions are related to simple ones and those

\text{805} \textit{in Int.} 27-29, p. 133.  
\text{806} \textit{in Int.} 28-4, pp. 134-5.
with indefinite predicate. In other words, it becomes manifest which two propositions are related to privative ones and which are not.\textsuperscript{807}

recte ergo dictum est de his quattuor propositionibus duas ad affirmationem et negationem ita se habere, ut sunt privationes, duas vero esse simplices et praeter aliquam privationum similitudinem.

(d) \textit{The logical relations of the diagram}

To establish the correct disposition of the propositions in a diagram is essential to understand the \textit{logical} relations among privative, simple and with-indefinite-predicate propositions, because, in Alexander's opinion, what is said at 19b. 22-24 in respect of the \textit{similarity} of these propositions is also said in respect of their logical sequences (\textit{consequentia}).\textsuperscript{808}

\textit{quod autem ait ad consequentiam, tamquam si dixisset aS similitudinem, ita debet intellegi.}

The logical relations among these kinds of propositions are introduced by Boethius' report of Alexander by means of the specific term \textit{consequentia}. As is said, Boethius postpones the complete analysis of the logical sequences of these propositions to the second commentary,\textsuperscript{809} and in his first exposition, he focuses on the relations that definite propositions and those with indefinite predicate hold, and leaves aside for a moment privative ones and the complete explanation of 19b. 22-24.

\textsuperscript{807} \textit{in Int.} 16-20, p. 134.

\textsuperscript{808} cf. \textit{in Int.} 20-22, p. 134.

\textsuperscript{809} Cf. above Part II, (ii) \textit{The ancient expositions of PeriH.} 19b. 22-24.
The diagram is as follows:

<table>
<thead>
<tr>
<th>Definite Affirmation</th>
<th>Definite Negation</th>
</tr>
</thead>
<tbody>
<tr>
<td>a man is just</td>
<td>a man is not just</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Neg. with Indef. Predicate</th>
<th>Affirm. with Indef. Predicate</th>
</tr>
</thead>
<tbody>
<tr>
<td>a man is not not-just</td>
<td>a man is not-just</td>
</tr>
</tbody>
</table>

According to Alexander, in this square, which follows the order of *Analytics*, the negation of an indefinite name is located under the affirmation of a definite name, and again, in the other column, the affirmation of an indefinite name under the negation of a definite name. The commentary calls *angulares*, i.e. 'diagonals', the propositions that are located in the diagonals of the square and states, in accord with Aristotle, that all they can be true together (*omnibus verae esse possunt*).

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**Footnotes:**

810 cf. *in Int.* 25-28, p. 135. Whether Alexander follows here Theophrastus in transposing the propositions at the bottom is not said by the commentary. However, Alexander knows that Theophrastus called these propositions 'transposed' (κατὰ μετάθεσιν). Cf. Alexander of Aphrodisias *in An. Pr.* p. 396, 34-p. 397, 4. And also above Part I, 5., (a) *Theophrastus and transposed propositions.*

811 *in Int.* 5-8, p. 153. sed hae, inquit, [Alexander] ita sunt dispositae eandemque ad se similitudinem gerunt, quemadmodum in *analytics* id est resolutorii, dictum est. scripsit autem duos resolutorios libros de syllogismo. in quorum primo de propositionum ex infinito nomine et infinito consequentia disseruit. No doubt, these words refer to *An. Pr.* I, 46, where Aristotle makes an exposition of logical relations concerning propositions with indefinite predicates. Here at 52a. 15-17 he says: "Privative terms are similarly related to positive terms in respect of this arrangement. Let A stand for equal, B for not equal, C for unequal, D for not unequal." (A.J. Jenkinson's translation, in *The Revised Oxford Translation*, Oxford 1991).

812 As Alexander surely knows, Aristotle states an implicit comparison between the diagonals of the unquantified and the quantified propositions when he treats some lines later (19b. 31-35) the quantified ones. At 19b. 35-36 he asserts that "here, however, [i.e. in the case of the quantified propositions] it is not in the same way possible for diagonal statements to be true together, though it is possible sometimes." From this statement, indeed, it is possible to infer that all diagonals of the unquantified propositions can be true together, though the point has to be demonstrated.
As Alexander observes, this happens except for the case in which these propositions include or cannot include by nature (naturaliter) what they predicate. The first exception is the pair: (i) 'a man is an animal' (i') 'a man is a not-animal', which never can be true together, because 'animal' belongs by nature to the substance of man, and thus (i) is always true, but (i') always false. In the second case, the propositions (ii) 'a man is a stone', and (ii') 'a man is a not-stone' never can be true together either, because it is impossible that 'stone' belongs by nature to the substance of man, and thus (ii) is always false, while (ii') is always true.\(^{813}\)

However, if the things which are predicated neither inhere by nature nor are separated by nature, but their inherence is only by possibility (inessse possibile est), as in the case of 'just' when is said of a man, the diagonals will be always true together, as is clear in the diagram above.\(^{814}\)

Here, indeed, the pair (iii) 'a man is just' and (iii') 'a man is not-just' can both be true. The same will occur, says the commentary, between (iv) 'a man is not just' and (iv') 'a man is not not-just', they can be true together, since the propositions are unquantified and they do not refer to the same object: the first can be true if it is said of Sulla, the second if it is said of Cato.\(^{815}\)

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\(^{813}\) As the argument shows, Alexander is cognizant of what Ammonius later calls matters of the propositions (ἐὰν τῶν προτάσεων): necessary, impossible and simply attributive (inessse). (cf. Am. in Int. p. 88, 4-29; and also above Part I, 4., (iii. 3) The arithmetical calculus of the number of the categorical propositions.

\(^{814}\) in Int. 21-24, p. 136.

\(^{815}\) in Int. 1-11, p. 136. In hac igitur descriptione (...) quarum angulares, quoniam sunt indefinitae omnes, simul in omnibus verae esse possunt, nisi in his tantum quae aut naturaliter insunt aut naturaliter inesse possunt. ut si quis dicat est homo animal, numquam cum hac vera esse potest quae dicit est homo non animal, quae est angularis, idcirco quoniam animal naturaliter in substantia hominis perspicitur inhaere. rursus si quis dicat est homo lapis, est homo non lapis, ne hae quidem simul verae esse possunt, idcirco quod lapidem inesse homini naturaliter impossibile est. quod si huiusmodi sint quae non insint naturaliter, sed inesse possint, ut in his quae supra propusimus exemplis, angulares verae sunt semper, potest enim vera esse et ea quae dicit est justus homo et ea quae dicit est non justus.
In this diagram, Alexander observes that the two propositions with indefinite predicate are taken in the same way (*aequaliter*), according to affirmation and negation, as the privative propositions, but not so the two simple ones, because while the affirmation and negation with indefinite predicate are equivalent (*consentire*) respectively to the privative affirmation and negation, this does not occur with the simple affirmation and negation. That explains, as Alexander observes, why Aristotle says (19b. 22-24) that "two propositions", namely, the affirmative and negative with indefinite predicate, "will be related, as to order of sequence, to the affirmation and negation in the way the privations are, while two will not.":

Alexander's explanation is consistent. Boethius' commentary suggests this by asserting that Alexander's explanation of 19b. 22-24 is simpler than that of Porphyry, though this is not a reason for rejecting it:

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819 see note on three senses of *consentire* here later (ii. 2) *Porphyry's exposition.*
820 *in* Int. 2, 21-1, pp. 292-3.
821 *cf. in* Int. 2, 21, p. 293.
(d.2) Boethius' report in the Second Commentary

In his second exposition, Boethius pays his debt of presenting a complete analysis of the semantic properties between privative, simple and with-indefinite-predicate propositions, and the complete interpretation of 19b. 22-24. Boethius does not have more than a brief material (a sententia as he calls it) to explain Alexander's exposition, though he has assimilated it in its full extent and sense for his second commentary.\footnote{816} Alexander's exposition is introduced after the presentation in its full detail of Porphyry's exposition of 19b. 22-24.\footnote{817} Boethius' report assumes the diagram of Alexander which was presented in the first exposition:\footnote{818}

<table>
<thead>
<tr>
<th>Simple Propositions</th>
<th>Neg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a man is just</td>
<td>a man is not just</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Privative Propositions</th>
<th>Neg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a man is unjust</td>
<td>a man is not unjust</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>With Indefinite Predicate Propositions</th>
<th>Neg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a man is not-just</td>
<td>a man is not not-just</td>
</tr>
</tbody>
</table>

\footnote{homo, rursus potest vera esse ea quae dicit non est iustus homo, si hoc de Sylla dicatur, et ea quae dicit, non est non iustus homo, si hoc de Catone praedicetur. Of the three qualities of inherence (= matters), namely, necessary, impossible, and possible, only this last sense is developed in full by Boethius' commentary. This development uses as a model the proposition 'a man is just' because the predicate 'just' can or cannot be present in man, i.e. its presence is contingently true or false. However, as A.N. Prior has noticed, Boethius makes a more extensive development of these other semantic relations in \textit{Introductio ad Syllogismos Categoricos} (= ISC). A.N. Prior has examined this development in his article \textit{The Logic of the Negative Terms in Boethius}, in \textit{Franciscan Studies}, 13 (1953), vol. I, pp. 1-6, by following Boethius' development in ISC.}

\footnote{816 in Int. 2, 6-8, p. 294. sed quod illic [i.e. in the first commentary] pro intellectus simplicitate breviter posimus, hic omni latitudine totam sententiae vim et prolixitatem digessimus.}

\footnote{817 cf. in Int. 2, 8-18, pp. 292-293.}

\footnote{818 in Int. 28-4, pp. 134-5.}
false), and in fact explains 19b. 22-24. The commentary seems to have gone astray, however, in asserting that the most important reason to prefer the exposition of Porphyry is its concordance with the following diagram of An. Pr. I, 46:

```
A
 to be good
↓
D
 not to be not-good

B
 not to be good
↑
C
 to be not-good
```

In this diagram, Aristotle presents the propositions at the bottom in a transposed way, and observes some logical relations between them. In Boethius' report, Alexander's diagram does not transpose the indefinite and the privative propositions in respect of the simple ones. However, Boethius' first commentary shows that Alexander knows the expedient of transposing the propositions at the bottom and of drawing some logical relations as a consequence of this transposition. Further, at in An. Pr. (I, 46), Alexander explains this transposition and its logical sequences (α ἀκολουθεῖα) by making a parallel to PeriH. 19b. 22-24. In this parallel, Alexander takes, contrarily to Boethius' report, the fact of the transposition of D and C as something that Aristotle has explained in PeriH. 19b. 22-24. And also, according to him, Aristotle introduces the privative propositions in Analytics in the same manner as in PeriH., i.e. by preserving the order of the simple and the indefinite propositions in position and logical sequence, arranging them in two identical diagrams, in

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822 Aristotle states that A and B cannot be applied to the same subject (i.e. they are contrary). D and C are also contrary. Besides, A and C cannot be applied to the same subject, while B and D may sometimes be applied. Similarly, he states that D follows from A, and B follows from C. Cf. also M. Soreth Zum infiniten Prädikat im zehnten Kapitel der aristotelischen Hermeneutic, in Islamic Philosophy and the Classical Tradition, Oxford 1972, pp. 405-7.


which it also becomes clear that the negations follow from the affirmations and that this relation is not convertible: 826

\[
\begin{array}{c|c}
A & B \\
\hline
to be equal & not to be equal \\
\downarrow & \uparrow \\
D & C \\
not to be unequal & to be unequal
\end{array}
\]

It is easy to see that this diagram arranges the propositions according to consequence in the same way as that which relates indefinite and simple propositions above, and that both together would produce one in which the indefinite and privative propositions are transposed in respect of the simple ones, just as it is seen in Porphyry's diagram of 19b. 22-24, which Boethius prefers. 827 This seems to suggest that Alexander did not maintain what Boethius reports or, at least, not in this way.

Boethius' report of Alexander raises the question of whether or not this report is complete. Let us note still that Porphyry considers the exposition of An. Pr. I, 46 by Alexander as one of those which expressed many contrary things and contribute to the opinion that this book (i.e. I, 46) was of an inextricable obscurity: 828

dicit autem Porphyrius fuisse quosdam sui temporis, qui hunc exponerent librum, et quoniam ab Hermino vel Aspasio vel Alexandro expositiones singularis proferentes multa contraria et expositionibus male ab illis editis dissidentia reperirent, arbitratos fuisse librum hunc Aristotelis, ut dignum esset, exponi non posse multosque illius temporis viros totam huius libri praetérisse doctrinam, quod inexplicabilem putarent esse caliginem.

Porphyry's opinion that Alexander contributed to confusing the doctrine of An. Pr. I, 46 is disconcerting, for Alexander's exposition of the order and consequences between indefinite and

826 ibid., p. 410, 1-15.
827 See here next section.
828 in Int. 2, 27-4, pp. 293-4.
simple, and privative and simple propositions, is the same as that
given by Porphyry for 19b. 22-24. 829

Boethius' complete account of Alexander produces justified
doubts about the accuracy with which Porphyry and Boethius
report Alexander's exposition of 19b. 22-24. Porphyry in
particular seems to be unaware of Alexander's account of An. Pr.
I, 46. Boethius' preference for the explanations that Porphyry
produces in logic 830 cannot explain these doubts. However, there
is a solution to this puzzling difficulty, which makes it
unnecessary to think of possibilities like (i) Alexander's
22-24, and (ii) Porphyry's lack of information (i.e. his dependence
on either incorrect or incomplete information). This solution is as
follows: the diagram that Boethius reports as belonging to
Alexander (that in which the indefinite and the privative
propositions are not transposed in respect of the simple ones) is
the final diagram that Alexander provides to explain a specific
point of 19b. 22-24, namely, how Aristotle takes the 6
propositions in question, i.e. which are the two propositions
relating, as to order of sequence, to the affirmation and negation
in the way the privations are, and which two do not. 831 This
diagram supposes an earlier explanation by Alexander and
probably an earlier diagram which accord entirely with the
diagrams derived from An. Pr. I, 46 (those in which simple and
privative, and simple and indefinite propositions are arranged). In
other words, the diagram reported by Boethius is not the diagram
used by Alexander to explain the arrangement and logical
sequence of the simple, privative and indefinite propositions at
An. Pr. I, 46, but the diagram to explain how Aristotle takes these
propositions in accordance to 19.b. 22-24.

829 Cf. next section (ii) Porphyry's exposition.
830 Clearly, before starting Porphyry's interpretation of this same passage,
Boethius has said (in the first commentary) that Porphyry is the
excellentissimus expositorum (cf. in Int. 5-6, p. 132); and in the second
commentary (cf. 9-10, p. 176) Boethius says that he will follow (on this
point) Porphyry because he agrees with his teaching (nos autem
Porphyrium sequentes eique doctissimo viro consentientes haec dicimus).
831 Let us recall that Aristotle says (19b. 22-24): "Because of this there will
be four cases (two of which will be related, as to order of sequence, to the
affirmation and negation in the way the privations are, while two will
not)." Ackrill (1963).
Since Boethius reports that Alexander arranged the propositions by following a syntactic criterion (similitudo) and that he observed that this sense is implied by An. Pr. I, 46, it follows that Alexander interpreted 19b. 22-24 in a syntactical sense, and that the diagram that he presents is one which illustrates precisely this view. So, Boethius' report seems to suggest that Porphyry criticises a specific point of Alexander's interpretation of 19b. 22-24: that he took here the expression ad consequentiam as meaning ad similitudinem. That is, 19b. 22-24 in a deliberate syntactical sense. This seems to shed light on why Porphyry does not release Alexander from contributing to the obscurity of An. Pr. I, 46. For Porphyry (as a consequence of his interpretation) does not agree completely with Alexander about which are the two propositions relating, as to order of sequence, to the affirmation and negation in the way the privations are, and which two do not, so that Porphyry in fact remarks that his own interpretation, as a whole, is that which expresses the correct sense of An. Pr. I, 46 and PeriH. I, 46.

Now, since the following discussion of Porphyry's account shows that he maintains a semantic interpretation of the logical relations of simple, privative and indefinite propositions, the point of disagreement between Porphyry and Alexander on 19b. 22-24 can be expressed thus: Porphyry was inclined to interpret this passage of Aristotle in a semantic sense, while Alexander, after applying his mind to many other expositions, interpreted it syntactically.

832 In Int. 2, 5-10, p. 135. Sed hae, inquit [sc. Alexander], ita sunt dispositae eandemque ad se similitudinem gerunt, quemadmodum in analyticis id est resolutorios libros de syllogismo, in quorum primo de propositionum ex finito nomine et infinito consequentia disseruit.
833 In Int., 20-23, p. 134. quod autem ait [sc Aristotle] ad consequentiam, tamquam si dixisset ad similitudinem, ita debet intelligi. quae enim sibi sunt similia [i.e. the privative and the indefinite propositions], a se quomodo non recedunt et invicem consequuntur.
834 I.e. Porphyry does not agree with Alexander in interpreting how Aristotle takes these propositions in the diagram. As seen in the next section, Porphyry agrees with Alexander in stating similarity and consequence between the indefinite and the privative propositions, which are four. But he does not agree with Alexander in taking the two simple ones as different from these four, for Porphyry takes the simple and the indefinite affirmation as different from the four remaining, for these two are antecedents and not consequents of the other four propositions.
835 Cf. in Int. 2, 8-10, p. 292.
Porphyry's exposition is by far the longest of those reported by Boethius' commentary.\textsuperscript{836} It is twice as long as that by Alexander (taking together the first and the second commentary), and about fifteen times longer than that by Herminus. Boethius introduces Porphyry's explanation by giving first a 'definition of terms used', where technical denominations for simple, privative and with-indefinite-predicate are stipulated.\textsuperscript{837}

It is not clear how this generalisation must be taken,\textsuperscript{838} but it is clear that, in explaining 19b. 22-24, three-term propositions with indefinite predicate are to be called 'indefinite propositions'.

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\textsuperscript{836} This is so even leaving aside a lacuna at \textit{in Int.} 2, 7, p. 288.

\textsuperscript{837} \textit{in Int.} 2, 17-24, p. 276. Porphyry seems to have used the expression 'indefinite proposition' specifically for naming propositions whose predicate is an indefinite name, e.g. 'a man is not-just'. Accordingly, 'indefinite proposition' is another name for 'transposed proposition', which Theophrastus mentions (see above Part I, 5., (a) \textit{Theophrastus and transposed propositions}). Neither Boethius nor Porphyry use this Theophrastean name. Boethius follows Porphyry in using normally 'indefinite proposition'. Ammonius, probably wrong, says that Aristotle used this expression too. (Cf. above Part I, 5., (a)). So 'indefinite proposition' seems to be an original expression by Porphyry.

\textsuperscript{838} The text imports two puzzles. (i) It does not clarify whether Porphyry thought to extend this expression to any proposition with indefinite name or limits it to only three-term propositions with indefinite predicate (e.g. 'a man is not-just). Since the passage adds that "we shall call those two propositions that have indefinite neither the subject nor the predicate 'simple propositions'" (\textit{ibid.}, above 25-26), one might assume that Porphyry thought that propositions like 'a not-man is just' are also indefinite; however, this kind of proposition does not play any part in explaining 19b. 22-24. One can defend the view that Porphyry was referring to this kind of proposition but here they are called 'propositions having an indefinite subject' (cf. \textit{in Int.} 2, 24-27, p. 311). It could be proposed that Porphyry uses this 'proposition having an indefinite subject' as a short for 'indefinite proposition with indefinite subject', a name awkward for reiterative
Porphyry's exposition is based on the following diagram, which we will explain in a more summary way by using a single arrow for 'x follows from y', (sequitur), and double arrow for 'x is equivalent to y', (consentiunt).

technical use. (ii) Meiser emends 'in hac expositione' for 'extra expositionem', which implies that the formula 'indefinite proposition' is valid beyond the limits of the explanation for 19b. 22-24. Meiser's emendation might be used to support further the 'general-extension view' at (i).

Sequitur is a technical term in Boethius' commentary on PeriH. In Boethius' translation of Porphyry's Isagoge, sequi is given by S. Brandt as synonymym of consequi. Both terms are correspondent to ἐνεσθεῖα (e.g. at in Isag. p. 331, 14). Both terms mean 'x follows from y, but y does not follow from x' (where x and y are propositions). Sequi and consequi (also consequens esse) state a non-reciprocal logical relation. The following text makes this clear: sequi vero dicitur, quotiens quolibet prius nominato posterius relinquum convenit nuncupari, ut si dicam 'omnis homo rationabilis est' prius hominem, posterius apposui differentiam; sequitur ergo differentiam speciem. at si convertam nomina dicamque 'omne rationabile homo est', propositio non tenet veritatem; igitur species differentiam nulla ratione comitatur. (Cf. in Isag. p. 332, 7-15). See also next note.

Two occurrences at in Isag. (cf. p. 164, 4; p. 198, 17; Brandt ed.) show a general meaning of consentire (+ dat.), namely, 'to agree with' (e.g. nos consentientes Alexandro (...) soluemus (...)). But, unlike in Isag. I et II (also in Cat.), consentire is a technical term in Boethius' comments on PeriH.. Here, the term in question has three senses, though one of them is derived. The senses are: (a) Consentire (= to be equivalent). This sense is stated in commenting on the logical relation between privative and indefinite propositions (cf. PeriH. 19b. 22-24), which are said 'to signify the same, and not to differ one from another' (cf. in Int. 2, 3-8, p. 281; also 21-24, p. 306). This sense also expresses the equipollences at 20a. 20-23 and 20a. 39-40. Here, (cf. later C. Equivalences) the propositions are said 'to follow one from another and vice versa' (= sese sequi et sibimet consentire: in Int. 2, 3-9, p. 328), and also 'to be equivalent (= coincident) in their truth values' (= et in veritate at in falsitate se sequi et a se nulla modo discrepare: ibid., 25-26, p. 329). There are also some additional formulae (e.g. sibimet in veritate et falsitate consentient et veritatem suam et mendacium invicem consequuntur, cf. in Int. 2, 23-25, p. 330). Consentire is also the verb to express the equipollence at 20a. 39-40, which is expressed by the formula τάτων σημαίναν (cf. in Int. 2, 17-21, p. 341). The sense in (a), therefore, can be expressed thus: if two propositions are equivalent (consentiunt), then the first is true and the second true, or the first is false and the second false. (b) Consentire in veritate (= to be equivalent in truth). This sense is given in discussions of the logical relations between diagonal propositions of 19b. 22-24. For instance, two unquantified diagonal propositions are said to be true together (συναλθεῖθεσθαι) and Boethius comments on this by the formula: 'manifestum est quoniam angulares sibimet semper in veritate consentiunt' (cf. in Int. 2, 1-3, p. 304; also 10-16, p. 304). The obvious sense is, then, that two propositions are said to be true together because they are coincident in their truth, but not in falsity; i.e. if one is false the other can be true, and vice versa. The expression consentire in veritate is clear in Boethius' comments. The verb συναλθεῖθαι is, however, not so precise in Alexander of Aphrodisias, and Ammonius, as J. Barnes has shown (cf. J.
In this diagram the disposition of its propositions is different to that of Alexander, for the privative and the indefinite propositions are transposed in respect of the simple ones. It is equally evident, as Porphyry describes it, that the simple affirmation is located diagonally to the other affirmative propositions and the simple negation is diagonal to the other two negations.

(a) The logical relations

The logical relations of this diagram can be summarized in the following way: in the first column, the privative negation

\[
\begin{align*}
\text{Simple Propositions} & \\
\text{Aff.} & \quad \text{Neg.} \\
a \text{man is just} & \quad a \text{man is not just} \\
\downarrow & \quad \uparrow \\
\text{Privative Propositions} & \\
\text{Neg.} & \quad \text{Aff.} \\
a \text{man is not unjust} & \quad a \text{man is unjust} \\
\uparrow & \quad \uparrow \\
\text{Indefinite Propositions} & \\
\text{Neg.} & \quad \text{Aff.} \\
a \text{man is not not-just} & \quad a \text{man is not-just}
\end{align*}
\]

841 in Int. 2, 25-3, pp. 277-278.
842 i.e. the privative and indefinite negations are under the simple affirmation, and in the other column the privative and indefinite affirmation are under the simple negation. For this description cf. in Int. 2, 8-23, p. 277).
843 in Int. 2, 25-27, p. 278. illud quoque in descriptione videndum est, quod angulariter se affirmationes negationes quae respiciunt.

\[
\begin{align*}
\text{Logical Relations} & \\
\text{in first column}: & \text{Privative negation} \\
\text{in second column}: & \text{Indefinite negation}
\end{align*}
\]
follows from the simple affirmative, but this is not convertible. Now, since the indefinite and the privative negation are equivalent, the indefinite negation will follow from the simple affirmation, but this is not convertible. In the second column, the reasoning is similar: the simple negation follows from the privative affirmation, but this is not convertible. Now, since the indefinite affirmation and the privative affirmation are equivalent, the simple negation will follow from the indefinite affirmation, but this is not convertible.

Porphyry will give now proofs of these relations, and he will state them by following this order:
1° The relation between the simple affirmation and privative negation, in the first column. 2° The simple negation and the the privative affirmation, in the second column. 3° The privative and indefinite affirmation, in the second column. 4° The indefinite and privative negation, in the first column. 5° The extreme propositions of the first column. 6° The extreme propositions of the second column.

(b) Proofs

When the logical relations are set out, Porphyry shows their respective proofs.844

1° The privative negation follows from (sequitur) the simple affirmative in truth (in veritate), because if it is true to say 'a man is just' it is true to say 'a man is not unjust', since he who is a just man, is not a unjust man. Accordingly, Porphyry proposes a direct consequence (continua et coniuncta propositio): if a man is just, then he is not unjust.845 And this is so, Porphyry argues, if the simple affirmation is true, the privative negation is also true, and so the truth of the privative negation will follow from (consequatur) the truth of the simple negation.846 However, Porphyry warns us, this relation is not convertible (non e converso est): the simple affirmation does not follow from the

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844 in Int. 2, 2-6, pp. 279-283.
845 cf. in Int. 2, 6-8, p. 279.
846 in Int. 2, 8-12, p. 279.
privative negation, for although it is possible to say truly of a horse that it is not a unjust man, (certainly, he adds, a horse is not, in any case, a man, and consequently it is not a unjust man), it is not, however, possible to say in truth of it that it is a just man. And so, the truth of the simple affirmation does not follow from the truth of the privative negation, and accordingly it cannot be proposed nor derived (proferri) from here as a direct consequence (continua propositio). So, the following is a false proposition: if a man is not unjust, then he is just.

2° Now Porphyry invites us to see how the logical sequence is between the simple and the privative propositions on the opposite side of this diagram. Here, the simple negation follows from the privative affirmation, but this does not follow from the simple negation: for if it is true to say 'a man is unjust', then it is true to say 'a man is not just', because he who is unjust, is not just. So, the simple negation follows from the truth of the privative affirmation. However, this relation is not convertible either: for if it is true to say 'a man is not just', it is not true to say 'a man is unjust'. Certainly, if it is true to say of the horse that it is not a just man, (because, he argues, that which, in any case, is not a man, is not a just man), it is not equally true to say of it that it is a unjust man, because that which is not a man cannot be a unjust man. Thus, the truth of the privative affirmation does not follow from the truth of the simple negation, but the truth of the simple negation follows by necessity (ex necessitate) from the truth of the privative affirmation.

Porphyry now explains the logical relations between indefinite and privative propositions. Here, he says, the negations are equivalent (consentiunt) to negations, and affirmations to affirmations.

847 in Int. 2, 22-24, p. 279. atque ideo nec continua propositio hinc et conjuncta proferri proponique potest.
848 in Int. 2, 3-4, p. 280. rursus videamus et in opposita parte qualis sit consequentia.
849 in Int. 2, 14-16, p. 280. nam si verum est dicere quoniam non est iustus homo, non est omnino verum quoniam est inustus homo.
850 in Int. 2, 14-20, p. 280.
851 in Int. 2, 30-10, pp. 280-282.
In the second column, the privative affirmation ('a man is unjust') is equivalent to (consentit) the indefinite affirmation ('a man is not-just') and certainly, he adds, both signify the same (idem significat). In fact, although they differ in the external aspect (quamquam in aliquo prolatione sermone), (because the privative puts 'unjust' and the indefinite, 'not-just'), they do not differ in respect of their signification.  

In the first column, the privative negation, ('a man is not unjust') is equivalent and accords to (consentit et concordat) the indefinite negation ('a man is not not-just'). And thus, it is also manifest that these, i.e. the negations, are equivalent one to another (consentiunt sibi).

In the first column, it has been established that the privative negation ('a man is not unjust') follows from the simple affirmation ('a man is just'), but given that the privative negation is equivalent to the indefinite negation ('a man is not not-just'), the indefinite negation follows from the simple affirmation. This relation is not convertible.

On the opposite side, the same occurs, Porphyry observes, because the simple negation followed from the privative affirmation, so that the simple negation will follow from the indefinite affirmation, provided that it is equivalent to the privative one. This relation is not convertible.

Thus, Porphyry summarizes, it has been demonstrated that the indefinite negation follows from the simple affirmation, and the simple negation follows from the indefinite affirmation, without conversion. And this is so, because (in the first column) the privative negation and the indefinite negation signify the same, and given that the simple affirmation does not follow from the privative negation, as it is demonstrated above, then the

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852 *in Int. 2, 3-8, p. 281*. idem enim significant utraeque et privatoria adfirmatio et infinita adfirmatio et quamquam in aliquo sermone prolatione discrepent, tamen significacione nil discrepant, nisi tantum quod quem illa iniustum ponit id est privatoria, haec ponit esse non iustum.

853 *in Int. 2, 8-12, p. 281.*

854 *in Int. 2, 12-19, p. 281.*

855 This formula is not written by Boethius in 5°, but the relation is not convertible as the summary explains later.

856 *in Int. 2, 10, p. 282*. sed hoc e converso non evenit.

857 *in Int. 2, 11-6, pp. 282-283.*
simple affirmation does not follow from the indefinite negation. Again, on the opposite side: if the privative affirmation signifies the same as the indefinite affirmation, and the privative affirmation does not follow from the simple negation, then the indefinite affirmation will not follow from the simple negation either.

(c) Further proofs: are they by Boethius?

After these proofs, Porphyry, or perhaps Boethius by himself, considers it appropriate to illustrate the earlier reasonings with further proofs (exemplis), although the reason for the logical sequence (ratio consequentiae), as the commentary says, has been correctly stated. These new proofs are very similar to the earlier ones and maintain the same style as those already given, but differ from them in taking the propositions in another order, namely, the conclusions (or extremes) of each column, and in giving a direct proof of them. By following this new order, the indefinite propositions are considered directly.

The indefinite negation ('a man is not not-just') follows from the simple affirmation ('a man is just'); equally, the privative

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858 in Int. 2, 10-24, p. 282.
859 in Int. 2, 6-8, p. 283. sed quamquam hoc ratio consequentiae et necessitas monstret, nos tamen id quod demonstravimus ratione exemplis quoque doceamus. ("Although this [earlier argumentation] has shown necessity and understanding for the logical sequence, we shall also explain, though by examples, that which we have demonstrated by means of reasoning. I say, then, that (...)."). The sense of this passage suggests that Boethius will complete Porphyry's exposition with his own account based on exempla. The alternative is that this further attempt was also present in Boethius' Greek material. The general evidence supporting J. Shiel's theory would make this alternative preferable. However, this is not a passage analysed by Shiel and, on his assumption, it is difficult to understand why Boethius, by translating this material, was literal to the point of being ambiguous in using the contrast between 'we have done that' and 'I will do this'. It was certainly easier to maintain the first person plural. Boethius, anyway, attributes authority in other passages (cf. in Int. 2, 21, p. 310; 27-6, pp. 256-7; 9-14, p. 263), but here his authority is over explanations, which shows —as Shiel correctly believes— that Boethius in those passages is transferring explanations from his source. But the case here is different: the explanation of 19b. 22-24 is already done and taken over from Porphyry's exposition, and this circumstance makes more likely that Boethius by himself (dico) has attempted this logical exercise.

860 in Int. 2, 6-8, p. 283. See note above.
negation ('a man is not unjust') follows from the simple affirmation ('a man is just'). This is so, because if it is true to say 'a man is just', it will be true to say 'a man is not not-just' (since who is just is not not-just), and so it is also true to say that he who is just is not unjust. Therefore, the indefinite negation follows from the simple affirmation and, in the same way, the privative negation follows from the simple affirmation. But, this is not convertible nor immediately true (*statim*): he who is not a not-just man is not, equally, a just man. The horse, in fact, is not a not-just man, (and it is not, in any way, a man: because one who is not, in any way, a man, could not be a not-just man); however while it is true to say that the horse is not a not-just man, it is not true to say that it is a just man. According to the commentary, this reasoning illustrates that the indefinite negation follows from the simple affirmation, as the privative negation follows from this as well; similarly, the simple affirmation does not follow from the indefinite negation, as this does not follow from the privative negation.

Now, on the opposite side, the simple negation follows from the indefinite affirmation, as the simple negation follows from the privative affirmation. Certainly, he who is a not-just man is not just, by necessity (*ex necessitate*); equally, he who is a unjust man is not just by necessity. However, conversely, if it is true that a man is not just, it is not necessarily true that this man is not-just. The horse, in fact, is not a just man (because the horse is not, in any respect, a man, neither can it be a just man); however, nobody can say, in the same way, that the horse is a not-just man (because one who is not a man, cannot be a not-just man). Equally, when we say that a man is not just, the privative affirmation does not follow, i.e. 'a man is unjust', because the horse, for example, is not a just man, and in the same way nobody can say that the horse is an unjust man.

By means of these proofs, then, the earlier ones are completed, and whether by Boethius or Porphyry, the logical sequence of 19b. 22-24 is confirmed.

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861 *in Int.* 2, 20, p. 283.
862 *in Int.* 2, 15, p. 284.
863 *in Int.* 2, 16-18, p. 284.
(d) Porphyry's arrangement of 19b. 22-24.

After having demonstrated sufficiently the logical relations between simple, privative and indefinite propositions, the commentary goes on to explain with detail how Aristotle's statement of 19b. 22-24 is consistent with the logical sequence. According to Porphyry, what Aristotle says is now correctly understood: the four propositions are the two simple and the two indefinite. Now, of these four propositions, two are consequences of the other two, (i.e. the indefinite and simple negations are consequences of the simple and indefinite affirmation respectively), since the two first (i.e. the indefinite and simple negation) follow from the simple and indefinite affirmation respectively. Thus:

现在，鉴于特权否定是从简单的肯定和简单的否定是从特权肯定分别推导出来的，如果要求特权命题被引入的话，下面的图形结果是可能的，题目是介绍的：

Now, given that the privative negation follows from the simple affirmation and the simple negation follows from the privative affirmation, the following diagram results if the privative propositions are introduced:

864 The complete explanation is at in Int. 2, 6-26, pp. 285-287. After that, the commentary discusses problems and difficulties of this interpretation, and then it insists on this explanation as a conclusion (in Int. 2, 1-8, pp. 291-292).
As is clear in this diagram, there are two consequences in each column,\(^865\) and therefore there are two propositions in the diagram which are not disposed as consequences,\(^866\) but as antecedents\(^867\) of the logical sequences verified in each column of the diagram. Therefore, just as Porphyry describes this diagram: there are four propositions (two simple and two indefinite). Two of them, the simple and indefinite affirmations follow from the negations (the simple and the indefinite one), and this is also so if the privations are considered (for here the privative negation follows from the simple affirmation and the simple negation follows from the privative affirmation). As is clear here too, there are two propositions, the remaining ones (\(\text{reliquae duae}\)), i.e. the simple and the indefinite affirmation which are consequences neither of the simple and the indefinite negations, nor of the privations (for the privative affirmation does not follow the simple negation and the privative negation does not follow the simple affirmation).\(^868\)

Accordingly, the complete sense of 19b. 22-24 is thus: "Because of this\(^869\) — says Aristotle — there will be four cases [i.e. two simple propositions and two indefinite ones] (two of which [i.e. the indefinite negation and the simple negation] will be related, as to order of sequence, [i.e. as antecedent and consequent], to the affirmation and negation [i.e. to each affirmation and negation]\(^870\) in the way the privations are [because in the privative propositions too the negations follow from the affirmations], while two will not." [i.e. the simple affirmation and the indefinite one: because they are antecedents, not consequents, in these logical relations].

\(^865\) namely, in the first, the privative and the indefinite negation; in the second, the simple negation and the privative affirmation.

\(^866\) \textit{in Int. 2}, 24-29, p. 285. Namely, the simple affirmation and the indefinite affirmation.

\(^867\) The commentary does not use the term 'antecedent', but clearly the distinction among propositions in each column is one of antecedent and consequent; the use of this term simplifies at great length what Porphyry explains, which is long and repetitive.

\(^868\) \textit{in Int. 2}, 7-19, p. 291.

\(^869\) i.e. because of 'is' is predicated as a third element.

\(^870\) i.e. the negations follow from the affirmations.
Porphyry's diagram is not only useful to verify the logical relations that privative, simple and indefinite propositions have to one another in each column, i.e. vertically, but also to verify diagonal relations. As we have indicated above, Aristotle makes an implicit comparison between the unquantified and quantified diagonal propositions when he introduces the oppositions of the quantified ones and says: \(^{871}\)

"Here, however, it is not in the same way possible for diagonal statements to be true together, though it is possible sometimes."

Not only Porphyry but also Herminus and Alexander infer correctly from here the obvious conclusion that in unquantified propositions every relation between the diagonal propositions can be true. In Boethius' report, Alexander and Herminus\(^{872}\) present an examination of the diagonal relations stating only the simple and indefinite propositions, while Porphyry presents a more complete account which includes the privative propositions.

Porphyry's diagram has shown that affirmations are diagonal to affirmations, and negations to negations. Now, Porphyry states that the diagonals (\textit{angulares}) of the unquantified propositions are true together (\textit{simul})\(^{873}\) and therefore the following relations must be added to his diagram:

\[\begin{align*}
\text{Simple Aff.} & \rightarrow \text{Simple Neg.} \\
a \text{man is just} & \rightarrow a \text{man is not just} \\
\text{Privative Neg.} & \rightarrow \text{Privative Aff.} \\
a \text{man is not unjust} & \rightarrow a \text{man is unjust} \\
\text{Indef. Neg.} & \rightarrow \text{Indef. Aff.} \\
a \text{man is not not-just} & \rightarrow a \text{man is not-just}
\end{align*}\]

\(^{871}\) \textit{PeriH.} 19b. 35-6.

\(^{872}\) see next section (ii. 3) \textit{Herminus' exposition}.

\(^{873}\) \textit{in Int.} 2, 4-5, p. 303. nam indefinitarum propositionum angulares simul veras esse contingit.
If 'a man is just' is true (i.e. the simple affirmation), nothing prohibits \(\textit{nihil prohibet}\), Porphyry remarks, the privative and the indefinite affirmations from being also true.\(^{874}\) Again, the negations that are diagonals one to another can be true: if 'a man is not just' is true, then nothing prohibits the corresponding privative proposition from being true: 'a man is unjust', and also 'a man is not not-just', the indefinite proposition.\(^{875}\) Therefore, when the propositions are unquantified, nothing prohibits, as Porphyry concludes, the diagonals from being equivalent one to another in truth \(\textit{in veritate consentire}\).\(^{876}\)

As in the case of Alexander's exposition, the commentary remarks that these diagonal relations are verified when the predicate of the proposition inheres in the subject by simple attribution, but not when it inheres or separates by necessity.\(^{877}\) So that 'a man is rational' cannot be true together with its respective diagonals, namely, 'a man is irrational', or 'a man is not-rational'. Indeed, 'rationality' belongs \(\textit{inest}\) in man by nature; and just as this proposition must be true, things which are predicated of a subject by impossibility must constitute a false proposition by necessity. So it is manifest that in propositions that are such that the terms do not belong by nature (as in 'a man is just': justice, indeed, neither is natural nor impossible in man) the diagonals (either affirmative or negative) always can be true together \(\textit{in veritate consentire}\).\(^{878}\)

\(^{874}\) \textit{in Int.} 2, 7-10, p. 303.  
\(^{875}\) \textit{in Int.} 2, 10-12, p. 303. \textit{rursus negationes negationibus quae sunt angulares veras esse contingit.}  
\(^{876}\) \textit{in Int.} 2, 15-16, p. 303. \textit{angulares ergo sibi indefinitis in veritate consentire nihil prohibet.}  
\(^{877}\) \textit{in Int.} 2, 16-18, p. 303. Boethius, as we have noticed earlier (cf. Part I, 4., (iii.3) \textit{The arithmetical calculus of the number of categorical propositions}), knows the doctrine of the 'matter of propositions'. He in fact refers to Book Two of his second commentary (cf. \textit{in Int.} 2, 3-16, pp. 148-155). This same doctrine is also mentioned in his first report of Alexander's exposition on 19b. 22-24 (cf. above Part II, (d.1) \textit{Boethius' report of Alexander in the First Commentary}).  
\(^{878}\) \textit{in Int.} 2, 23-8, p. 303-4.
Herminus' exposition of 19b. 22-24 is characterized by Boethius' commentary both by its pronounced errors and by its incompleteness, that is, because Herminus explains wrongly what Aristotle means in this passage and not all that is contained in it. Boethius seems to present this exposition to criticise it, and to make manifest the superiority of Alexander's and above all of Porphyry's explanations.

According to Herminus, the propositions with indefinite names can be expressed in three ways: they have either an indefinite subject, as in the case of 'a not-man is just'; or an indefinite predicate, as in 'a man is not-just', or finally an indefinite subject and predicate, as in 'a not-man is not-just'.\(^{879}\)

As Herminus observes, propositions with indefinite predicate are similar (\textit{similes sunt}) to privative ones: 'a man is not-just' is similar to 'a man is unjust', and this also occurs with their respective negations: 'a man is not-not-just' and 'a man is not unjust' are similar.\(^{880}\) This occurs, Herminus says, because 'to be a unjust man' is the same as 'to be a not-just man'.\(^{881}\)

Accordingly, Herminus maintains that propositions that have either an indefinite subject, like 'a not-man is just' or both indefinite names, like 'a not-man is not-just', are not equivalent (\textit{non consentiunt}) to the privative propositions.\(^{882}\) So, there is no similarity (\textit{nulla similitudo}), according to him, between 'a not-man is just' and 'a man is unjust'; again 'a not-man is not just' is completely different from 'a man is unjust'. Supposedly,\(^{883}\) the same applies to the negative privation, for Herminus remarks in general that propositions which have an indefinite name in their predicate are equivalent to (\textit{consentiunt}) privative propositions, but those propositions whose subject is indefinite, or those both of

\(^{879}\) \textit{in Int.} 2, 6-11, p. 275.  
\(^{880}\) \textit{in Int.} 2, 11-14, p. 275. harum igitur, inquit, quaecumque ad praedicatum terminum habent nomen infinitum, similes sunt his quae aliquam denuntiant privationem.  
\(^{881}\) \textit{in Int.} 2, 18-19, p. 275. idem enim est, inquit, esse hominem iustum quod hominem non iustum.  
\(^{882}\) \textit{in Int.} 2, 19-23, p. 275.  
\(^{883}\) Boethius' commentary does not provide more than this example.
whose names are indefinite, are quite different from the privative and indefinite propositions.\textsuperscript{884} Briefly, in a diagram, what Herminus states is this:

\begin{itemize}
  \item[(i)] a man is unjust
  \item[(i')] a man is not unjust
  \item[(ii)] a man is not-just
  \item[(ii')] a man is not-not-just
  \item[(iii)] a not-man is just
  \item[(iii')] a not-man is not-just
\end{itemize}

According to the commentary, Herminus misunderstood the sense of 19b. 22-24 when he introduced the propositions with indefinite subject, i.e. (iii) and (iii'). Reasonably, this fact misled his interpretation:\textsuperscript{885}

sed haec Herminus. longe a toto intellectu et ratione sententiae discrepans has interposuit, quae aut ex utrisque infinitis aut ex subjecto fierent infinito.

But the point, says the commentary, is that Herminus neither explains Aristotle's phrase 'secundum consequentiam'\textsuperscript{886} nor which two propositions are related to the privations according to consequence, so that what Aristotle means at 19b. 22-24 remains obscure before and after his exposition.\textsuperscript{887}

\textsuperscript{884}in \textit{Int.} 2, 27-31, p. 275. namque illa quae infinitum nomen habent in praedicatione hae privatoriis consentiunt, illae vero propositiones quae subiectum habent infinitum aut utraeque infinita privatoriis longe diversae sunt.

\textsuperscript{885}in \textit{Int.} 2, 31-3, pp. 275-6. ("These things, however, Herminus [says]. He, misunderstanding badly the complete sense of the phrase [19b. 22-24], introduced these propositions, namely, that with both [terms] indefinite and that with an indefinite subject.").

\textsuperscript{886}i.e. "two propositions will be related as to order of sequence [i.e. secundum consequentiam], to the affirmation and negation (...).

\textsuperscript{887}in \textit{Int.} 2, 3-8, p. 276. quid autem esset quod ait [sc. Aristotle] secundum consequentiam vel quae duae haberent se secundum consequentiam ut privationes, quae vero non, exponens nihil planum fecit et sensus nihil magis ante expositionem Hermini quam post expositionem obscurus est.
According to Ammonius, Aristotle has posited the indefinite negation under the simple affirmation and the indefinite affirmation under the simple negation. To do this, Ammonius supposes a diagram congruent to that given earlier by Porphyry (Boethius). Then, Ammonius' analysis starts thus:

(a) The indefinite negation or 'transposed' as Ammonius calls it, following Theophrastus, is more general, or more extensive, (ἐνὶ πλέον) than the simple affirmation, for we can apply correctly the predicate 'is not not-just' to the dog, for instance, but it is impossible to do the same with the other predicate, that is, to say that the dog is just. After this, on the other side of the diagram, he adds:

(b) The indefinite (or transposed) affirmation will be less extensive (or more specific) (ἐπ' έλαστον) than the simple negation.

In fact, Ammonius remarks, if someone is a not-just man, then he is not a just man, but it is not verified that if someone is not a just man, then he will be a not-just man.

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888 This first argument already shows how Ammonius will reason on this topic. His expression is: οὔτε ἐπὶ πλέον εἴη ἢ ἐκ μεταβάσεως ἀπόφασις τῆς ἀπλῆς κατάφασις (in Int. p. 162, 3-4). The important concept, the logical function, which is stated between a pair (or group) of propositions is, as is clear, 'to be more general' or 'to be more extensive'. The concept is the inverse to 'to be less general', that is, 'to be more specific', ἐπ' έλαστον, as Ammonius will introduce it some lines later. These two concepts then will give the logical order of the simple, indefinite, and privative propositions. (See also next note). Th. Aquinas' Commentary on Peri Hermeneias, (S. Thomae Aquinatis in Aristotelis Libros Peri Hermeneias et Posteriorum Analyticorum Expositio, P. Fr. Raymundi M Spiazzi, O.P. Marietti (Italy), 1955, = in PeriH.) which is based on the translation by William of Moerbeke of Ammonius' in Int., comments on this development. As to this relation, he says: Affirmativa vero simplex in minus est quam negativa infinita: quia quod non sit homo non iustus potest dici non solum de homine justo, sed etiam de eo quod penitus non est homo. (in PeriH., 219, p. 87).

889 Ammonius, in Int. p. 162, 4-5. τῆς ἀρα ἀποφάσεως τῆς ἀπλῆς ἐπ' έλαστον ἐστα ἢ ἐκ μεταβάσεως κατάφασις. Ammonius explains that the sense of these deductions is clearer if we suppose the whole of things (τὰ δύτα πάντα) to be consistent in a number of one thousand; thus, (and supposing the diagram), the simple affirmation is verified, according to a supposition, of four hundred beings, while the transposed or indefinite negation is verified in more beings than those, in six hundred beings. Again, on the other side, the indefinite affirmation will be verified of four hundred beings, while the simple negation of six hundred (cf. Ammonius, in Int. p. 162, 9-16). His example shows clearly that these consequences work reasoning from the more specific to what is more general. Thus, it is clear that if the specific
Now, as Ammonius also observes, Aristotle introduces the privative propositions: 'a man is unjust', 'a man is not unjust'. The commentary immediately explains the sense of a privative proposition by alluding to *Physics* A, 7, 189b. 30, and also *Categories* 13a. 5, and then explains the positions that this kind of proposition has in the diagram already assumed. According to Ammonius, the privative propositions are posited between the simple and the indefinite propositions. As a general characteristic of his reasoning, Ammonius will verify, in the first side of the diagram, that both negative propositions, the privative and the indefinite, follow from the simple affirmation: in fact, the privative and the indefinite negations are more extensive than the simple affirmation. Again, in the other column, there will occur something similar: the simple negation will follow from the affirmative propositions, the privative and the indefinite. Indeed, the two affirmations, the privative and the indefinite, are less extensive than the simple negation. Therefore, the diagram that Ammonius has in mind is this:

occurs, the general will occur as well. And if the general does not occur, the specific will not occur either. So, it is clear that the absolute negation ('x is not just') applies to a greater number of beings than the transposed one ('x is not-just'), for while the first denies absolutely a predicate of a subject, the second affirms that something which can have a property does not have it now. So Th. Aquinas comments on this: Secundum ergo hunc modum loquendi, manifestum est quod simplex negativa in plus est quam affirmativa infinita, quae ei correspondet. Nam, quod sit homo non iustus, vere potest dici de quolibet homine, qui non habet habitum iustitiae; sed quod non sit homo iustus, potest dici non solum de homine non habente habitum iustitiae, sed etiam de eo qui penitus non est homo: haec enim est vera, *lignum non est homo iustus*, tamen haec et falsa, *lignum est homo non iustus*. (in Perih., 219, p. 87).

So also A. Busse (Ammonius *in Int.*, p. 163). The passages are also clearly related to Cat. 11b. 38-12a. 5, of which we give an explanation in the next section (ii. 5) *Porphyry's and Ammonius' expositions*.


Cf. Ammonius, *in Int.* p. 164, 4-6. ὡσαίτως ἐκ καὶ ἀ καταφάσας αὐτῶν τὸν αὐτὸν ἔξομιν λόγον πρὸς τὴν ἀπὸ ἀπόφασιν· καὶ γὰρ ταῦτας ἐξεύκομην ἐκένης ἐπὶ ἐλεβτον οὕσας.
The diagram and most of the logical relations stated by Ammonius coincide with what Porphyry has stated. However, Ammonius will differ from Porphyry in respect of the logical relation verified between the privative and indefinite propositions. In fact, while in Porphyry's view, as Boethius shows it, the privative and the indefinite propositions are equivalent, in Ammonius' reasoning the privative affirmation is more specific than the transposed affirmation, and the privative negation is more general than the transposed negation. As a result, (second column) the transposed affirmation follows from the privative affirmation, and (first column) the privative negation follows from the transposed negation. These relations are not convertible. Therefore, in Ammonius' view, as he will demonstrate it, 'to be unjust' is not exactly the same as 'to be not-just'.

The remaining proofs of the complete set of (vertical) logical relations in this diagram are as follows:
(c) The privative affirmation is more specific than the indefinite or transposed affirmation,\textsuperscript{894} for if someone is an unjust man, then he will be not-just, but not vice versa. In effect, one can say of a boy, for instance, that he is not-just, but not that he is unjust, because a boy does not partake (μετέχειν) of the habit of justice.\textsuperscript{895}

\textsuperscript{894} Ammonius, \textit{in Int.} p. 164, 18-19. ἡ ἀλήθεια ἐπὶ ἀλήθειαν ἄλλης ἡ κατάφασις ἡ στερητικὴ τῆς ἐκ μετάθεσης.

(d) The privative negation is more general (or extensive) than the indefinite negation,\textsuperscript{896} because the privative one will be verified of a boy, who is not an unjust man, while the transposed or indefinite negation cannot be applied to him, since the indefinite affirmation can be applied to him, i.e. he is a not-just man —as Ammonius stated in the earlier proof.\textsuperscript{897}

(e) The privative negation is more general than the simple affirmation.\textsuperscript{898} For if a just man is not said to be unjust, but (on the contrary) not to be unjust, then 'a man is not unjust' follows from 'a man is just'. Now, it is clear that this relation is not convertible, for the privative negation is true in more cases than the simple affirmative, i.e. the predicate 'is not unjust' is applied correctly to more things than a man. In fact, it is also applied to those things which do not have the habit of justice or injustice.\textsuperscript{899}

(f) The privative affirmation is more specific than the simple negation.\textsuperscript{900} There is no direct proof provided by Ammonius, but he refers to what has been stated earlier. It can be deduced of his earlier instances of proof that the predicate 'is unjust' can be correctly applied only to things that can have the habit of justice, while the predicate 'is not just' can be applied to more things: in fact, to things that are not able to have that habit, as for example a stone. Thus, a stone is not just, which is true, but one cannot say that it is unjust.\textsuperscript{901}

\textsuperscript{896} Ammonius, in Int. p. 164, 22-26. ὡστε ἡ ἀποφάσις ἡ στερητική ἐπὶ πλέον τῆς ἕκ μεταβέσεως ἀποφάσεως ἀληθεύει.

\textsuperscript{897} In other words, there are more things which are not unjust than things which are not not-just, for 'to be unjust' is more specific than 'to be not-just'. So Th. Aquinas: Similiter etiam negativa privativa in plus est quam negativa infinita. Nam, quod non sit homo inustus, potest dici non solum de homine habente habitum iustitiae, sed de eo quod penitus non est homo, de quorum quodlibet potest dici quod non sit homo non iustus: sed ulterior potest dici de omnibus hominibus, qui nec habent habitus iustitiae neque habent habitum iniusitiae. (in PeriH., 219, p. 87).

\textsuperscript{898} Ammonius, in Int. p. 163, 32-35. ἐπὶ πλεονάσων γὰρ ἀληθῆς ἡ στερητικὴ ἀποφάσις, ἵνα καὶ τὴν ἀόρατον ἀποφασιν καταλαμβάνωμεν ἐπὶ πλεον ὁδεγαὶ τῆς ἀληθείας καταφάσεως, τούτῳ ἐστιν ἐπὶ τῶν παρὰ τὸν ἐνεργοῦν πάντων. (in PeriH., 219, p. 87).

\textsuperscript{899} Cf. Ammonius, in Int. p. 163, 35 - p. 164, 2.

\textsuperscript{900} Cf. Ammonius, in Int. p. 163, 38 - p. 164, 2. δὴ λογον δὲ ἐκ τῶν πρῶτων ἐθνημένων ὅτι ἡ κατάφασις ἡ στερητικὴ ἐπὶ διατηρεῖ ἐστί στοι τῆς ἀποφάσεως.

\textsuperscript{901} In this sense, Aquinas says: Simili ratione, negativa simplex est in plus quam affirmativa privativa: quia de eo quod non est homo non potest dici quod sit homo inustus. (in PeriH., 219, p. 87).
(a) Ammonius' arrangement of 19b. 22-24

According to Ammonius, Aristotle at 19b. 22-24 gives us to understand (αὐτῷ τῇ ὑπαίθρῳ) the sequence (ἀκόλουθω) of these propositions in a way that the affirmation and the negation which are called 'simple' work like paradigms (ὡς ἄριστον), since they, when they receive a negative predicate, produce the propositions which are by transposition, so that they (the simple and the transposed) will make the four propositions and two oppositions alluded to. In fact, this is what is said (19b. 22): ὅστε δὲ τούτο τέταρτα ταύτα ἔσται.902

Accordingly, Ammonius interprets the passage thus: of these four propositions, two of which, [i.e. the transposed ones] will be related, according to affirmation and negation, [i.e. to the simple affirmation and negation], as to order of sequence, [i.e. in order of consequence and correspondence (ἀντί τού κατὰ συστοιχίαν καὶ ἀκόλουθόν τι)], in the way the privations are, [i.e. just as the indefinite propositions are related to the simple ones so too the privative ones are related to these, for the indefinite negation follows from the simple affirmation and the privative negation also follows from it, and (in the opposite column) the simple negation follows from the indefinite affirmation and follows from the privative affirmation too.]903 Finally, Ammonius remarks, while two will not, [i.e. the simple propositions: for they are not ordered to the transposed ones just as the privative ones are.]904

902 That is, "Because of this there will be four cases". Cf. also Ammonius, in Int. p. 166, 28-34.
903cf. Amm., in Int. p. 166, 35-167, 4. I.e. the order of sequence preserved between the privative propositions and the simple ones is the same as that preserved between the simple propositions and the indefinite ones. Thus Th. Aquinas: Ex quo patet quod eadem est habitudo in consequendo infinitarum ad simplices quae est etiam privatvarum. ("The same relation of entailment between the privatives and the simple ones is manifest between the indefinites and the simple ones." Cf. in PeriH. 220-1, p. 87).
904cf. Amm., in Int. p. 167, 4-13. It is easy to see in the diagram what is pointed out by Ammonius: when the simple affirmation implies the transposed negation, the privative negation does not imply it. In the other column, when the simple negation is implied by the transposed affirmation, the privative is not implied by it. Thus Th. Aquinas: "But the simple propositions do not relate to the indefinite ones in consequence as the privative propositions to the indefinite ones." (in PeriH. 220-1, p. 87).
Porphyry's and Ammonius' expositions

W. Cavini has observed that the ancient commentators interpreted the passage of 19b. 22-24 in relation to the more articulated exposition of An. Pr. I, 46. This statement is, in general, true, as the expositions by Alexander, Porphyry and Ammonius show by themselves. In interpreting it, however, they also maintained marked differences one from another. The most manifest difference is the following: in the diagrams, Porphyry, Alexander and Herminus state an equivalence between the privatives and the indefinites based on the fact that 'to be unjust' is the same as 'to be not-just'. This equivalence, which is grounded apparently on appealing to an intuitive certainty of the sense of these expressions when taken isolatedly, occurs in Boethius' report as a principle or conviction of these commentators. Ammonius, however, does not have this equivalence.

It is worth noting that Ammonius knows his own interpretation of 19b. 22-24 to be different from one which is advanced by the more competent interpreters of Aristotle (οἱ ἄκριβέστεροι τῶν ἐξηγητῶν). Although Ammonius does not agree with this interpretation, he recognises its persuasive force. Ammonius observes that those who maintain this interpretation argue that one of its virtues is to be simpler than what he offers, and also to be one for which to guess Aristotle's mind is not a condition. Since Ammonius refers to an implicit comparison between his interpretation and that of the other interpreters, his remark suggests that his position, and the other one, were school matters of his time. It is also remarkable that Ammonius does not observe that the rival interpretation stems from Alexander's interpretation of 19b. 22-24. That Ammonius refers to this

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906 in Int. p. 167 34, οὐ μὴν ἔμε γε ἐπάγεται καὶ πολὺ ἔχουσα τὸ πιθανόν ἡ ἕξηγησις.
907 in Int. p. 167, 15-18, οἷς μὲν οἷς ὅτι τῶν ἐξηγητῶν οἱ ἄκριβέστεροι γράφουσι καὶ ἔτερων ἐξηγησιν τῆς ῥήσεως ταύτης, ὡσ ὡς πολλοὶ ἄφοσαν τούτων ἐπιλογοι οὐκ ἐγνωρίσεται τῆς προειρημένης καὶ οὐκ ἀναγκαζομαι ἡμᾶς, ἓνακαὶ ταύτης ἡμᾶς, μαντεύεσθαι τὴν διανοοίαν τοῦ Ἀριστοτέλους.
908 This other interpretation has been also reported by M. Soreth (1972), pp. 400-1, but she has not noticed the connection with Alexander. This connection is, however, manifest. The competent interpreters, those whose view Ammonius reports (p. 167, 15-35), refer to the form of propositions at
interpretation without mentioning its original author is perhaps not surprising, for he also seems unaware of Porphyry's and Herminius' interpretations.\textsuperscript{909}

Now, the opinion that 'to be unjust' and 'to be not-just' are equivalent seems to misunderstand Aristotle, because, as Ackrill has pertinently observed,\textsuperscript{910} Aristotle in \textit{Cat.} 11b. 38-12a. 5 does not consider 'to be just' as a necessary quality of the subject (i.e. of man), so that in this case the indefinite term ('not-just') will not be equivalent to the privative one ('unjust'), as happens in every case in which the quality is necessary to the subject and there is not an intermediate state, e.g 'to be equal' said of numbers: here, indeed, 'to be unequal' is equivalent to 'to be not-equal'.\textsuperscript{911}

\textsuperscript{909} The fact suggests that Ammonius knew these commentators indirectly and mostly through limited and discontinuous pieces of information. This kind of information seems to be already well described by Boethius as \textit{sententiae}. The alternative that Ammonius had been aware of the Aphrodisian origin of this interpretation but had decided not to ascribe it to him seems more unlikely, provided Ammonius' unawareness of other interpretations, and specially of that by Porphyry. So, in respect of their use of the ancient commentators of \textit{PeriH.}, Boethius' and Ammonius' commentaries are quite similar, though the existence of Proclan influence in Ammonius (and here all that Proclus debts to Lamblichus and Syrianus) seems to indicate a difference between both.

\textsuperscript{910} cf. Ackrill (1963), p. 143.

\textsuperscript{911} At \textit{Cat.} 11b. 38 ff. the examples given by Aristotle of contrary qualities are (i) sickness and health, and (ii) even and odd, said of the animal's bodies and numbers respectively: here there is no intermediate state. But, on the contrary, in cases such as (iii) black and white, (iv) bad and good, (v) just and unjust, it is not necessary for one or another of them to belong to the subject, even though (iii), says Aristotle, occurs naturally in bodies. Cf. also Part I, 2.1, (i) Aristotle's definition of verb and his intention.
So, while Ammonius' explanation of these relations of consequence agrees with the doctrine expressed in Cat, the explanation of Herminus, Alexander, and Porphyry (Boethius) does not match with it. Is it possible to explain this difference by a mere misunderstanding of Herminus, Alexander, and Porphyry (Boethius) in reading comprehensively Aristotle? There are no substantial elements to answer this question, for Aristotle scarcely contributes to clarification of the point. In fact, he does not explain, either in An. Pr. I, 46 or in PeriH., what is the exact relation maintained by the privative and the indefinite propositions. Besides, it is difficult to find more evidence to decide whether the commentators, apart from Ammonius, make this equivalence because they inferred it from the fact that the logical relations between simple and indefinite propositions do not change if the privative ones are introduced in a second instance in the diagram, or because this equivalence is true in the example used by Aristotle in An. Pr. I, 46, where 'unequal' is given as equivalent to 'not-equal'). Rather, all seems to indicate that Ammonius' understanding of Physics A, 7, 189b. 30, and Categories 13a. 5, (prompted perhaps by Proclus), was a decisive innovation in this discussion.

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912 An Pr. I, 46, 52a. 15-17. Ὄμοιος δ ' ἔχουσι καὶ οἱ στερησεῖς πρὸς τὰς κατηγορίας ταύτη τῇ θέσει. ("Privative terms are similarly related to positive terms in respect of this arrangement". A.J. Jenkinson's translation, Aristotle's Prior Analytics, The Revised Oxford Translation).

913 An. Pr. I, 46 (51b. 22-27). ("As then not to know what is good is not the same as to know what is not good, so to be not-good is not the same as not to be good. (...) Nor is to be not-equal the same as not to be equal; for there is something underlying the one, viz. that which is not-equal, and this is the unequal, but there is nothing underlying the other."). A.J. Jenkinson, ibid.

914 Alexander at in An. Pr. I, 46 does not mention Cat. or Phys., and he neither uses the relation 'specific-general' to state the logical correspondence, as Ammonius does, between the simple, privative and indefinite propositions, nor comments on the specific point of the relation between privatives and indefinites. Similarly, when Alexander comments on the nature of the privation in Metaphysics, he seems acquainted with the distinction between negation and privation (cf. in Met. 1022b. 32-3: not every negation is a privation), but he does not allude to Cat. 11b. 32-12a. 5 in a further relation to indefinite propositions. (cf. Alexander of Aphrodisias On Aristotle Metaphysics, W. E. Dooley SJ, London 1993, p. 105). (See also the interpretation of this passage by al-Farabi, later in this same section). cf. also above Part II, (d.2) Boethius' report of Alexander in the second commentary.
Ammonius, therefore, seems to interpret Aristotle correctly in maintaining that a privative proposition implies the corresponding indefinite (and the negation of an indefinite implies the negation of a privative), and that none of these relations is convertible. Ammonius claims to maintain a more accurate and complete interpretation of the mentioned passages of *An. Pr.* and *PeriH*. He thinks that he has not only understood how is the arrangement (ὅ στοιχος) of the simple, privative and indefinite propositions, but also stated the hidden logical order and the analogical correspondence (τὰ ἀνάλογα) by which these propositions are related one to another, namely, one of 'specific to general', where the specific proposition (or concept) implies the general one, and the negation of the general proposition (or concept) implies the negation of the specific one, as happens in the case of a man and an animal: the species (man) implies the genus (animal), as every man is an animal.

In the light of Ammonius' distinction, one can reject the extreme position maintaining that the indefinite term (name or verb) coincides with the privation. This view has been stated by Al-Farabi,915 and also by others.916 Al-Farabi argues that the notion signified by an indefinite term corresponds to the privation (στέρησις) mentioned by Aristotle in *Categories*, namely, 'the absence of something from the subject in which it is proper for it to be'.917 He adds:918

"For in the third section [of *PeriH*. 19b. 23 ff.] he [Aristotle] declares that in relation to plain sentences, metathetic statements919 are equivalent to privative ones. In the light of this statement, we must understand the present statement to the effect that the indefinite verbs and nouns signify kinds of privations. This is also stated in *Metaphysics*, [Met. 1022b. 32 f.] where Aristotle says: "Generally

916 According to Montanari (1988), vol. ii, p. 209, Averroes and also Albert the Great (Albert Magnus) approach the nature of the indefinite verb (and name) as privation.
919 Zimmermann's word for 'transposed propositions' (= indefinite propositions).
Speaking, the kinds of privation are those signified by 'not-such', where 'not-such' stands for words like 'not-just' or 'not-sighted". This then is what the indefinite kinds of nouns and verbs signify according to Aristotle. Again, what he says at the end of the first book of the Prior Analytics [I, 46] is to the same effect. All his statements about the signification of the indefinite nouns and verbs agree with one another wherever he mentions them. I do not understand how this has escaped the said commentators so that they could offer an interpretation which agrees neither with what Aristotle says nor with the truth of the matter."

Whether or not Th. Aquinas in his comments on PeriH intends to reject Al-Farabi's position, he produces, in fact, a convincing summary argument to understand the difference between a privative and an indefinite term:

Imponitur enim a negatione hominis, quae aequaliter dicitur de ente et non ente. Unde non homo potest indifferenter et de eo quod non est in rerum natura, ut si dicamus chimaera est non homo, et de eo quod est in rerum natura, sicut cum dicitur, equus est non homo. Si autem imponeretur a privatione, requireret subiectum ad minus existens: sed quia imponitur a negatione, potest dici de ente et de non ente, ut Boëthius et Ammonius dicunt.

The view advanced by Al-Farabi is not without problems, as he himself realizes at the end of its long defence. It has been already noted that he has adopted Ammonius' (= Stephanus') interpretation of 19b. 22-24, but he has inferred the logical

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920 According to Montanari (1988), vol. ii, p. 209, Th. Aquinas has in mind Al-Farabi's view. The point seems to be plausible if one thinks that Al-Farabi's position was adopted by Averroes. Also Albert the Great (Albertus Magnus), master of Aquinas, maintained this position (according to Montanari, ibid., p. 208). Against Montanari's view, however, lies the fact that Aquinas does not mention Al-Farabi's views at all in his in PeriH.

921 cf. Th. Aquinas (in PeriH., 48, p. 22). The expression 'ut Boëthius et Ammonius dicunt' refers to the fact that Ammonius and Boethius maintain that the indefinite name (or verb) holds of everything whether existent or non-existent, but does not refer to the distinction between indefinite name and privation, for (as we know) Boethius, unlike Ammonius, adopted the view that the privative and indefinite predicate are equivalent.

sequences in a way which is neither in Ammonius nor in Stephanus.\textsuperscript{923} Al-Farabi says that he is following the commentators, but it is clear that none of them can exhibit his peculiar deductions.\textsuperscript{924} In his long and complex discussion, he attempts to adapt Aristotle's notion of the indefinite term (that which can be applied to what exists and what does not exist) to a view in which 'what does not exist' is understood as that which does not exist in the way the privations produce non-existence:\textsuperscript{925}

"For privation is non-existence of what can exist, while the commentator's definition of indefinite verbs signifies non-existence of what cannot exist, or plain non-existence, which is the genus of the non-existence of what can exist and of the non-existence of what cannot exist."

As the passage shows, the commentators whom Al-Farabi intends to refute, maintain correctly that the indefinite term is wider than

\textsuperscript{923} cf. M. Soreth (1972), p. 397. (M. Soreth, \textit{ibid.}, pp. 397-8, provides a report of Al-Farabi's method; for an English translation cf. also Zimmermann (1991), pp. 103-8).

\textsuperscript{924} Zimmermann (1991), pp lxxxiv ff., has argued convincingly that al-Farabi's allusions to 'all' or 'some' commentators "cannot mean that he was surrounded by commentaries in monograph form", but "he must have copied or inferred most of these distinctions from the glosses at his disposal" (cf. p. xcviii). Zimmermann's idea is similar to that which J. Shiel maintains in respect of the commentaries by Boethius on the logical treatises of Aristotle. And so he says "I can see nothing that would seriously argue against the assumption that al-Farabi was relying on a single codex descended from a line of ancestors in which, in the course of generations, selections from later sources had been grafted on an original substratum of purely Porphyrian glosses" (pp. xc, xcv). Zimmermann has equally argued that "all the features of the commentary which (...) have to count as Ammonian could have come through Stephanus, hence "We may therefore conclude that the Ammonian prototype was represented in al-Farabi's source or sources by glosses descended from excerpts made in a distant past from the commentary of Stephanus" (p. xcv). However, even though he has shown certain important parallels between Stephanus' \textit{in Int.} and al-Farabi's, the extreme opinion of identifying the indefinite term and the privation rather seems to be due exclusively to the Arab commentator. Similarly, the complex and convoluted arguments given by al-Farabi to show the order of this arrangement of 19b. 22-24 seem to be his own, for they are not found in any post-Ammonian commentator (nor do they come through the Alexander-Porphyrian way either). It is probable that the 'originality' showed by Al-Farabi in this part of his commentary is due rather to his need to make compatible two ideas (i.e. privations with indefinite names) that in Aristotle do not match, as Ammonius has shown.

the privation. Al-Farabi understands their position, but insists on his own. Although complex, Al-Farabi's arguments are weak, and may not represent Aristotle's correct view of indefinite term and negation. Al-Farabi in fact does not reflect on simpler points: Aristotle would not say that there is no name for expressions like 'not-man' or 'does not walk', etc., if they were privations, for Aristotle obviously would call these expressions 'privations' instead of giving them a name. Similarly, there are some reasons to think that Al-Farabi's view could be prompted by extra-logical facts: he realizes that the indefinite term, as it is in Aristotle, is virtually inexistent in the Arabic language except as an imported irregularity.

Ammonius' view also helps to clarify a point made by J. Barnes, namely, that Aristotle in some contexts refers to the privative term as δυτικός (twofold, ambiguous). In his comments on An. Post. 77b. 24 ff., Barnes notices that 'non-geometrical' and 'non-rhythmical' (strictly the privative ἀγεωμέτρητος and ἀρχυμός) are said to be ambiguous by Aristotle, for one applies these terms either to what does not have the quality (e.g. the geometrical skill or property) or to what has it but deffectively (φαύλως). Barnes

926 Al-Farabi argues that Aristotle (Met. 1022b. 32 f.) identifies privative and indefinite terms: καὶ δύσκολος ἐκ αὐτῶν ἐπί τοῦ ἀποφάσεως λέγοντα, τοσαίτων καὶ αὐτοφάσεως λέγοντα. ("There are just as many kinds of privations as there are of words with negative prefixes."). However, in Ammonius' view Aristotle here states that the privative term ('x is unjust') implies the indefinite term ('x is not-just'), for the latter is more extensive than the former. So, the indefinite predicate, the indefinite term, does not always imply the privative one (i.e. sometimes the indefinite predicate does not coincide with the privative). The reason why this relation does not occur always is given, as Ackrill has pointed out, at Cat. 11b. 38-12b. 5. The term unjust does not correspond to not-just, for there are things which are not-just, but not unjust, e.g. the stone. It is important to note that Aristotle at the end of this passage cited by Al-Farabi (Met. 1023a. 6 f.) reminds us "This is why not every man is good or bad, just or unjust, but there is also an intermediate state."


929 An. Post. 77b. 24-26. ἰτιτων γὰρ τοῦτο, ὥσπερ τὸ ἀρχυμόν, καὶ τὸ μὲν ἐτερον ἀγεωμέτρητον τῆς μὴ ἔχειν [ὡσπερ τὸ ἀρχυμόν] τὸ δὲ ἐτερον τῆς φαύλως ἔχειν. ("There is an ambiguity here [twofold, 1975 ed.] (as in the case of being non-rhythmical): in one sense, being non-geometrical is not possessing geometrical skill, and in another it is possessing it poorly." Barnes' translation (1993), [ὡσπερ τὸ ἀρχυμόν] excised by Ross.)
pertinently reminds us of other texts where Aristotle maintains this view. 930

These passages do not state expressly that indefinite names ('non-F' in Barnes' notation) are ambiguous too, but Barnes seems to be right to assume that this qualification can also be extended to them: in fact, there is no difficulty in taking 'not-man' as 'what cannot be defined as a man or it can but badly'. The parallel works as in other examples given by Aristotle: a thing is called 'footless' either because it has no feet at all or because it has imperfect feet (Met. 1022b. 36 f.).

Now, one could ask why Aristotle does not allude to this view in PeriH. 2, 3, or 10, or even in An. Pr. I, 46, provided that here he devotes an important consideration of the nature of the indefinite names and verbs, or why he does not refer to PeriH. in one of these texts of Met., De Anima, or Eud. Eth.. Beyond chronological implications, the answer seems to be quite simple: Aristotle alludes to it only implicitly, for those texts show a factual ambiguity of language, which is present in the ancient Greek language as in English.

Ammonius' explanation of 19b. 22-24 allows us to understand that Aristotle holds one and the same doctrine concerning the signification of the indefinite terms in all these texts. In fact, Aristotle at the end of the passage of Met. alluded by Barnes says: 931

"This is why not every man is good or bad, just or unjust, but there is also an intermediate state."

Aristotle says this because 'not-just' means, in accordance with the factual ambiguity of the signification of privative terms in language, unjust or imperfectly just (=neither just nor unjust). 932

This permits us to see that in PeriH. Aristotle assumes this 'natural' ambiguity of a term that has been transformed into a privative one by a negative affix, and that the important

930 namely, Met. 1022b. 31-36; De Anima 422a. 26-31; Eud. Eth. 1230a. 38-b.5. Text for Met. has been quoted above. Barnes also points out Phys. 222b. 10-17, but here either there is no allusion to it, or it is a cryptic one.
931 Met. 1023a. 6-7.
932 For this formula cf. Cat. 11b. 38-12a. 25; and Ackrill (1963), p. 143.
clarification concerning the logical relation between indefinite and privative propositions at 19b. 22-24 is not ambiguous or uncertain because of the integration of this natural ambiguity of language.\textsuperscript{933}

Ammonius also differs from both Porphyry and Alexander in taking the \textit{two propositions} that \textit{are related, as to order of sequence, to the affirmation and negation in the way the privations are} (19b. 22-24). In Ammonius' view, these two propositions are the indefinite ones, while for Alexander they are the two simple ones. In Porphyry's opinion, these are the indefinite and the simple negation, while for Herminus they are the propositions with indefinite subject.

Even though Ammonius' distinction between privative and indefinite propositions seems to interpret Aristotle correctly, his reading of 19b. 22-24, as to the order in which the propositions are taken by Aristotle, has been not accepted unanimously. I. Pacius, T. Waitz and C. Prantl have accepted it,\textsuperscript{934} but Th. Aquinas considered it an unsatisfying interpretation and preferred in the end that of Porphyry. Aquinas argues, after reviewing in detail Ammonius' interpretation, that Ammonius does interpret Aristotle's thought with subtlety but the reading by Porphyry is simpler than Ammonius' and fits better with Aristotle's expression of 19b. 22-24:\textsuperscript{935}

\begin{quote}
Quamvis autem secundum hoc littera Philosophi subtiliter exponatur, tamen videtur esse aliquantulum expositio extorta. Nam littera
\end{quote}

\textsuperscript{933} Barnes (\textit{ibid}, p. 151) is also right to remind us that that at Met. 1055b. 4-11 and \textit{An. Pr. I}, 46 (51b. 25-8), Aristotle points out (as Barnes summarizes it) that 'a thing cannot be $F$ (as opposed to not being $F$) unless it is capable of being $F'$. Barnes wonders why Aristotle at \textit{An. Post.} 77b. b. 24 ff. seems to drop this rule. But the answer is this: the mentioned rule does not apply to the cases of \textit{An. Post.} 77b. 24 ff. for here 'geometrical' and rhythmic are taken as qualities which are not necessary to the subject, while 'equal/not-equal' at Met. 1055b.4 ff. and \textit{An. Pr. I}, 46 51b. 25-28 are taken as necessary ones, for it is said of numbers, and, as Ackrill recalls (1963), p. 143, a number must be either equal or unequal to another. How can one know whether a quality is necessary to a subject? A general remark by Aristotle at Met. 1055b. 7 f. seems to be useful here: that depends on the subject's receptive material.

\textsuperscript{934} cf. M. Soreth (1972), p. 399. M. Soreth on her own has also criticised Ammonius' solution. (\textit{ibid.}, pp. 399-400).

\textsuperscript{935} cf. in \textit{PeriH.} (22, p. 87).
Philosophi videtur sonare diversas habitudines non esse attendendas respectu diversorum; sicut in praedicta expositione primo accipitur similitudo habitudinis ad simplices, et postea dissimilitudo habitudinis respecto infinittarum. Et ideo simplicior et magis conveniens litterae Aristotelis est expositio Porphyrii quam Boëthius ponit, secundum quam expositionem attenditur similitudo et dissimilitudo secundum consequentiam affirmativarum ad negativas.

Th. Aquinas' position is surprising, for Ammonius' and Porphyry's explanations are incompatible. If one accepts that by Porphyry, then the distinction between privatives and indefinites is disregarded. And if one accepts that by Ammonius, then his arrangement seems to be the only one possible.\(^{936}\) Aquinas argues that Porphyry's interpretation is simple and fits in well with 19b. 22-24, while that by Ammonius seems to distort the sense of this passage, given that Aristotle here seems to refer rather to a certain unity than a diversity in the propositions. The contrariety of the propositions, that between privative and indefinite, ought not be considered, implies Aquinas (*nam litterae videtur sonare diversas habitudines non esse attendendas respectu diversorum*). But could Aristotle identify the meaning of 'to be unjust' and 'to be not-just'? Rather, he could not, unless he had forgotten a central doctrine of his thought. Aquinas' opinion reveals a simple fact: that the ancient commentators did not agree in interpreting 19b. 22-24 and that he could not either interpret completely the obscure sense of 19b. 22-24.

In spite of this disagreement, Ammonius, Porphyry, and also Alexander (in *in An. Pr.*, ) have an important point in common. They actually coincide one with another in distinguishing the simple proposition from the indefinite one, and in general in indicating the place and logical correspondence of the simple or absolute negation. The proposition 'A man is not just' is always implied by the privative and indefinite affirmations or, as Ammonius expresses it, it is more extensive and general than each of them. The ancient commentators maintain a mutual

\(^{936}\)Let us note that while Ammonius sees a contrapositive relation between the privative and indefinite propositions, Porphyry sees a relation of equivalence.
understanding between An. Pr. I, 46 and PeriH. in this respect. At An. Pr. I, 46, as we know, Aristotle says:\textsuperscript{937}

"As then not to know what is good is not the same as to know what is not good, so to to be not-good is not the same as not to be good. (...) Nor is to be not-equal the same as not to be equal; for there is something underlying the one, viz. that which is not-equal, and this is the unequal, but there is nothing underlying the other."

Aristotle says in Analytics that an absolute negation (e.g. 'not to be equal', 'is not a white log') always is more extensive than a transposed affirmation, (e.g. 'to be not-equal', 'is a not-white log'), for while the absolute negation does not suppose anything, the affirmation of an indefinite predicate supposes a subject. In fact, an indefinite verb, that is an absolute negation (e.g. 'does not walk', or 'not to be equal', as Aristotle says in An. Pr. I, 46)\textsuperscript{938} does not suppose anything, but 'is not-walking' or 'is not-equal', do suppose a subject: something which can walk in the first case, and something which is unequal, in the second one.

Accordingly, the expression 'does not suppose anything' said of the indefinite verb, or absolute negation, is equivalent to that which Aristotle states at PeriH. 16b. 15 concerning the indefinite verb, namely, that 'it holds indifferently of anything whether existent or non-existent', and in this precise sense An. Pr. I, 46 and one of the important characteristics of the indefinite verb in PeriH. seem susceptible to elucidate one to another. The absolute negation is the expression of the indefinite verb, which applies to everything whether existent or non-existent. That is why the absolute negation, which expresses the predicate 'not to be just', does not suppose anything, and is always implied by the


\textsuperscript{938}Cf. An. Pr. I, 46, 51b. 26. The expression 'not to be equal' is, or plays the role of, an indefinite verb. It is clearly distinguished by Aristotle from 'to be not-equal', which is the affirmation of an indefinite name. 'Not to be equal' could be counted as equivalent to 'does not equate', while 'to be not-equal' to 'is not-equal'. So, the indefinite verb could be counted as an absolute negation, and the affirmation of an indefinite name (i.e. the transposed or indefinite proposition) as a relative negation, or "a sort of affirmation", as Aristotle calls it in An. Pr. I, 46, (51b. 34).
affirmative propositions with negative meaning ('x is unjust', 'x is not-just').

The examples of An. Pr. I, 46 mentioning the concept of 'equal' and immediately that of 'the white log' imply that Aristotle considers this relation (i.e. the absolute negation is implied by the transposed affirmation) as valid even in the case that the indefinite term coincides with a privative one, as 'equal' when said of numbers: here 'not-equal' is the same as 'unequal'. However, this seems to imply neither an equivalence, as Alexander and Porphyry believed, nor a subordination to the privative, as Al-Farabi sustained it, but rather that the indefinite contains the privative, so that the privative is more specific, and then implies the indefinite.
1.2 Quantified Propositions

(i) The ancient interpretations

Aristotle passes on to consider the logic of the quantified three-term propositions by means of the following passage:939

19b. 32 ὃμας δὲ ἔχει κἂν καθόλου τοῦ ὅνόματος ἢ ἡ κατάφασις, ὅν πᾶς ἐστὶν ἄνθρωπος δίκαιος — [ἀπόφασις] οὐ πᾶς ἐστὶν ἄνθρωπος δίκαιος, πᾶς ἐστὶν ἄνθρωπος οὐ δίκαιος — οὐ πᾶς ἐστὶν ἄνθρωπος οὐ δίκαιος. τιθὶ ὅχι ὅμας τὰς κατὰ διάμετρον ἐνδεχεται συναληθευσεθα, ἐνδεχετα δὲ ποτέ.

________________________
33 ἀπόφασις + τούτου ΒΓΑ : om. Δ

So Ackrill:

"Similarly, too, if the affirmation is about the name taken universally, e.g.:

(a) 'every man is just'  (b) 'not every man is just'
(d) 'not every man is not-just'  (c) 'every man is not-just'

Here, however, it is not in the same way possible for diagonal statements to be true together, though it is possible sometimes."

The general sense of this passage is to introduce quantification (universal or particular) to the subject of a categorical proposition with three terms (i.e. to take the name universally). According to Boethius, Aristotle discusses logical relations between this kind of proposition as following a pattern similar to his earlier exposition on unquantified propositions.940 This explains, Boethius remarks, why Aristotle says here "Similarly" (Ὀμαίως). However, some

939 PeriH. 19b. 32-35.
interpreters, Boethius points out, take this 'ομοιως as indicating that the number of the propositions and oppositions in unquantified propositions is similar to the number in quantified ones. Boethius thinks, however, that this interpretation must be taken as an incomplete understanding of this passage, for Aristotle does refer to the number of the categorical propositions (numerum oppositionum et propositionum), but not only (non solum): Aristotle also points out similar consequences (sed etiam ad consequentiam).  

The passage also implies, as the ancient commentators realized, an implicit comparison between the unquantified and quantified diagonal propositions. Indeed, when in this passage Aristotle refers to the diagonal propositions, the force of δυοιως contrasts with the following ουχ δυοιωσ. The ancient commentators provide a complete interpretation of this comparison, which is now to be explored.

(i. 1) Alexander's exposition

In Boethius' commentary, Alexander's exposition of the quantified propositions with indefinite predicate refers to a diagram similar to that of the unquantified propositions. Alexander's explanation, unlike that by Porphyry and Ammonius, revolves uniquely around the difference or contrast, already noticed by Aristotle, between the unquantified and quantified diagonal propositions, so that Alexander's main concern seems to have been to explore the full sense of the contrast between δυοιως and ουχ δυοιως at 19b. 32-35. Alexander's diagram is the following:

\[
\begin{array}{c|c}
\text{Affirmation} & \text{Negation} \\
\text{every man is just} & \text{not every man is just} \\
\hline
\text{Negation} & \text{Affirmation} \\
\text{not every man is not-just} & \text{every man is not-just}
\end{array}
\]

941 Cf. in Int. 2, 22-20, pp. 294-5. See also here above (i) General considerations.
942 The complete exposition at in Int. 24-25, pp. 236-238.
According to Alexander, the difference referred to by Aristotle (19b. 32-35) is as follows: in the diagram of the unquantified propositions, as was shown above, where the predication is simply attributive (inesse possibile est), the diagonal propositions are always true together (semper angulares simul veras esse contingit). But now, under the same kind of attribution (i.e. inesse possibile), we do not reach the same result, because the affirmations cannot be true with affirmations. In fact, 'every man is just' never can be true (numquam vera esse potest) with its diagonal 'every man is not-just', and this relation, as Alexander points out, is always verified, independently of the examples which can be taken. Now, on the contrary, the other diagonal, which is formed by particular negations, can be true together. Indeed, 'not every man is not-just' can be true together with 'not every man is just'.

To distinguish between kinds of attribution by which the predicate and the subject are related in a proposition has been a constant in Alexander's explanation of the logic of the indefinite names. The distinction is completely pertinent, since Aristotle establishes all these relations in the mode of possible attribution (inesse possibile), but the truth values verified under this modality can certainly change if the modes of necessary and impossible attribution are considered.

Boethius' report of Alexander does not explain how a general theory of kinds of attribution could be constituted. However, Alexander's expression et hoc discrepare in nullo reperietur exemplo, which refers to diagonal quantified affirmations (i.e. 'every man is just' is never true together with 'every man is not-just') allows us to infer, by induction, a general conclusion. This is as follows: (a) If two propositions cannot be true together under simple attribution, they can be true neither under impossible nor necessary attribution. On the contrary, (b) If

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943 in Int. 11-12, p. 137. adfirmationes enim adfirmationibus nulla ratione iunguntur.
944 in Int. 15-16, p. 137. et hoc discrepare in nullo reperietur exemplo.
945 in Int. 17-19, p. 137. negationes autem particulares, quae sunt sibi angulares, simul veras esse contingit.
946 This induction can be verified if a term of impossible attribution for 'man' is posed instead of 'just', e.g. 'stone'; equally, if a term of necessary attribution is posed, e.g. 'rational'.
two propositions can be true together under simple attribution, they are not necessarily true together under either necessary or impossible attribution. There are two logical consequences to be drawn from this: (c) If two propositions are false under necessary attribution, then they are not necessarily false together under simple attribution, and (d) If two propositions are false together under impossible attribution, then they are not necessarily false under simple attribution.

(i. 2) Porphyry's exposition

Porphyry's plan to understand our passage is to analyse, firstly, whether the logical sequence (consequentia) of the quantified propositions is the same as in the case of the unquantified; after that, he will attempt to state what is the difference (dissimilitudo) in the diagonal propositions.947

Porphyry sets out the diagram of the unquantified propositions which we have shown above. After that, he arranges, under this diagram, the corresponding quantified propositions, so that his complete figure is the following:948

Unquantified Propositions

\[
\begin{array}{c}
\text{Simple Affirmation} \\
\text{a man is just} \\
\downarrow \quad \downarrow
\\
\text{Privative Negation} \\
\text{a man is not unjust} \\
\downarrow
\\
\text{Indefinite Negation} \\
\text{a man is not not-just}
\end{array}
\quad
\begin{array}{c}
\text{Simple Negation} \\
\text{a man is not just} \\
\uparrow \quad \uparrow
\\
\text{Privative Affirmation} \\
\text{a man is unjust} \\
\uparrow
\\
\text{Indefinite Affirmation} \\
\text{a man is not-just}
\end{array}
\]

947 In Int. 2, 8-11, p. 296. videamus ergo prius, an eadem in his quae determinatae sunt consequentia quae in his est quae indefinitae proferuntur, post videamus quae sit in angularibus dissimilitudo.

948 In Int. 2, 5-23, p. 297. The commentary describes what is evident in the diagram. At in Int. 2, 13-24, the disposition of the unquantified propositions is described; and immediately after, that of the quantified. The description is repetitive, for it also repeats the arrangement of the unquantified in the same terms as before. The style of this description is as follows: "Now, under this [diagram], are disposed those that we have called quantified, or determined by quantity. And, firstly, the simple particular affirmation; on the opposite side (contra), the simple particular negation. Now, the privative particular negation is placed under the simple universal affirmation; now, under the simple particular negation, (...)"
Quantified Propositions

In this diagram, the disposition of the unquantified and quantified propositions follows a similar order. And here it is clear which propositions are diagonals: affirmations, in general, are diagonal to affirmations, and negations to negations. Now, according to Porphyry, the same logical sequence which is verified in the unquantified propositions will be verified in the quantified ones. Therefore, in the first column of the quantified propositions, the privative and indefinite negations (which are particular) follow from the simple affirmation (which is universal); but the simple universal affirmation does not follow from those. Again, in the opposite column, the simple negation (which is particular) follows from the privative and indefinite affirmations (which are universal); but these do not follow from the simple particular negation.

(a) Proofs

According to Porphyry, in the first column, the privative and indefinite particular negations follow from the simple universal affirmation, for if the simple universal affirmation ('every man is just') is true, then the privative particular negation ('not every man is unjust') is also true. Porphyry argues that this is so because 'not every man is unjust' has the same force as (idem potest), and it is similar to, 'some man is just', i.e. the simple

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949 in Int. 2, 20-24, p. 295. nam quae est consequentia negationum ad affirmationes in his propositionibus simplicibus et infinitis, quae praeter determinationes dicuntur, eadem se similidudo habet in his quae terminacione proferuntur.

950 in Int. 2, 25-26, p. 298. rursus si quis ad ordinem definitarum respiciat, idem inveniet [i.e. the same logical sequence (sequentia), ibid., 19, p. 298].
particular affirmation.\footnote{in Int. 2, 2-6, p. 299. hoc autem idcirco evenit, quod ea quae dicit non omnis homo iniustus est idem potest quod simplex et similis est el quae proponit quidam homo iustus est particulari simplici adfirmationi.} Indeed, if not every man is unjust, some man is just. Now, given that the simple particular affirmation follows from the simple universal affirmation (for if the universal affirmation is true, the particular affirmation is also true), and that 'some man is just' is equivalent to (consentit) the privative particular negation ('not every man is unjust'), then the privative particular negation will also be equivalent (sic!) to the simple universal affirmation.\footnote{in Int. 2, 14-15, p. 299. quocirca etiam particularis negatio privatoria universalis simplici adfirmationi consentiet. The expression "will be also equivalent to" (consentire) produces an abnormal explanation in respect of what Boethius has manifested up to here. The correct conclusion is that the privative negation will also follow from the universal affirmation, as Boethius says later. In fact, later (at 25-29, p. 299), Boethius gives a clue to understanding this change: Porphyry might intend to show that 'every man is just' and 'some man is just' will be both true if the former is true: so that consentire here means consentire in veritate. Porphyry might have in mind the square of the oppositions (cf. PeriH. 7; and in Int. 2, 10 ff., p. 152), where this relation is verified. But, in any case, consentire is odd, for this relation is not convertible and seems to indicate an equivalence (as at in Int. 2, 25-9, p. 299), which would be an error. It would be an error to make equivalent the first and the second propositions of the first column, for the privative particular negation cannot be equivalent (consentire) to the simple universal affirmation, for in this case both will be equivalent and the latter will also follow from the former, which would distort Porphyry's order: the negations follow from the affirmations and not vice versa. Fortunately, Boethius (or Porphyry) rectifies this ambiguous passage and adds both the expected expression ('to follow from', sequitur), and proofs to clarify the non-convertibility of the negations with affirmations.} Therefore, 'not every man is unjust', i.e. the privative particular negation, follows from (sequitur) 'every man is just', i.e. the simple universal affirmation.

Now, the privative particular negation ('not every man is unjust') is equivalent to (consentire) the indefinite particular negation ('not every man is not-just').\footnote{in Int. 2, 19-22, p. 299.} Because, if it is true to say that not every man is unjust, it is also true to say that not every man is a not-just man. In fact, Porphyry argues, to be unjust is the same as to be not-just.\footnote{in Int. 2, 24-25, p. 299.} Therefore, he concludes, given that the privative particular negation follows from the simple universal affirmation, the indefinite particular negation also follows from the simple universal affirmation, and is
equivalent to that too (*eique consentit*), if, firstly, the universal affirmation is true. Consequently, without doubt, the privative particular negation and the indefinite particular negation follow from the simple universal affirmation. Thus, then, it is also here verified that negations follow from affirmations.

Porphyry now demonstrates pertinently that these relations between negations and affirmations are not convertible. Let us distribute from the top to the bottom, in the first column, the following letters among the propositions. Let (a) be 'Every man is just'; (b) 'Not every man is unjust'; (b') 'Some man is just'; (c) 'Not every man is not-just'. Accordingly, Porphyry reasons thus: (b) is equivalent to (b'); now, (a) does not follow from (b') (because if it is true that *some man is just*, then it is not true, by necessity, that *every man is just*). Therefore, since (a) does not follow from (b') — in fact, if this is true, the other can be false —, and given that (b') is equivalent to (b), then (a) does not follow from (b) either. Now, given that (b) is equivalent to (c), then (a) does not follow from (c).

Therefore, Porphyry concludes, in the first column, the two particular negations, the privative and the indefinite, follow from the simple universal affirmation, and this is not convertible. Now, the same occurred with the unquantified propositions (indeed here the two unquantified negations, the privative and the indefinite, followed from the unquantified simple affirmation and this was not convertible). Therefore, in their own order, the quantified and unquantified propositions are taken similarly. Similarly, then, the negations are true with the affirmations that are true, and the truth of the affirmations does not follow from the truth of the negations, as the truth of the negations is not equivalent to these either.

Again, in the opposite column, Porphyry analyses how the simple particular negation ('not every man is just') follows from the privative universal affirmation ('every man is unjust'), and

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955 *in Int.* 2, 25-29, p. 299. See note 952.
956 *in Int.* 2, 4-5, p. 300.
957 *in Int.* 2, 7-11, p. 301. quare in hoc uno ordine similiter sese habent definitae his quae sunt indefinitae. aequaliter enim affirmationibus veris verae sunt negationes, veras negationes affirmationum veritas non sequitur nec his consentit.
from the indefinite universal affirmation ('every man is not-just').
According to Porphyry, the privative universal affirmation is
equivalent to the simple universal negation ('no man is just'), for
if every man is unjust, no man is just. Now, given that the
simple particular negation follows from the simple universal
negation, (for if it is true that no man is just, then it is true that
not every man is just), and the simple universal negation is
equivalent to the privative universal affirmation, then the simple
particular negation follows from the privative universal
affirmation.

Now, the privative universal affirmation is equivalent
(consentire) to the indefinite universal affirmation, for 'every man
is unjust' signifies the same as 'every man is not-just'.
Therefore, Porphyry concludes, the simple particular negation also
follows from the indefinite universal affirmation. Therefore, in
the second column, the simple particular negation follows from
the universal affirmations, the privative and the indefinite, and
this is not convertible.

Now, Porphyry demonstrates this inconvertibility. Let us
distribute again the following letters into the propositions of the
second column from the top to the bottom. Let (d) be: 'Not every
man is just'; (e) 'Every man is unjust'; (e') 'No man is just'; (f)
'Every man is not-just'. Accordingly, Porphyry reckons thus: (e')
does not follow from (d), for it is false that if not every man is
just, then no man is just. But (e') is equivalent to, and has a unique
meaning with, (e). Therefore, (e) does not follow from (d). Now,
given that (e) is equivalent to (f), then (f) does not follow from
(d).

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958 in Int. 19-20, p. 301.
959 in Int. 2, 25-28, p. 301. sequitur ergo particularis simplex negatio quae est non omnis est homo iustus universalem adfirmationem privatoriam quae proponit omnis est homo iniustus. Let us note that the use of sequitur here does not produce the ambiguity that consentire produced in the symmetric part of the first column.
960 in Int. 2, 29-1, pp. 301-302. idem enim significant omnis est homo iniuustus et omnis est homo non iustus.
961 in Int. 2, 1-5, p. 302.
962 in Int. 2, 4-7, p. 302.
963 in Int. 2, 12-13, p. 302. (...) consentit unumque significat cum (...).
964 in Int. 2, 7-2, pp. 302-3.
Accordingly, Porphyry concludes that here the simple particular negation also follows from the two universal affirmations, i.e. the privative and the indefinite, as also occurred earlier: the unquantified negation followed from the two unquantified affirmations, the indefinite and the privative. Again, none of these relations is convertible. Thus, then, the quantified and the unquantified propositions are taken (habent se) similarly according to their logical sequence (similiter se igitur habent definitae indefinitis secundum consequentiam).

(b) The diagonal quantified propositions

Porphyry recalls us that in unquantified propositions the diagonals are true together (simul), if the terms are simply attributive. Then, he contrasts this result with the case of the quantified: here, he says, the universal and particular pairs (participes) of propositions are not in the same way true together. Indeed, the universal affirmations, in any kind of terms, either possible, or necessary, or impossible, cannot be true together (in veritate consentire non possunt), and the particular negations can be true together, but only when the terms forming the propositions are neither necessary nor impossible.

In affirmations, indeed, the propositions 'every man is just' and 'every man is unjust' cannot be true together (simul), for the latter does not differ from ( nihil differt) 'no man is just', so that

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966 in Int. 2, 2-3, p. 303.
967 Cf. in Int. 2, 4-8, pp. 303-4.
968 in Int. 2, 10, p. 304. The translation of 'participes' by 'pairs' regards the fact that diagonals make pairs of two propositions. Diagonal relations total four pairs: two are universal and two particular. The former two are both affirmative, while the latter ones are negative. So, Porphyry means that the two universal affirmative pairs behave differently from the particular negative pairs: the affirmative ones match propositions which cannot be true together, but the negative ones match propositions which can be true together, though only sometimes.
969 in Int. 2, 10-16, p. 304. In quibusvis enim terminis sive possibilibus sive naturalibus sive impossibilibus adfirmationes adfirmationibus sibimet angularibus in veritate consentire non possunt, negationes autem negationibus angulares angularibus in his tantum terminis qui neque naturales neque impossibles sunt in veritate poterunt convenire.
'every man is just' is also diagonal to 'no man is just'. But these propositions are contrary, so that they cannot be true together. So, if 'no man is just' coincides with and is equivalent to \textit{(convertit atque consentit)} 'every man is unjust', then 'every man is just' and 'every man is unjust' cannot be true together.\footnote{\textit{in Int.} 2, 19-29, p. 304.}

Now, 'every man is unjust' is equivalent to 'every man is not-just', as has been established before.\footnote{The privative proposition is equivalent to the indefinite one, either in unquantified or quantified propositions. (Cf. \textit{in Int.} 2, 19-22, p. 299; and 3-8, p. 281).} Accordingly, 'every man is not-just' cannot be true together with 'every man is just' either. Therefore, the simple universal affirmation cannot be true together with the privative and the indefinite universal affirmations. Accordingly, in quantified propositions, unlike the unquantified ones, the diagonal affirmations cannot be true together \textit{(simul verae non possunt)}.\footnote{\textit{in Int.} 2, 10, p. 305.}

Now, the diagonal quantified negations, which are particular, can be true together. But this is so only with terms whose attribution is neither impossible nor necessary. Certainly, the simple particular negation ('not every man is just') can be true together with the privative particular negation ('not every man is unjust'). In fact, Porphyry argues, it can happen that some are just, and some are not just, and both can be true. In fact, 'not every man is just' can be true, if some are unjust; and 'not every man is unjust' can also be true, if some are just.\footnote{\textit{in Int.} 2, 16-21, p. 306.} Now, the privative universal affirmation is equivalent to the indefinite particular negation ('not every man is not-just'): it is the same, indeed, to say 'not every man is unjust' as 'not every man is not-just'. Therefore, these two diagonal propositions can also be true together. In fact, if some are just, then some are unjust; accordingly, it is true to say 'not every man is just', because some are unjust; again, it is true to say 'not every man is not-just', because some are just.\footnote{\textit{in Int.} 2, 25-29, p. 306.} Therefore, in quantified propositions, diagonal negations can be true together, and this is similar to the
case of the unquantified propositions (in which the same occurs for affirmations). 975

Therefore, the complete sense of 19b. 32-35 is thus: Aristotle says "Similarly, too, if the affirmation is about the name taken universally", because in the same way as in the unquantified propositions the quantified are also arranged in respect of their logical sequence. And Aristotle adds "Here, however, it is not in the same way possible for diagonal statements to be true together", because the diagonal quantified affirmations cannot be true together as in the case of the unquantified affirmations. Finally, Aristotle says "though it is possible sometimes", because the diagonal quantified negations can be true together (though only if the terms in the propositions are simply attributed one to another). 976

(i. 3) Herminus' exposition

According to Boethius' commentary, Herminus also made an exposition of the order in which the quantified propositions are arranged. 977 Herminus' starting-point is a diagram in which the quantified propositions, the simple and indefinite, are arranged by positing affirmations under affirmations, and negations under negations, thus:

(a) every man is just  (b) not every man is just
(c) every man is not-just  (d) not every man is not-just
(c') no man is just

Herminus observes that here there are two oppositions, for (a) is contradictory to (b), and (a) is contrary to (c). That is so, Herminus argues, because (c) is equivalent to (c') 'no man is just', and (a) and (c') are contrary propositions. This result shows, says

975 in Int. 2, 1-4, p. 307. (For unquantified diagonal, see in Int. 2, 16-18, p. 303; and here above (ii.2) Porphyry's exposition, (e) Diagonal relations).
976 in Int. 2, 4-29, p. 307.
977 in Int. 2, 29-21, pp. 307-310.
Herminus, that there are two oppositions in quantified propositions as there are also two in unquantified ones, though these are found in another way (alio modo). 978

As to diagonals (secundum diametrum), Herminus verifies that there is a difference between unquantified and quantified propositions, for in the former (as he verified it earlier) the diagonals can be true together, all with all (omnes omnibus), but in quantified ones the result is not identical. 979 Herminus provides the following proof: (a) is contradictory to (b), and (c) is contradictory to (d). Now, if (a) is true, then (c) is false, but if (c) is false, (d) is true. Therefore, Herminus concludes, (d) and (a) are true. However, Herminus remarks, this which has been verified (i.e. the truth of (a) and (d)) does not occur always, because if one starts from the indefinite negation, i.e. from (d), one will come to another result. 980 Indeed, Herminus says, if (d) is true, then (c) is false, since it is its contradictory. But if (c) is false, (a) can be false, or not necessarily true, because (a) is contrary to (c), and contrary propositions, as was said above, 981 can be both false. So, according to Herminus, this second reasoning (or logical assignation of truth values) shows that the quantified diagonals, unlike the unquantified ones, can be true together only sometimes, and this interprets Aristotle's words of 19b. 32-35.

978 in Int. 2, 4, p. 309.
979 in Int. 2, 7-12, p. 309. illae enim quoniam indefinitae erant, et secundum diametrum quae erant simul veras esse contingebat et omnes omnibus, quod si quis ad indefinitarum descriptiones redeat diligenter agnoscit. hic autem, inquit, hoc est in his quae definitae sunt, non idem est.
980 in Int. 2, 25-28, p. 309. contingit ergo aliquando veras esse, sed non, inquit, omnino. nam si a particulari negatione infinita coeperis, non idem est id est non eadem veritas venit. ("It happens, then, that these are true sometimes, but not always. Because if you start from a particular negation, the same [result], i.e. to the same truth, is not obtained.").
981 in Int. 2, 5-7, p. 310. contrarias autem propositiones simul falsas esse posse supra docuimus. The expression supra docuimus ("as we taught it above") arises the question of who taught this: whether Herminus or Boethius. In Shiel's hypothesis (cf. Shiel (1990), p. 368), Boethius translated this expression from a report of Herminus, as contained in Porphyrian material which Boethius had at his disposal. In this case, Herminus taught this point earlier (possibly on the occasion of his comments on the square of opposition in Chapter 7 of PeriH.). Another possible but weaker explanation seems to be: that Boethius reports Herminus' account with the help of this connective in order to show certain traces of truth in Herminus' expression. In any case, Aristotle taught this earlier in Chapter 7 of PeriH., and Boethius' commentary refers to this point earlier too.
Herminus' explanation is in its total an original one. Besides, in all the points in which his exposition is common to Alexander's and Porphyry's, he is the necessary precedent. This is so at least in assigning truth values to the propositions, in stating the logical sequences between propositions as consequences, and in seeing an equivalence between 'to be unjust' and 'to be not-just'. His idea of starting from different propositions in order to make valid the logical consequences is also remarkable, though in this point he is alone. However, it is certainly a comparative deficiency of his arrangement to leave aside the privative propositions, which have been indirectly alluded to by Aristotle through the statement that quantified propositions behave *similarly* to unquantified. In fact, Herminus had included the privations in his exposition of the unquantified ones.

Further, according to Boethius, Herminus confuses the order of the propositions by an incorrect exposition.  

\[\text{atque hoc quidem Herminus non recte expositione dicens ordinem turbat. si quis autem vel hoc quod Herminus ait diligenter agnoscit vel id quod supra nos diximus [i.e. Porphyry's exposition], cognoscit multam esse differentiam expositionis et meliorem iudicans ei, si quid nobis credit recte consentiet.}\]

The commentary adds that he who analyses accurately the expositions made by Herminus and by Porphyry, will observe a substantial difference between both and, after a comparison, he will correctly decide to rely on what has been explained in accordance with Porphyry.

(i. 4) *Ammonius' exposition*

According to Ammonius, in the case of the quantified propositions we have again both the similar logical relations which

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982 *in Int.* 2, 15-21, p. 310.
983 *in Int.* 2, 20, p. 310. *si quid nobis credit.* Does Boethius claim a certain participation in Porphyry's exposition? Cf. here above Part II, (ii.2), (c) *Further proofs: are they by Boethius?*
are verified in the case of the unquantified propositions and a similar diagram. Ammonius assumes this time the following one:

<table>
<thead>
<tr>
<th>Quantified Propositions</th>
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<tbody>
<tr>
<td>Simple Univ. Aff.</td>
</tr>
<tr>
<td>every man is just</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>not every man is unjust</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>not every man is not-just</td>
</tr>
</tbody>
</table>

Therefore, in the first column, the negations, the privative and the transposed, will be more general or extensive than the simple universal affirmation. Ammonius proves this first general statement by means of a notable argument: these negations follow from the simple affirmation, for the corresponding contradictions are false and they do not follow from the simple affirmation. In other words, Ammonius argues, if men who are just were not-just, then each mentioned negation would be true, and the simple affirmation false.

The argument tried by Ammonius seems to be an instance of the following valid formula: *if it is not true that p implies q, then p implies not-q.* Ammonius indicates that the same reasoning is applied, in the other column, to prove that the simple particular negation is more general than the affirmations which are under it, i.e. the privative and the indefinite ones.

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987 Or, equivalently, *the consequent follows from the antecedent, for the negation of the consequent does not follow from the antecedent.* In other words, the antecedent implies the consequent, or the antecedent implies the negation of the consequent.

Ammonius does not provide any proof for these last relations; however, it is easy to see that an analogous argument to that given earlier by him will work in this case too. Indeed, the simple particular negation ('not every man is just') follows from the indefinite universal affirmation ('every man is not-just'), for the contradiction of the former does not follow from the latter, i.e. 'some man is just' (this is the contradiction of 'not every man is just') does not follow from 'every man is not-just'). Again, the simple particular negation ('not every man is just') follows from the privative universal affirmation ('every man is unjust'), for the contradiction of the former does not follow from the latter, i.e. 'some man is just' (this is the contradiction of 'not every man is just') does not follow from 'every man is unjust'.

Now, similarly, Ammonius also states the logical relations between the privative and the indefinite propositions in both sides. According to his words, the privative negation will be again more general than the indefinite negation, and the privative affirmation more specific than the indefinite affirmation. These two logical relations are proved in a clear parallel to his earlier proofs for unquantified propositions. The first, in fact, states that if every man is unjust, one will be able to say truly that every man is not-just, since it is clear that the man who is unjust is not-just. But this is not convertible, as he says immediately, and therefore that every man is not-just will not necessarily imply that every man is unjust. The proof of this non-convertibility follows the general argument developed earlier for unquantified privative and indefinite affirmations. Ammonius does not repeat this proof now, but refers to what has shown earlier. Similarly, the privative negation follows from the indefinite negation, but not vice versa.

\[989\] Cf. Ammonius, p. 171, 32 - p. 172, 2, τῶν μέντοι στερητικῶν ἢ μὲν ἀπόφασις παλιν ἐπὶ πλέον ἐσταὶ τῆς ἐκ μεταβέσεως ἀπόφασις ἢ δὲ κατάφασις ἐπ᾽ ἑλαττῶν τῆς καταφάσεως.

\[990\] Ibid. p. 172, 4-6.

\[991\] Cf. above Part II, (d) Ammonius' exposition. In letter (c).

\[992\] Cf. above Part II, (ii) Ammonius' exposition. In letter (d). It is worth noting that a further proof of these relations and their non-convertibility can be provided with the help of the law of contraposition (if \( p \) implies \( q \), then \( \neg q \) implies \( \neg p \)). The negations (the privative and the indefinite) represent the contraposition of the corresponding privative and indefinite affirmations in the other column. Accordingly, 'every man is not not-just'
(a) The diagonal relations

For Ammonius and Porphyry, *mutatis mutandis*, the vertical logical relations between quantified and unquantified propositions keep a similar order. So both explain, in their own manner, 19b. 32-35. It is clear, however, that they differ one from another in explaining the consistency of this order in itself, for they neither see an identical relation between privative and indefinite propositions nor do they provide similar proofs for these relations.

Now, as to diagonal relations, if one continues comparing Ammonius' and Porphyry's explanations, the agreement between them is complete. In fact, like Porphyry, Ammonius maintains that in unquantified and quantified propositions the diagonal propositions are in relation one to another: affirmations to affirmations and negations to negations. Accordingly, the simple affirmation is related to the transposed and also to the privative affirmations; the same occurs with the negations.993

Ammonius also observes that in the unquantified propositions, when their matter (ὑλή) is contingent, the affirmations can be true together (συναληθεύων), and also the negations.994 But, in the quantified ones, (where the affirmations are universal and the negations particular), the affirmations cannot be true together (συναληθεύσα σώματον), in any matter, while the negations can be true together, though only when the attribution is contingent.995


1.3 Singular Propositions

(i) The incomplete treatment of singular propositions

The last kind of three-term propositions with indefinite predicate which are analysed by Aristotle in *PeriH.* is the singular one. Aristotle's analysis of singular propositions appears to be characterized by a relative incompleteness, given that he does not deal with singular propositions with indefinite subject and definite or indefinite predicate (e.g. 'Not-Socrates is just'; 'Not-Socrates is not-just'). He does not point out cases of indefinite subject in two-term propositions either (e.g. 'Not-Socrates walks').

However, this absence seems to be justified, for Aristotle makes a separate analysis of propositions with indefinite subject, which would be correct in his view, for they are a group on their own separate from the propositions with definite subject. Therefore, propositions like 'Not-Socrates is just' are separate from others like 'Socrates is just'; also, given that in this respect propositions with two terms will behave identically to the three-term ones, propositions like 'Not-Socrates walks' are separate from others like 'Socrates walks'. Accordingly, the absence of singular propositions with indefinite subject is relative, and seems rather to answer to an intelligent economy of Aristotle's approach to the logic of the indefinite names.

However, although one can maintain the thesis that Aristotle in Chapter 10 takes into consideration all the species of singular propositions, the thesis that the logical treatment of these propositions is as complete as the treatment of the unquantified and quantified propositions is not so certain, for Aristotle does not clarify whether the singular propositions can be said to maintain the same vertical and diagonal relations as the former ones. And there are some problems here, for singular diagonal propositions do not seem to be true together (e.g. 'Socrates is just' cannot be true together with 'Socrates is not-just'), which would be diagonal,

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996 "These last [i.e. the propositions with indefinite subject] are a group on their own separate from the others in that they use 'not-man' as a name." (20a. 1-3). Cf. also here later B. The Indefinite Subject.
if one would extend to singular propositions what has been stated for unquantified and quantified propositions.

One could argue here that 'Socrates is just' and 'Socrates is not-just' can be true together in different times, for Boethius (by following Alexander) argues similarly for the case of the unquantified ones: 'a man is just' and 'a man is not-just' can be true together, for they refer to different subjects (Sulla and Cato, as he says). However, since the proviso is necessary if one is to say that the singular propositions behave just as the quantified and unquantified ones do, one would expect that Aristotle or the ancient commentators would say something in this respect. But Aristotle does not say anything concerning this, and the commentators do not touch on the point either. Hence, it seems to be a more assured conclusion that Aristotle's logical treatment of the singular propositions is incomplete.

(ii) *Singular propositions in Boethius' first exposition*

Aristotle introduces the analysis of singular propositions by means of the following words:998

20a. 23 φανερὸν δὲ ὅτι καὶ ἐπὶ μὲν τῶν καθ' ἕκαστον, εἶ ἄληθες ἑρωτηθέντα ἀποφθέγμα, ὅτι καὶ καταφθέγμα ἄληθες, ὅτι δὲ ἐμὲ ὑποκράτης σοφός; οὐ τοῦ ὑποκράτης ἢ σοφός, ἐπὶ δὲ τῶν καθολοῦ οὐκ ἄληθες ἢ ὑμοίως λεγομένη, ἄληθες δὲ ἢ ἀπόφασις, οὗ: ἀφά γε πᾶς ἄνθρωπος σοφός. οὐ τοῦ πᾶς ἄνθρωπος οὐ σοφός· τούτῳ γὰρ ἔστω, ἀλλὰ τὸ οὖ ἀλλά τοῦ πᾶς ἄνθρωπος σοφός ἄληθες· αὕτη δὲ ἐστιν ἢ ἀνακειμένη, ἐκείνη δὲ ἦν εἰρηνικὰ.

997 In *Int*. 18-21, p. 136. Cf. also above (d.1) *Boethius' report of Alexander in the First Commentary*.

998 PeriH. 20a. 23-30. Cf. also *AL* II.1, 10 (20a23-30). "Manifestum est autem quoniam etiam in singularibus, si est verum interrogatum negare, quoniam et adfirmare verum est, ut 'putasne Socrates sapiens est?', 'non est', quoniam 'Socrates igitur non sapiens est'. In universalibus vero non est vera quae simuliter dicitur, vera autem negatio, ut 'putasne omnis homo sapiens est?', 'non', 'omnis igitur homo non sapiens'; hoc enim falsum est, sed 'non igitur omnis homo sapiens' vera est;". (We corrected in this quotation the phrase at *AL* 20a. 29 (sed non 'igitur omnis homo sapiens' vera est), which erroneously opens the quotation after "non" rather than before it).
So Ackrill:

"It is clear too that, with regard to particulars, if it is true, when asked something, to deny it, it is true also to affirm something. For instance: 'Is Socrates wise? No. Then Socrates is not-wise'. With universals, on the other hand, the corresponding affirmation is not true. For instance: 'Is every man wise? No. Then every man is not-wise.' This is false, but 'then not every man is wise' is true; this is the opposite statement, the other is the contrary."

Normally in its first exposition, Boethius' commentary presents a more literal interpretation of Aristotle.\textsuperscript{999} Accordingly, he immediately comments on this passage that the denial of the question of whether a singular subject has or does not have a determined quality (e.g. 'Is Socrates wise?') can be correctly expressed, when the answer is 'no', by an affirmation with an indefinite predicate (e.g. 'Socrates is not-wise').\textsuperscript{1000} This is what Aristotle himself seems to point out. In the same sense, Boethius pays attention now to the case of universal propositions, and he recognizes that the correct answer to a question like 'Is every man wise?', (on the assumption that someone answers this question negatively), is 'Not every man is wise', and not 'Every man is not-wise', as it would be if one followed the pattern of the singular propositions. In other words, the correct answer, in the case of universal propositions, is given by the corresponding contradictory, which does divide truth and falsity (\textit{dividit verum vel falsum}).\textsuperscript{1001}

\textsuperscript{999}in Int. 2, 2-4, p. 186. This is due to Boethius' strategy of understanding Aristotle's subtle texts: quare recte mihi consilium fuit subtilissimas Aristotelis sententias gemino ordine commentationis aperire.

\textsuperscript{1000} cf. in Int. 1-5, p. 145. quotiens aliquis, inquit, in singularibus rebus interrogat et is qui interrogatur negat, tunc is qui interrogat recte negationem cum singulare iungens ex infinito nomine faciet affirmationem.

\textsuperscript{1001} in Int. 22, p. 145. The expressions \textit{dividit verum et falsum} and below (in Int. 4, p. 146) \textit{non dividit verum et falsum}, are common in the treatment of the square of opposition to characterize contradictions (cf. in Int. 2, 10 ff., pp. 152 ff.). It is clear, therefore, that the first means 'either it is true or it is false', i.e. if the first is true the second is false and vice versa, which always occurs in contradictory propositions. The second means, in general, that there is not an opposition of contradiction (as between a universal affirmation and a particular negation or as a universal negation and a
As the commentary explains, to answer this last question (on the same assumption) with: 'Every man is not-wise' does not produce this division because this proposition is equivalent to 'No man is wise', which is the contrary, not the contradictory, as the comments on the earlier passage (20a. 16-23) taught it.\textsuperscript{1002} Hence, Boethius' commentary concludes that the best (potius) answer is the contradictory proposition (i.e. 'Not every man is wise'), because the contrary does not produce division between truth and falsity.\textsuperscript{1003}

(iii) \textit{Universal and singular oppositions}

In his first commentary, Boethius leaves the point here by maintaining many things without a definitive answer. One of the questions that can be raised is (i) whether between 'Socrates is not wise' and 'Socrates is not-wise' there is an equivalence.\textsuperscript{1004} The other question arising is (ii) whether or not the characteristics of the singular propositions can be correctly applied to unquantified and particular propositions.\textsuperscript{1005}

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\textsuperscript{1002} And also according to the teaching of the well-known square of opposition. (Cf. \textit{in Int.} 2, 11 ff., p. 152).

\textsuperscript{1003} In other words, a universal affirmative proposition (A) is denied by its contradictory (O). Thus, if (A) is true, (O) must be false, and vice versa. A universal negative proposition (E) denies (A), but in a weak way. Thus, if (A) is true (E) is false, and vice versa. But, if (A) is false, (O) can be false as well. Therefore, the term \textit{potius} means here the best opposition, i.e the true opposition. This is why Aristotle introduces the subsequent expression \textit{æ tē Æτιν ἡ ἀντικειμένη, ἐκείνη Æτη ἡ ἐναρτία} (i.e. \textit{haec autem est opposita illa vero contraria, AL II.1, 10, 20a30-1}). In fact, he is referring to the propositions: "Not every man is wise", and "Every man is not-wise", which are, respectively, the contradictory and the contrary propositions to 'Every man is wise'.

\textsuperscript{1004} In other words, whether or not in singular propositions the negation is equivalent to the transposed or indefinite affirmation. Certainly, the question is pertinent because one of the points in Aristotle's text is whether a question which is negatively answered can be expressed in an affirmative way. But another point, which is implicit, is whether between these answers there exists equivalence and how.

\textsuperscript{1005} Aristotle's example is: someone asks: (a) 'Is Socrates wise?' Someone answers: 'No.' Therefore, it is true to say: (a') 'Socrates is not-wise', because this answer is the specific negation or contradictory of 'Socrates is wise'. Now, the universal case: (b) 'Is every man wise?' Someone answers: 'No.'
The second commentary gives us a satisfactory answer to the first question. To start with, it takes the point in its full general sense, so that it states that what Aristotle mentions in this part of the text are examples of the logical fact that the oppositions in universal propositions are double (duplex), and single in the singular ones.\textsuperscript{1006} The commentary reiterates the explanation and the examples given in the first exposition,\textsuperscript{1007} but now, moreover, it further adds that this should have a cause, so that it must be investigated why in singular propositions the affirmation with indefinite name and the definite negation seem to be equivalent one to another, and why this does not seem to happen in universal propositions.\textsuperscript{1008}

According to the commentary, the reason for this is that in propositions with a singular subject there are not two oppositions (duplices oppositiones), but only one, namely, that which the negation makes; but in universal subjects, which are universally taken, the opposition is double, one is the contrary opposition and the other the contradictory one.\textsuperscript{1009} This is clear, the commentary adds, in the examples mentioned above: the oppositions of 'Socrates is wise' are either (a) 'Socrates is not wise' or (b) 'Socrates is not-wise', and they have the same sense...
(intellectus). Therefore, they have the same signification (significatio). On the contrary, the commentary observes, in the case of the universal propositions, there is not equivalence in the oppositions, but two oppositions with different senses. Thus, of 'every man is wise' its oppositions are (c) 'no man is wise' and also (d) 'not every man is wise', but—as is said—the first of these oppositions is the contrary, and the other the contradictory, and therefore they cannot be equivalent (sibi non poterit consentire), for the first (the universal negation) excludes the whole (totum tollit), while the other (the particular negation) excludes the part. Finally, the commentary adds, since the universal affirmation with indefinite name ('every man is not-wise') is equivalent to the negative universal ('no man is wise'), this will also differ from the particular definite negation ('not every man is wise').

Boethius' second exposition gives us a direct answer to our question (i) above. In fact, it argues that in singular propositions the absolute and the indefinite negation are to be taken as equivalent, for there is no way of making a logical difference between these two kinds of negative proposition. The point is presented as a particularity of the singular propositions, but it does not provide the essentials for answering our question (ii). Boethius' commentary lacks an answer for (ii), but Ammonius, who argues similarly to Boethius, takes also this question and answers it briefly. Ammonius states that the peculiarity of the singular propositions cannot be extended to unquantified and particular propositions:

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1010 cf. in Int. 2, 24-26, p. 335. si ergo dicat aliquis Socrates non sapiens est, haec nullum alium habebit intellectum quam ea quae dicit Socrates sapiens non est.
1012 cf. in Int. 2, 2-9, p. 336.
1013 in Int. 2, 10-12, p. 336.
1014 Amm. in Int. p. 187, 20 - p. 188, 7.
1015 in Int. p. 188, 7-14. ἄλλα οὖσαν τῶν λοιπῶν καταφάσεων, τί ἐρώμεν, τῆς τε ἀπροσδιορίστου καὶ τῆς ἐπὶ μέρους, οὐκ ὅτι ἂν τῷ καθ’ ἄκαστα ὁμοίως ἔχομι διὰ τὸ μᾶλλον ταύτας εἶναι πολλά παρακεφαλαίων, ἄλλ’ ἠτοι συναλληθεύσασαν ἡ διαφοράς μεθ’ ἐκατέρας αὐτῶν τὸ ἀλλ’, καὶ τό ψεῦδος. διὸ τῆς ἄρα γέ αὐθαίρως περιτότας ἐστιν, καὶ ἄρα γέ τῆς αὐθαίρως περιτότας ἐστιν, ἐρμηνεύειν τειχωμένης οὔτε ή αὐθαίρως ἄρα οὖσα περιτότας ἐστιν οὔτε ἡ τῆς αὐθαίρως ἄρα οὖσα περιτότας ἐστιν ἐκ μεταθέσεως καταφάσεως ἑυθύς.
"But what will we say concerning the remaining affirmations, the unquantified and the particular ones? I say, accordingly, that the singular propositions hold this characteristic, for there does not exist a double negation for them, but they both either assert truth or divide truth and falsity. For neither of these propositions: 'The man is not-winged' and 'Some man is not-winged', i.e. the transposed affirmations which are false, make the denial of these: 'Is the man winged?' and 'Is some man winged?'

Ammonius chooses clear examples to show which are the correct negations of the questions above. Given the question: Is the man winged? It is answered: No. Therefore: 'The man is not winged', the absolute negation, not the transposed affirmation, will be the correct answer. Similarly: Is some man winged? No. Therefore: 'No man is winged', i.e. the contradictory of 'Some man is winged' is the correct answer, but not 'Some man is not winged' or even 'Some man is not-winged'.

It is worth noting that Ammonius' examples change matter of predication (Ἀνὴρ) from inesse ('man/wise'), where Aristotle proposes his own examples, to impossible ('man/winged'). The change seems to be justified: for now, in the propositions with impossible matter, the falsity and truth become more evident. We know that, in fact, 'No man is winged' is true. Accordingly, if someone asks: 'Is some man winged?', there will be only one true answer, namely, 'No man is winged', while 'Some man is not winged' is not false in itself, but a defective or false answer for the proposed question. Similarly, 'The man is not winged' is a true statement, for it is so in re. Therefore, the question: 'Is the man winged?' has only one correct answer, namely, 'the man is not winged', while the transposed affirmation, namely, 'the man is not-winged' does not result not false in itself, but it is not the correct answer for what has been asked; for the man, actually, is not winged at all. Accordingly, Ammonius' reflection implies that the question: 'Is Socrates winged?' is answered correctly by both the absolute negation ('Socrates is not winged') and the transposed affirmation ('Socrates is not-winged'), as an exception to the rule. He implies, accordingly, that 'Socrates is not-winged' and 'Socrates is not winged' are both, without any distinction, false.
So, Aristotle's permission to infer 'Socrates is not-wise' from 'Socrates is not wise' is not so surprising, for 'Socrates is not-wise' is equivalent (consentire; ἀπομονεῖται) to 'Socrates is not wise', just as 'Socrates is not-winged' and 'Socrates is not winged' are.

What transpires in Boethius' and Ammonius' comments on Aristotle's assertions at 20a. 23-30 is that there is no logical way to distinguish the sense of 'Socrates is not wise' and 'Socrates is not-wise' when one wants to deny that Socrates is wise. This is to be taken universally, i.e. without restriction of matter of predication. (Besides, that Socrates must be taken here as an existent individual is unquestionable, for Aristotle, as M. Thompson argues, would not inquire whether Socrates is wise or not, if Socrates were a nonexistent.) Therefore, the point is not, as Al-Farabi takes it, whether one can make a difference between 'Socrates is not just' and 'Socrates is not-just', when Socrates behaves with justice or without it in different times. The point is purely a logical one. Aristotle realizes that, when the aim is to deny a simple affirmation, no categorical proposition makes its contradictory by the transposed (= indefinite) affirmation, except the singular proposition. Accordingly, the context assumes, as Boethius and Ammonius point out, an Aristotle who is looking for the best answer (potius) to the affirmation which is assumed to be false. This means, in other words, that the point is to find the exact contradiction of a simple affirmation which is proposed. This is also clear from the following list:

'Every man is just' is denied by 'No man is just', but properly by 'Not every man is just'

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1016 This is questioned by Ackrill (1963), p. 144.
1018 When Socrates is nonexistent, cf. above Part I, 2.2, (viii) *Existential import of singular propositions and indefinite verbs*.
1019 cf. Al-Farabi's *in Int.* (= Zimmermann (1991), p. 132). "Moreover, 'Socrates is not just' is true of Socrates at all stages: when he is a child and while he grows up unjust or insane, while 'Socrates is not-just' is only true of him if he is an unjust adult. The latter statement is, therefore, narrower than the negation. So how can the commentators say that it follows from the negation?".
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<th>Transposed Affirmation</th>
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<td>'No man is just'</td>
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According to this, Aristotle (20a. 23-30) might imply that in singular propositions the transposed affirmation also produces an absolute separation between the subject and predicate of a categorical proposition, just as the absolute negation (i.e. contradictory) produces it in the remaining cases. Let us consider some examples: Someone asks: 'Is the man winged?' The answer is: 'No.' Then, between 'The man is not winged' and 'The man is not-winged' one can still make a difference, for the latter is false, because the truth is that the man is not winged at all. The difference seems to lie in the fact that in the transposed affirmation the individuals which are denoted by the subject term 'the man' cannot be separated perfectly from the predicate term 'winged', as it would be if the subject term would denote only one case, e.g. Socrates. Socrates belongs or does not belong to the group of beings which are winged. The example shows, then, that if someone asks: 'Is Socrates winged?' one can also make the contradiction through the transposed affirmation, because if Socrates is not-winged, then Socrates is perfectly separated from 'being winged', because he is one, (and only one), who is not in the proposed quality (winged). This is also verified if 'just' or 'wise' are taken into consideration. In fact, if someone asks whether the man is just, and the answer is negative, one cannot say with truth 'The man is not-just', because the individuals denoted by 'the man' cannot be perfectly separated from 'being just', because it is not impossible that a man can be just, (or a stone gold, etc.), i.e. because there are individuals in 'the man' who can be just. Accordingly, one must say 'the man is not just', that is, the absolute negation or contradiction, to deny that the man is just.
B. The Indefinite Subject

(i) General considerations

The general classification of the categorical propositions seems to be in itself a sufficient clue to understand the following words of Aristotle (19b. 36-20a. 3):

19b. 36 αὐτα μὲν οὐν δύο ἀντίκεινται, ἀλλὰ δὲ πρὸς τὸ οὐκ ἀνθρώπος ὡς ὑποκείμενον τι προστεθέντος· ἐστὶ δίκαιος οὐκ ἀνθρώπος - οὐκ ἔστι δίκαιος οὐκ ἀνθρώπος, ἐστιν οὐ δίκαιος οὐκ ἀνθρώπος - οὐκ ἔστιν οὐ δίκαιος οὐκ ἀνθρώπος. πλείους δὲ τούτων οὐκ ἔσονται ἀντιθέσεις· αὐταί δὲ χωρὶς ἔκεινων αὐταί καθ' αὐτασ εἶσαι, ὡς ὀνόματι τῷ οὐκ ἀνθρώπος χρώμενα.

In Ackrill's translation:

"These [i.e. the two universal oppositions at 19b. 32-5], then, are two pairs of opposites. There are others if something is added to 'not-man' as a sort of subject, thus:

(a) 'a not-man is just'
(b) 'a not-man is not just'
(d) 'a not-man is not not-just'
(c) 'a not-man is not-just'

There will not be any more oppositions than these. These last are a group on their own separate from the others, in that they use 'not-man' as a name."

The passage refers, as Boethius' commentary takes it, to the completeness of the three-term propositions. However, this is not all that is stated here. Boethius also observes and comments on another point made by Aristotle: namely, the dissimilarity between propositions with indefinite and definite subjects.

1020 Cf. above Part I, 4., (iii.1), (b) The categorical proposition with three terms.
(ii) The dissimilarity between propositions with indefinite and definite subjects

Aristotle refers to the propositions with indefinite subjects as a group separate from the other containing propositions with a definite subject. So he says (20a. 1-3):\textsuperscript{1021}

"These last are a group on their own separate from the others in that they use 'not-man' as a name."

The two groups of propositions that Aristotle compares are the following:

(a) a man is just  
(b) a man is not-just  
(c) a not-man is just  
(d) a not-man is not-just

(a') a man is not just  
(b') a man is not not-just  
(c') a not-man is not just  
(d') a not-man is not not-just

Aristotle's words (20a. 1-3), however, do not make sufficiently clear whether he considers this dissimilarity also in logical terms, as the commentary takes it. In fact, 20a. 1-3 does not seem to imply more than a difference in the form of these propositions: for "they use 'not-man' as a name". However, Boethius' commentary, which follows Porphyry as indicated, interprets this phrase in the sense that while the propositions having a definite subject and a definite or an indefinite predicate (i.e. the four propositions on the top) have some logical sequence in relation to one another (\textit{habent aliquam ad se consequentiam}), these with an indefinite subject and definite or indefinite predicate (i.e. the four at the bottom) do not relate logically to the former ones:\textsuperscript{1022}

\textit{sed illae, inquit [sc. Aristotle], quae praedicatum quidem infinitum habent, subiectum vero finitum vel quibus et praedicatum finitum est et subiectum, habent aliquam ad se consequentiam, hae vero quas}

\textsuperscript{1021} cf. \textit{in Int. 2}, 24-25, p. 312.
\textsuperscript{1022} in \textit{Int. 2}, 15-27, p. 312.
postea memoravimus, id est quae infinitum haberent subjectum, praedicatum autem vel infinitum vel finitum, nullam habent consequentiam ad eas propositiones, quae sive finito praedicato sive infinito, ex finito tamen subjecto consistèrent. hoc est enim quod ait: *hae autem extra illas ipsae secundum se erunt*, id est nullam consequentiam ad superiores quae ex finito subjecto constarent habere eas quae infinitum subjectum in propositionis ordine retinerent.

When Boethius compares both groups of propositions he has in mind the logical relations which Porphyry verified for unquantified propositions with definite subject earlier (i.e. the logical relations that the propositions on the top have one to another).\textsuperscript{1023} As we have argued earlier,\textsuperscript{1024} these relations can be presented thus:

(i) Two propositions can be true together: (*ἐνδέχεται συμβαλλεῖσθαι*: 19b. 35-36), which is said of unquantified diagonal propositions (= *in veritate poterunt convenire*).\textsuperscript{1025}

(ii) Two propositions are true together: (*συμβαλλεῖσθαι*, from 19b. 35-36), which is also said of diagonal unquantified propositions, if they can be true together (= *consentire in veritate*).\textsuperscript{1026}

(iii) Two propositions are equivalent: (*consentire*), which is said of the propositions of 20a. 39-40 (*ταύτων ομοίων, idem significant*); and of those at 20a. 20-23 (= *consentire*).\textsuperscript{1027}

If the commentary, in both expositions,\textsuperscript{1028} implies that no logical relation is verified between propositions with definite and indefinite subjects, then it implies that they cannot even be true together. The commentary assumes, then, that a proposition like 'a not-man is just' cannot be true together with another like 'a man is just'. Accordingly, given that (i) is the weakest of the three

\textsuperscript{1023} Cf. above Part II, (ii. 2) Porphyry's exposition.
\textsuperscript{1024} Cf. above Part II, (ii.2), (a) The logical relations.
\textsuperscript{1025} Cf. in *Int.* 2, 13-16, p. 304.
\textsuperscript{1026} Cf. in *Int.* 2, 1-3, p. 304.
\textsuperscript{1027} Cf. in *Int.* 2, 21-29, p. 330.
\textsuperscript{1028} Cf. also in *Int.* 1-5, p. 140.
logical relations which are distinguished by the commentary, one can infer that (ii) and (iii) will not be verified either.

A weak logical relation is one which can be satisfied in a great number of cases, and in this sense the relation (i) creates difficulties to the interpretation advanced by the commentary. In fact, is it absolutely certain that propositions like 'a not-man is just' and 'a man is just' cannot be true together? Alexander of Aphrodisias had advanced a valuable reflection for the case of the unquantified diagonal propositions with definite subject-term. He argues that propositions like 'a man is just' and 'a man is not-just' can be true together, for they refer to different subjects, Cato and Sulla respectively (as Boethius reports: two different men, one just, the other not-just). But Alexander's point, though it seems to be in the right direction, is not sufficient to elucidate the case with which we are concerned now. In fact, all that can be suggested by his remark (which is besides isolated in Boethius' report) is that 'a man is just' and 'a man is not-just' can be true together if they do not refer to the same subject, for they in fact cannot be true together if, otherwise, the same subject is assumed. The case which concerns us now is different, for there is no reason to assume that 'a not-man is just' and 'a man is just' cannot be true together if the denotation of the subject-term is not changed.

The ancient commentaries (Ammonius does not even consider the point) do not discuss whether or not a syntactical dissimilarity also implies a semantic one. In fact, they do not discuss how an indefinite subject, like 'not-man', produces a logical difference from propositions with definite subject. The point, however, would require a clarification, given that Aristotle himself shows that there exist some propositions which relate logically to one another despite having a different syntactical form. The absence of further explanation in this respect leaves

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1029 *in Int.* 18-21, p. 136. See also above Part II, (d.1) *Boethius' report of Alexander in the first commentary.*

1030 Amm. *in Int.* p. 175, 25-p. 176, 6. Ammonius' comments on 20a. 1-3 revolve around the number of oppositions which are generated in three-term propositions when the subject varies from definite to indefinite. He in fact states that the number of oppositions which is generated if 'not-man' is introduced as subject is the same as if 'man' is taken: namely, two.

1031 Many examples are given by Aristotle: 'Socrates is not just' is equivalent to 'Socrates is not-just' (cf. 20a. 23-30). And at 20a. 20-23: 'no man
many doubts in the ancient commentaries. Only some of them are clarified by further reflection which Boethius develops in commenting on another passage of Aristotle (20a. 37-39).

(iii) **Dissimilarity in quantified propositions**

Boethius' view that Aristotle implies a *logical* dissimilarity between propositions with indefinite and definite subject seems to be confirmed when Aristotle himself refers to quantified propositions with indefinite subject (20a. 37-39):\(^{1032}\)

20a. 37 σημάνει δὲ τὸ ἐστὶ πᾶς οὐκ ἄνθρωπος δίκαιος οὐδεμιᾶ ἕκαστον ταύτιν, οὐδ’ ἡ ἀντικειμένη ταύτῃ ἢ οὐκ ἐστὶ πᾶς οὐκ ἄνθρωπος δίκαιος. (...) 

So Ackrill:

"Every not-man is just' does not signify the same as any of the above, nor does its opposite, 'not every not-man is just'. (...)"

In fact, Aristotle now is explicit and indicates that the propositions with indefinite subject *do not signify the same as* those with definite subject (σημάνειν ταύτιν). The propositions which are compared, as the commentary points out, are the following ones:\(^{1033}\)

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\(^{1032}\) cf. also AL. 20a. 37-40. Significat autem 'est omnis non homo justus' nulli illarum idem, nec huic opposita ea quae est 'non est omnis non homo justus'; illa vero quae est 'omnis non justus non homo' illi quae est 'nullus justus non homo' idem significat.

\(^{1033}\) in Int. 27-11, pp. 147-8. Illae propositiones in quibus infinita nomina subjecta sunt longe aliud, inquit, significant et non idem his propositionibus quae vel secundum finita vel secundum infinita praedicata dicuntur. ea enim quae dicit *omnis non homo justus* nihil idem significat quam illa quae dicit *est omnis homo justus vel nullus homo justus* est vel iterum *est omnis homo non justus* vel *nullus homo non justus*. nulli enim similis est harum ea quae dicit *omnis non homo justus* vel *nullus homo non justus*. nec huic opposita negatio particularis ea quae dicit *non est omnis non homo justus* nulli earum idem significat quae superius descriptae sunt vel alicui earum quae sunt superius descriptis oppositate. (Cf. also in Int. 2, 1-2, p. 340).
(a) every not-man is just  (a') every not-man is not just
(b) every man is just  (c) no man is just
(d) no man is not-just  (e) every man is not-just

The commentary calls propositions which have a different syntactical form but a certain logical relation between them 'diversae':\textsuperscript{1034}

\textit{possunt enim diversae quidem esse praedicationes, idem tamen aliquotiens significare, ut ea quae dicit omnis est homo iniustus cum sit diversae ab ea quae dicit nullus est homo iustus, idem tamen aliquando significant, si adfirmatio privatoria praecesserit. dictum est enim quod adfirmationibus praecedentibus negationes sine dubio sequentur.}

Boethius realizes that Aristotle, when he compares these groups of propositions, does not say that they are \textit{diversae}, but he says rather that they are separate one from another on logical grounds:\textsuperscript{1035}

\textit{ergo non hoc dicit, quoniam diversae sunt ex infinito nomine subiecto, praedicato vel finito vel infinito < his quae sunt ex praedicato vel finito vel infinito >, subiecto tamen finito, sed quod omnino sibi non consentiant nec idem significent id est tota sint propositionis virtute dissimiles.}

The logical reason is, as the passage indicates it, that the propositions in question are not equivalent (\textit{non consentiunt}), and the commentary bases an ultimate reason for this logical difference on the fact that the propositions do not have the same subject:\textsuperscript{1036}

\textsuperscript{1034} in \textit{Int. 2}, 24-30, p. 340.
\textsuperscript{1035} in \textit{Int. 2}, 1-6, p. 341.
\textsuperscript{1036} in \textit{Int. 2}, 5-17, p. 340. Let us note that 'dissimilarity' in categorical propositions can be said in a \textit{weak} and in a \textit{strong} sense: the first sense corresponds to \textit{diversae} here: two propositions are syntactically different one from another, but they have a logical relation (as above 24-30, p. 340). The strong sense (= \textit{tota virtute dissimiles}, cf. in \textit{Int. 2}, 1-6, p. 341), if two propositions are syntactically different one from another and also without
Although through this specification Aristotle clarifies now that he alludes to a logical dissimilarity between propositions with definite and indefinite subject, his words are not sufficient to dissipate some questions. First, a general lack of proof for this and the earlier dissimilarity is to be noted. The allusion to a different subject-term in the propositions in comparison cannot be taken as a complete reason (or proof) for maintaining a logical dissimilarity between the propositions in question. Perhaps a further clarification of how a different subject-term produces a non-equivalence between two quantified propositions is not as indispensable as one of how different subject-terms impede two unquantified propositions from being true together. However here too, in the case of the quantified propositions, a further comment would have made the point clearer. Second, Aristotle says that quantified propositions with definite and indefinite subject cannot be equivalent (ταύτων ομολογεῖν). Now, if this point is accepted, what can be said about the logical relations which are weaker than this, i.e. (ii) and (i)? In other words, propositions like 'every not-man is just' and 'every man is just': are they true together (= consentire in veritate) ? or even Can they be true together (consentire in veritate possunt) ? Boethius, as all the ancient commentators, does not say here anything else. They do not clarify Aristotle. Is this negligence on the part of the ancient commentators?

In modern or formal semantics, two different propositions, (let us take for instance 'a not-man is just' and 'a man is just'), can
be true together if there is a model or interpretation which makes these propositions true.¹⁰³⁷ Now, it is not difficult to conceive at least one interpretation that will make these propositions true.¹⁰³⁸

A general clarification from a modern point of view seems to be valuable in this point. It allows us to understand what is the place of Aristotle and the ancient commentators in the development of formal semantics. Equally, it allows us to suppose that the ancient commentaries do not develop a systematic treatment of logical dissimilarity of categorical propositions, but they attached themselves to Aristotle's words, not by neglecting a further clarification, but through prudence. The doctrine of the logical dissimilarity of the categorical propositions (if we may call it by this name) was not as developed as the doctrine of their logical similarity.


¹⁰³⁸ Only to see how this concept operates, let us suppose the universe U= the rational creatures of the Bible. Again, the subjects or individuals a= Michael the archangel; b= Job. And also the predicates: M= 'to be a man'; not-M= 'not to be a man'; J= 'to be just'. Accordingly, the proposition 'a man is just' (i.e. 'Mb and Jb') is true if it is said of Job; and 'a not-man is just' (i.e. 'not-Ma and Ja') is true, if it is said of Michael the archangel. So, both propositions can be true together in *this* interpretation.
At 20a. 16-20, in the middle of his considerations concerning logical relations between indefinite propositions, Aristotle reminds us of some\textsuperscript{1039} of the logical relations contained in the well-known Square of Opposition:

\begin{center}
\begin{tabular}{|c|c|}
\hline
\textbf{Universal Aff.} & \textbf{Universal Neg.} \\
\textbf{Every animal is just} & \textbf{No animal is just} \\
\textbf{Particular Aff.} & \textbf{Particular Neg.} \\
\textbf{Some animal is just} & \textbf{Some animal is not just} \\
\hline
\end{tabular}
\end{center}

Obviously, the absence of indefinite names and the use of another subject-term ('animal') in the propositions of this square do not constitute a direct way of presenting further logical relations

\textsuperscript{1039} Details of these relations in J.N. Keynes, \textit{Studies and Exercises in Formal Logic}, London 1906, pp. 110-116.
between indefinite propositions. Besides, Aristotle had already systematically treated this subject.\textsuperscript{1040} Again, without a clear connection with the preceding passage, Aristotle adds:\textsuperscript{1041}

\begin{verbatim}
20a. 20 ἀκολούθοισι δ' αὕτα, τῇ μὲν πᾶς ἐστὶν ἄνθρωπος οὐ δίκαιος ἢ οὔδεις ἐστὶν ἄνθρωπος δίκαιος, τῇ δὲ ἐστὶ τοῖς δίκαιοις ἄνθρωποι οὐ δικαιοὶ ἢ ἀπεκδεδεδεδέναι ὅτι οὐ πᾶς ἐστὶν ἄνθρωπος οὐ δίκαιος. ἀνάγκη γὰρ εἶναι τιμα.
\end{verbatim}

20-1 ἢ ... τῇ n

So Ackrill:

"'No man is just' follows from 'every man is not-just, while the opposite of this, 'not every man is not-just, follows from 'some man is just' (for there must be one)."

The commentary says nothing concerning the relation of these two passages, but at the end of their elucidation, it remarks that Aristotle was making a brief digression (\textit{parumper egressus}) about the logical sequence of these propositions:\textsuperscript{1042}

De consequentia propositionum disputans et sibi quemadmodum consentirent illum tractatum parumper egressus docere proposuit, quae veniant in responsionem de singularibus, si ad praedicationem ipsorum quae de universalibus sunt propositionibus ad praedicationem addita particula negativa concurrant.

A reason to explain why Aristotle makes use of these peripheral remarks can be taken from the fact that the kinds of proposition defined in the square of opposition (i.e. A, E, I, O) are present in Porphyry's diagram of the quantified propositions (which, on this assumption, would be coincident with one which Aristotle would

\textsuperscript{1040} See \textit{PeriH.} 7, 17b. 16-25. Cf. also \textit{in Int.} 2, 10 ff. p. 152 ff.
\textsuperscript{1042} \textit{in Int.} 2, 14-20, p. 331.
have construed). As set out before, Porphyry presents the following diagram:\textsuperscript{1043}

### Quantified Propositions

<table>
<thead>
<tr>
<th>Simple Universal Affirm.</th>
<th>Simple Particular Negat.</th>
</tr>
</thead>
<tbody>
<tr>
<td>[A] every man is just</td>
<td>[O] not every man is just</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Privative Particular Negat.</th>
<th>Privative Universal Affirm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>not every man is unjust</td>
<td>every man is unjust</td>
</tr>
<tr>
<td>[I] (= some man is just)</td>
<td>[E] (= no man is just)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indefinite Particular Negat.</th>
<th>Indefinite Universal Affirm.</th>
</tr>
</thead>
<tbody>
<tr>
<td>not every man is not-just</td>
<td>every man is not-just</td>
</tr>
</tbody>
</table>

In this diagram, it is apparent where the kinds E (universal negation), and I (particular affirmation) are located by Porphyry. Besides, an A (universal affirmation) is immediately derived from Aristotle's diagram of the quantified propositions (19b. 32-35);\textsuperscript{1044} and an O (particular negation) can be derived from the first proposition of the second column, for—as Boethius' commentary will argue later— if 'not every man is just', then 'some man is not just'.\textsuperscript{1045}

The occurrence of these kinds of proposition in the diagram gives important credibility to Porphyry's idea of finding equivalences between the privatives and definite propositions (e.g. 'not every man is unjust' is equivalent to 'some man is just') in order to get a further relation between definite and indefinite propositions. In this view, Aristotle's digression would consist in coming back to the diagram of the quantified propositions to extend its logical relations.

\textsuperscript{1043} cf. in \textit{Int.} 2, 5-23, p. 297. (See also above Part II, 1., A., 1.2 \textit{Quantified Propositions}, (i. 2) \textit{Porphyry's exposition}).

\textsuperscript{1044} cf. \textit{ibid.}, 1.2 \textit{Quantified Propositions}, (i) \textit{The ancient interpretations}.

\textsuperscript{1045} Later (in \textit{Int.} 2, 10-12, p. 329) Boethius states this relation literally: si quis dicat non omnis homo iustus est, hoc est dicere quidam homo iustus non est.
(ii) Equipollences

Without noticing the similarity between the propositions occurring in Porphyry's diagram and those presented by Aristotle at 20a. 20-23, the commentary simply starts from a new, face-value diagram for the passage:

\[
\begin{array}{c}
\text{[Indef. Univ. Aff.]} \\
(a) \text{Every man is not-just} \\
\text{[Simple Univ. Neg.]} \\
(c) \text{No man is just} \\
\text{[Simple Part. Aff.]} \\
(b) \text{Some man is just} \\
\text{[Indef. Part. Neg.]} \\
(d) \text{Not every man is not-just}
\end{array}
\]

Aristotle\(^{1047}\) says that (c) follows from (a), and (d) follows from (b). Besides, he adds that (a) is the opposite (\(\alpha\nu\tau\kappa\iota\mu\varepsilon\nu\eta\)) of (d). However, concerning these relations, Boethius' commentary shows two remarkable characteristics: (i) In both expositions, it transposes the logical order of the universal propositions in respect of the expression that is found in the text of the modern OCT edition.\(^{1048}\) And (ii) It demonstrates (or at least it is its intention) not only that between (a) and (c), and (b) and (d), there is a logical relation of consequence or entailment (\(\alpha\kappa\omicron\lambda\omicron\omega\nu\theta\omicron\alpha\zeta\)), as Aristotle seems to mean, but also one of equivalence.

In first term, indeed, Boethius' translation in AL, and also the lemmata of both commentaries, transpose the logical relation of the first pair of propositions indicated by Aristotle, although not the second pair. So in his translation:\(^{1049}\)

\[
\text{Sequentur vero eam quidem quae est 'nullus est homo iustus' illa quae est 'omnis est homo non iustus'}.\]

---

\(^{1046}\) in Int. 2, 18-19, p. 328. As is clear, the propositions of this diagram are the same as the four occurring at the bottom of Porphyry's diagram of the quantified propositions. Though they are arranged in another way, the same propositions are disposed in logical relation in both diagrams.

\(^{1047}\) Aristotle's logical relations are shown by the arrows in the square.

\(^{1048}\) Aristotelis Categoriae et Liber de Interpretatione, (1949), p. 60.

\(^{1049}\) cf. AL II.1, 10 (20a. 20 f.). The apparatus criticus of AL does not attest the variant in question.
And also both lemmata:¹⁰⁵⁰

Sequuntur vero hae: hanc quidem quae est nullus est homo iustus illa quae est omnis est homo non iustus.

hanc quidem quae est omnis est homo non iustus illa quae est homo iustus? an hanc] haec et illam?

As a consequence, Boethius' commentary and translation do not state—as our Aristotle does— that "'No man is just' follows from 'every man is not-just'", but, on the contrary, that "'Every man is not-just' follows from 'no man is just'". This textual problem is present neither in AL nor in the critical edition of Boethius' commentary of PeriH., though C. Meiser expresses his doubts concerning the reverse reading. It is worth noting that the apparatus criticus of the Oxford edition of Aristotle's PeriH.¹⁰⁵¹ shows that the Ambrosianus MS (=n) contains the reading attested in Boethius' commentary and translation. On the other hand, Ammonius neither follows the converse reading nor seems aware of textual conflict: he rather seems to have held a unique version for 20a. 20-23: "'No man is just' follows from 'every man is not-just'", i.e. the reverse relation to that given by Boethius.¹⁰⁵²

A definitive explanation for Boethius' textual variant is surely difficult, and a hypothetical answer seems to be all that can be offered. M. Soreth has explained it as a correction operated by a logical reason.¹⁰⁵³ Her point is more credible than the hypothesis of a mistake in Boethius' translation of the Greek text, but it is not free of difficulties. On the one hand, her explanation cannot lead us to believe that Boethius made this correction on his own. Boethius was scrupulous in treating a textual problem at 19b. 24-25,¹⁰⁵⁴ and naturally one should expect a similar attitude

¹⁰⁵⁰ Cf. in Int. 17-19, p. 143; in Int. 2, 16-18, p. 327.
¹⁰⁵⁴ cf. above Part I, 4., (ii)
this time. Rather, Boethius' unawareness of a textual conflict at 20a. 20-23 suggests that he did not have this time an alternative reading, but that he had a Greek text in which the reading found in the Ambrosianus MS was the only one. On the other hand, if one takes into consideration the possibility of a correction made from a logical viewpoint, then Boethius (Porphyry) should have had a definite reason of logical kind to operate in this way. But actually Porphyry had no more important logical reasons than Ammonius (who takes the reverse reading) to have operated the change, for both will take the pairs of 20a. 20-23 as if the truth and falsity of one proposition follow correspondingly from the truth and falsity of the other, and in these terms neither one text nor the other advance an obstacle for the respective demonstrations. Accordingly, the difficulty of 20a. 20-23 does not seem to be logical, but only philological and related in particular to the transmission of the text of Aristotle. Boethius' text for 20a. 20-23 intensifies, rather, the doubt concerning what was the genuine text of Aristotle.\(^{1055}\)

The second characteristic of Boethius' commentary is to take the two logical relations that Aristotle states literally to be entailments (δικολούθει δ’ αύτα: sequuntur vero hae) as equivalences (sequuntur sese sibique consentiunt).\(^{1056}\) The commentary goes on to proceed, in order, to demonstrate these equivalences without noticing that the aim of these demonstrations is going beyond Aristotle's words. Already from the first exposition, a relation of equivalence is stated between the mentioned propositions by means of the technical term 'consentire',\(^{1057}\) and so an argument proving this relation is


\(^{1056}\) Cf. in Int. 2, 25-29, p. 330.

\(^{1057}\) in Int. 23-2, pp. 143-144. nunc autem monstrat universali negationi nominis finiti consentire universalem adfirmationem nominis infiniti et particulari adfirmationi, quae est opposita universali negationi nominis finiti, consentire eam, quae est opposita <universalis> adfirmationi nominis infiniti, scilicet particulararem negationem praedicatum retinentem infinitum, et prius describantur hoc modo: (it follows the diagram we give above).
partially attempted.\textsuperscript{1058} In the second exposition, Boethius is more explicit:\textsuperscript{1059}

proponit has quattuor dicens negationem quidem simplicem universalem et adfirmationem infinitam universalem sese sequi et sibimet consentire nec minus his oppositas id est particularem adfirmationem simplicem et particularem infinitam negationum et in veritate et in falsitate se sequi et a se nullo modo discrepare.

Therefore, both the first and the second commentary leave no doubt that Boethius approaches the propositions of 20a. 20-23 as relating correspondingly one to another in two equivalent pairs.

In another context, the change of relation (i.e. from 'entailment' to 'equivalence') would have been a logical mistake,\textsuperscript{1060} but here the change does not result incorrectly, for these propositions mentioned by Aristotle in the relation of entailment are logically equivalent—or, equipollent as the medieval logicians will say later.\textsuperscript{1061}

\textsuperscript{1058} The commentary points out that the universal affirmation with a indefinite name, ('every man is not-just') follows from (sequitur) the universal negation ('no man is just'), because, if it is true that no man is just, it will be true that every man is not-just. Then it adds that the respective opposite propositions of these, i.e. 'some man is just' and 'not every man is not-just' are again mutually implied (sibi rursus ipsae consentient), because, if it is true to say 'some man is just', it is true to say 'not every man is not-just', because if not every man is not-just, some man must be necessarily just. The argument is partial, however, because it does not prove the converse for the universal propositions (first column). (Cf. \textit{in Int.} 19-23, p. 144).

\textsuperscript{1059}in Int. 2, 3-9, p. 328. ("He [sc. Aristotle] proposes these four propositions, by saying that the simple universal negation, and the indefinite universal affirmation follow one another, and are equivalent (sese sequi et sibimet consentire), and, not less, those which are opposite to these, i.e. the simple particular affirmation and the indefinite particular negation follow one another in respect of their truth and falsity (in veritate et in falsitate se sequi), and they do not disagree in any way one with another (a se nullo modo discrepare).").

\textsuperscript{1060} Because it is not sufficient to prove that the truth of the first proposition implies the truth of the second, and so too with the false valuation, but it is necessary to prove respective reciprocity in these implications.

\textsuperscript{1061} "The theory of equipollence —says A.N. Prior— is the theory of equivalences between propositions differing only in the way in which signs of quantity are combined with variously placed signs of negation." One example is, as Prior shows later, 'not every B is not an A' is equivalent to 'some B is an A'. On equipollence and its rules cf. A. N. Prior (1962), p. 134.
Now, the fact that this change does not produce an error does not imply that the reading of the ancient commentators represents necessarily the sense of the words of Aristotle (20a. 20-23). Boethius and Ammonius are interpreting 20a. 20-23, which is an ambiguous passage in a crucial point: namely, it does not clarify if the relation of entailment (*hae vero sequuntur*) should be taken reciprocally too (*sequuntur sese sibique; ἀκουλοθείων ἀλλήλας*). It is sound to distinguish the ancient commentators' interpretation from the sense of the passage in itself, but one should be conscious as well that the opinion that Aristotle at 20a. 20-23 cannot present equivalences is controversial.¹⁰⁶²

¹⁰⁶² In modern studies of logic, the point amounts to whether Aristotle accepted the obversion of the categorical propositions to be reciprocal, or he did not admit the obversion of negatives to affirmatives. (See explanation of obversion at Part II, C., Equivalences, (iv) The canon of Proclus). The best argument (see Martha and William Kneale (1978), p. 57) is that Aristotle shows entailments, and no equivalence, in the logical relations of the diagrams at 19b. 22-24 and in the corresponding one of the quantified propositions. This would be corroborated by An. Pr. I, 46. Here, in fact, the negatives always follow from affirmatives, but not vice versa. A.N. Prior (1962), pp. 126-127 had already shown this. However, J.N. Keynes (1906), p. 133; J. S. Mill (A System of Logic, London 1970, pp. 104-5); F. Ueberweg (System of Logic, London 1871, p. 327, English translation); I. Copi (Introduction to Logic, New York/London 1972, p. 163); and, in general, the more ancient authors, are keen to understand the obversion as a reciprocal entailment of propositions (=logically equivalent) and to interpret Aristotle accordingly, though the ambiguous words of 20a. 20-23. We have touched on the point of whether 'negatives follows from affirmatives' is a logical principle (see also Part II, C., (v)). It is worth adding here that according to the interpretations of Boethius and Ammonius, the logic of the indefinite names is a theory of similarity and dissimilarity of the categorical propositions, and that at 20a. 20-23 Aristotle would produce a clear separation between the logical entailments (*consequentia; ἀκολουθία*), which he had been proving earlier (19b. 22-24 and quantified-proposition diagram), and the relations of equivalence that he shows at 20a. 20-23 (cf. Boethius in Int. 2, 20-3, pp. 327-328; Ammonius in Int. p. 181, 12-21). On this assumption, the thesis that Aristotle might have realized that a number of pairs of quantified propositions not only followed one from another, but also reciprocally, and so that he would have advanced a further reflection on these reciprocal entailments at 20a. 20-23, is quite understandable. Let us note that Aristotle's words at 20a. 20-23 (*ἀκολοθείων δὲ 'ἀρταί') can be taken as suggesting no more than an entailment, but he is explicit later (20a. 39-40) with a pair of propositions which he calls 'to have identical meaning' (*ταύτων σημαίνειν*). It is worth adding, too, that Boethius (cf. here later C., (vi)) takes this explicit equivalence to be a formal derivation from 20a. 20-23, and that Ammonius takes it as another formula derived from the canon of Proclus, which
Boethius' proof of equivalence for 20a. 20-23

The last diagram given above shows the relations of consequence and contradiction stated by Aristotle. The following one will show the relations of equivalence and contradiction stated by the commentary.

![Diagram](image)

Boethius' commentary makes two different approaches to a demonstration of the mentioned equivalences. The first one is not complete proof and is preceded by an argument intending to reason by analogy on the basis of a more evident example. So, after presenting the diagram, Boethius focuses on the first column and states that both propositions are equivalent in their truth values. The commentary grounds this thesis, perhaps poorly, on the fact that this becomes evident in using a more clear example: if 'every man is not-quadruped' is true, then 'no man is quadruped' is also true. The commentary only points out that this will also happen if one takes the false value for one of these allows us to find the other proposition of an equivalent pair (cf. here later C., (iv)). On the concern whether the canon of Proclus is or not the rule of obversion, see here later C., (iv).

Boethius says: "Therefore, in this arrangement, if the indefinite universal affirmation is true, i.e. this which says 'every man is not-just', this which proposes 'no man is just', i.e. the simple universal negation, is also true. But, this is more clearly understood by means of more evident examples (hoc autem melius in verioribus cognoscitur exemplis). If it is said that 'every man is not-quadruped' is true, then 'no man is quadruped' is also true. And, if one of these is false, the other will be false too. Therefore, if 'every man is not-just' is false, then, correctly, the simple negation, which falsely predicated that no man is just, is false. Thus, the indefinite universal affirmation and the simple universal negation are equivalent (sibimet consentiunt), so that it is necessary that if one is true, the other is also true, and the falsity of one will follow (consequatur) the falsity of the other. The same occurs in the other part." (in Int. 2, 20-4, pp. 328-9). The passage only shows, in fact, a sort of reasoning by analogy, which cannot be counted as a proof, but as a mere intuitive basis for reasoning.
propositions: the other will also be false. The commentary does not show the reciprocal.

This irregular proof is enlarged by an argument which attempts to state the propositions of the second column as equipollences, i.e. as formulae deriving one from another by formal (or algebraic) transformations. This argument is interesting from a logical viewpoint, for it outlines not only equipollences but also what could be called a law of quantifiers. In fact, the commentary argues that (b) 'some man is just' is equivalent to (d) 'not every man is not-just', because the expression not every signifies some is not. Therefore, if 'not every' signifies just as 'some is not', then 'not every man is not-just' will signify the same as 'some man is not-just', (for the commentary assumes 'not every man' is replaced by 'some man is not' in (d)). Equally, the commentary adds, 'is not not-just' signifies the same as 'is just'. Therefore, (d) 'not every man is not-just' will signify the same as (b) 'some man is just'.

This proof is the closest to what we can denominate 'a formal proof'. The commentary neither extends it to the opposite column nor takes it as a proper demonstration, but as a reasoning which might seem, to some extent, obscure. The demonstration in question contains, however, important logical elements: on the one hand, the idea that an equipollence between two (or more) propositions can be proved only by formal transformations accepted by definition, that is, without relating to the truth and falsity of propositions; on the other hand, a law of quantifiers, as we can call the equivalence between 'not every' and 'some not', for if this could be expressed in general terms, here it has been stated that 'not every x is y' is equipollent to 'some x is not y', and this is valid for every term x and y.

1064 In Int. 2, 7-12, p. 329. nam id quod dicitur non omnis tantundem est, tamquam si dicat quidam non est, quod in alio quoque exemplo manifestius adparebit, si quis dicat non omnis homo iustus est, hoc est dicere quidam homo iustus non est.

1065 cf. in Int. 2, 12-18, p. 329.

1066 In Int. 2, 21-23, p. 329. sed quoniam hoc fortasse aliquatenus videtur obscurius, consequentiae ipsarum hoc modo sumendae sunt. (The commentary then proceeds to prove the equipollences in question in its usual way: by assigning truth values to the propositions).

1067 It worth noting that both a mechanical transformation to produce further equipollences and at least a second law of quantifiers (namely, 'not
The second approach developed by Boethius' commentary to prove the mentioned equivalences follows in the usual way: namely, the attribution of truth values to the propositions in order to verify whether or not they equate in truth and falsity, i.e. whether the truth and the falsity of one proposition follows respectively from the truth and falsity of the other. As we have noted, the commentary does not suppose the earlier result, so that it attempts the new reasoning based only on the assumption that the propositions have truth values. This new reasoning shows two characteristics: first, its structure, which is that of an assumption or hypothesis to be confirmed by further reasoning. Secondly, the weakness in getting all the steps required in a correct demonstration, which makes it a target of criticism from a more strict consideration. Both points will be clear from the following exposition.

The commentary starts by assuming that (a) and (c) are equivalent (sibimet consentire), so that the truth and falsity of one follow from the truth and falsity of the other. Accordingly, the commentary states that if (a) is false, (d) is true, because they are contradictory (in fact one denies the other). But if (a) is false, (c) is false as well, by hypothesis. But if (c) is false, (b) will be true, because it is its contradictory. Thus, when (a) is false, (d) is true. And when (c) is false, (b) is true. Therefore, if (a) and (c) are false together (simul) and equivalent as to be false, (b) and (d) will

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1068 cf. in Int. 2, 21-23, p. 329. sed quoniam hoc fortasse aliquatenus videtur obscurius, consequentiae ipsarum hoc modo sumendae sunt. ("But since this [sc. the former proof] could seem, perhaps, to some extent, quite obscure, the logical relations between the same propositions must be supposed in this following manner.").

1069 The complete proof at in Int. 2, 23-2, pp. 329-331.

1070 Cf. in Int. 2, 23-26, p. 329. sitque nobis hoc posium adfirmationem universalem infinitam et negationem universalem simplicem sibimet consentire, ut unius veritatem et falsitatem alterius veritas aut falsitas consequatur.

1071 i.e. simul falsae sunt et sibimet in falsitate consentiunt. (Cf. in Int. 2, 12-13, p. 330).
be true together. Again, in the other column, if (a) is true, (d) will be false, for they are contradictory. Now, if (c) is true, then (b) will be false, for they are contradictory. Thus, (a) and (c) are true together: therefore, (b) and (d) will be false together. As a conclusion of the complete argument, the commentary states that (a) follows from (c) and vice versa, and the same is verified for (b) and (d), and that the pairs in questions are equivalent.\textsuperscript{1072}

Strictly speaking, this argument is not a proof, but merely a reasoning showing that the assumption that (a) and (c) are equivalent in their truth values leads us to accept that (b) and (d) are equivalent so too. It is clear, however, that the equivalence between (a) and (c) must be proved. Boethius' argument, besides, imports another kind of abnormality. First, the commentary does not use the information provided by Aristotle, namely, that (a) follows from (c), and (d) from (b), and also that (a) and (d) are contradictory. Second, the commentary does not make a direct allusion to Porphyry's diagram, where these two vertical equivalences are proved.

There is, accordingly, some reason to assume that the material available for Boethius was, in this point, incomplete. On this assumption, the proof that Boethius' commentary gives us could be explained as the last stage of a complete proof given, presumably by Porphyry, but no longer extant in Boethius' time. Indeed, one could be led to this hypothesis by the fact that if one proves equivalence for (a) and (c), one will be able to give a proof for the equivalence between (b) and (d), just as the commentary did. The hypothesis of mutilated material could easily explain, besides, the abnormalities that we have indicated, because the complete proof should have contained the elements given by Aristotle in this passage, and even, plausibly, to have made an allusion to Porphyry's diagram, where the same propositions are mentioned and proved as equivalences.\textsuperscript{1073}

\textsuperscript{1072} \textit{In Int. 2, 25-29, p. 330. quare adfirmatio quidem et negatio utraque universalis, haec simplex, illa infinita, sequuntur sese sibique consentiunt. particulares autem, id est universalibus oppositae simplex adfirmativa et negativa infinita, ipsae quoque sibimet consentiunt.}

\textsuperscript{1073} Let us note that this hypothesis also makes sense with the tentative and incomplete nature of Boethius' first attempt at proof, which mixes two heterogeneous elements (reasoning by analogy and 'formal' transformation), and fails to provide, finally, a convincing demonstration.
We do not know, however, how this first-stage proof was. But if, as it should have been done, the information provided by Aristotle at 20a. 20-23 were used, and if, further, an allusion to the inferences that Porphyry stated for the quantified propositions were made, then the proof in question should have been thus: According to Aristotle, if (c) is true, then (a) is true, for (c) follows from (a).\textsuperscript{1074} But if (a) is true, then (d) is false, for they, according to Aristotle, are contradictory. Now, if (d) is false, then (b) is false too (for the former follows from the latter, says Aristotle). But if (b) is false, (c) is true (for they are contradictory). Therefore, (c) and (a) are true together. Equally, if (c) is false, then (a) is false. Now, if (a) is false, then (d) is true. But if (d) is true, (b) is true. And if (b) is true, (c) is false. Therefore, (a) and (c) are false together.

Now, Porphyry might have added: this is, besides, already stated, for in respect of the quantified propositions we said that if 'every man is unjust' is the same as (a) 'every man is not-just' (for 'to be unjust' is the same as 'to be not-just'), and 'every man is unjust' has the same force as (c) 'no man is just',\textsuperscript{1075} it follows that (c) 'no man is just' has the same force as (a) 'every man is not-just'.

Provided this, then, Boethius would not have needed to suppose that (a) and (c) are equivalent (\textit{consentiunt sibi}), because, either from the data provided by Aristotle at 20a. 20-23 or from Porphyry's inferences in quantified propositions, the equivalence of (a) and (c) was already proved.

Another explanation could suggest that the material that Boethius had at his disposal was certainly incomplete but Porphyry did not provide a complete proof for 20a. 20-23, but he, rather, relied on accumulative evidence and simply referred to other parts of his commentary in which evidence was available.

\textsuperscript{1074} At least in Boethius' reading of 20a. 20-23. (cf. also here above).
\textsuperscript{1075} \textit{idem potest}, cf. \textit{in Int.} 2, 2-6, p. 299. See also above Part II, 1., A., 1.2 \textit{Quantified Propositions}, (i.2) Porphyry's exposition.
Since the argument developed here might produce the impression that the propositions at 20a. 20-23 are not equivalent, we add finally the outline of a proof for these equivalences. To proceed with, a more strict notion of proof has been assumed and the (modern) concept of material implication has been used.\textsuperscript{1076}

The reasoning should demonstrate that the assumption that the pairs (a) and (c), and also (b) and (d), are not equivalent in their truth values leads us to contradiction.\textsuperscript{1077}

\textit{Thesis:} The first demonstrandum is that (a) and (c) are equivalent.

\textit{Hypothesis:} If (a) and (c) are equivalent, then (a) follows from (c), and (c) from (a).

\textit{Proof (by contradiction):} Let us suppose that (a) and (c) are not equivalent. If this is so, then, first, (a) does not follow from (c); and, second, (c) does not follow from (a) either.

\textit{First.} If (a) does not follow from (c), then (a) is true, and (c) is false. But if (c) is false, then (d) will be true, because it is its negation. Now, if (d) is true, (a) will be false, because it is the negation of (d) (in fact, (d) says 'not every man is not-just' and (a) says 'every man is not-just'). But this is a contradiction, since we have accepted by hypothesis that (a) was true. Therefore, it is impossible for (a) to be true and (c) to be false; and consequently, it is impossible that (a) does not follow from (c).

\textit{Second.} If (c) does not follow from (a), then (c) is true, and (a) is false. But if (a) is false, (d) will be true, because (d) is the negation of (a) (in fact, the first says 'every man is not-just, while the second 'not every man is not-just'). Now, if (d) is true, (c) is false, because it is its contradictory. But this is a contradiction, since we have accepted by hypothesis that (c) is true. Therefore, it is impossible for (a) to be true and (c) to be false; and consequently, it is impossible that (a) does not follow from (c).

\textsuperscript{1076} A 'material implication' is defined by the formula 'p or not-q', i.e. p is false or q is true, which amounts to 'it is not true that p is true and q is false' (= it is not true that \{p and not-q\}). For distinctions between meanings of the expression 'p implies q', cf. J. Corcoran \textit{Meanings of Implication}, in \textit{A Philosophical Companion to First-Order Logic}, R.I.G. Hughes (Ed.), Indianapolis/Cambridge 1993, pp. 85-100.

\textsuperscript{1077} In other words, that the pair \{(a) and not-(c)\} is contradictory; and also \{(c) and not-(a)\}. Equally, for (b) and (d).
is impossible for (c) to be true, and for (a) to be false. Consequently, it is impossible that \( \hat{\text{c}} \) does not follow from \( \hat{\text{a}} \).

Therefore, the equivalence between (a) and (c) follows from the first and second step.

Now, the proof for the other column of the diagram, that is, (b) and (d), should proceed in the same manner as the one we have given, unless one uses some of the relations already demonstrated in this proof.

(iv) *The canon of Proclus*

The so-called canon of Proclus is not the same as the mechanical rule of transformation that Boethius presents in his comments on the equipollence at 20a. 39-40.\(^{1078}\) As we will see, the rule of transformation which is presented by Boethius allows us to find an equipollent *pair of propositions* from an initial one by transformation of the definite subject-term into an indefinite one, while the canon of Proclus allows us to find an equipollent *proposition* from an initial one. The mentioned rule is based, moreover, on Porphyry's teaching, while the canon belongs to Proclus. Equally, Ammonius does not mention the rule of transformation which Boethius knows, and Boethius does not mention the canon of Proclus.\(^{1079}\)

Ammonius presents the canon when he comments on the equivalences presented by Aristotle at 20a. 20-23. As we know, both Ammonius and Boethius maintain the opinion that Aristotle has presented here two equivalent pairs of propositions, namely:

(a) 'Every man is not-just' = (a') 'No man is just'
(b) 'Some man is just' = (b') 'Not every man is not-just'

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\(^{1078}\) Cf. here Part II, C., (vi) *A rule of transformation in propositions with indefinite subject.*

\(^{1079}\) Cf. Amm. in *Int.* p. 190, 5 - p. 191, 4. It is worth mentioning in *Int.* p. 190, 33 ff. where Ammonius interprets the equivalence of 20a. 39-40 as another application of the canon of Proclus. Cf. also p. 182, 27-30, where the equivalences of 20a. 39-40 (or those verified in propositions with indefinite subject) are confirmed to be instances of the canon.
Let us recall that each equivalent pair which is mentioned here is an equipollence, i.e. an equivalence produced by transformations of formal characteristics of the categorical proposition: quality, quantity, definiteness and indefiniteness of the subject- and predicate-term. Accordingly, each proposition of an equipollence will contain the same terms as the other proposition, but in a different form or 'state' (e.g. definite/indefinite, universal/particular, etc.). Now, a simple observation shows that in each equivalent pair some of these formal characteristics vary, while others do not. It is easy to see that in each equipollence, the quantity and the subject-term of both propositions do not change (so in (a), for instance, the subject goes from definite to definite; and the quantity from universal to universal), while the quality and the predicate-term do change (so in (a) again, the quality changes from affirmative to negative, and the predicate-term from indefinite to definite). This describes completely what the canon of Proclus proposes.

Indeed, as Ammonius suggests, the canon of Proclus consists of an insight which discovers the formal characteristics which vary and do not vary in each of the equipollences that Aristotle presents here at 20a. 20-23 (and that of 20a. 39-40 can also be added):

"Aristotle, in fact, while presenting us isolated examples of some propositions which follow one from another with reciprocity, disregarded the general principle, our teacher and benefactor gave us rules which are entirely specific in order to discover, in accordance with them, what is the entailment of every proposition which has been given."

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1080 'Formal characteristics' here, then, exclude 'material characteristics' as we can call, accordingly, those characteristics which are mentioned by Ammonius and Boethius, namely, the matter of terms which are predicated (impossible, necessary, simple attribution); and also tense (present, future and past tense).

1081 Amm. in Int. p. 181, 28-32. ὁ μὲν οὖν Ἀριστοτέλης παραδείγματα μόνα παραθέμενος ἴσων τιμών ἀκολουθοῦσαι ἀλλήλων προτάσεων ἀπηλλάσσει τοῦ θεωρήματος, ὁ δὲ γε ἡμέτερος καθηγωμένος καὶ εὐεργέτης κακών ἴσων πάνω τεχνικοῦ παρεξήγου, καθ' οὗς οὖν τε πάση τῇ προτεθείσῃ προτάσει τὴν ἀκολουθίαν εὑρεῖν.
Proclus observed, accordingly, that in every equipollence the subject and the quantity behave similarly (διμοως), while the predicate and the quality change.

"So, given these things [i.e. the formal characteristics of the categorical proposition], [the canon] prescribes to examine, in the proposition which is given, that for which we want to discover the entailment, how each of these [characteristics] behaves, and it makes manifest that the proposition which follows from the given one is that which behaves similarly in respect of subject and quantity, but differently as to the remaining two characteristics [i.e. predicate and quality]."

To illustrate the procedure, Ammonius provides two examples which are not presented by Aristotle at PeriH. 10: Ammonius chooses two universal affirmations: (c) 'Every man is just' and (d) 'Every man is animal' (this last example regarding the fact that it is true). According to Ammonius, (c') 'No man is not-just' follows from (c); (d') 'No man is not-animal' follows from (d).

"Let us propose to find the proposition which follows from 'every man is just' or 'is animal' (regarding that the example shares truth too—and also that Aristotle does not give examples of this kind of proposition): so, since this proposition has a definite subject, and it is simple, and universal and affirmative, it will be necessary that it follows from it a proposition with definite subject, though not simple now, but transposed and, again, universal, though not affirmative now, but negative. How will be a proposition which is a negation with

1082 There is no doubt that the teacher and benefactor alluded to refers to Proclus. Cf. Part I, 1.2, (i) The text. Cf. also Steph. in Int. p. 46, 25.

1083 in Int. p. 182, 11-16. τουτών οὖν ἔχωντας ἀποθέτευν παρεκκλειστο πρὸς τὴν προτέθεσιν πρότασιν, ὡς βουλόμεθα τὴν ἀκολουθοῦσαν εὑρεῖν, πῶς ἔχει καθ’ ἑκαστον τούτων, καὶ ἀποφαίνουσιν τὴν ἐπομένην αὐτῇ ταὐτῇ εἶναι τὴν κατὰ μὲν τὸν ὑποκειμένον ὄρον κατὰ τὸν ποιόν ὄμως αὐτῇ ἔχουσαν κατὰ δὲ τὰ λοιπὰ ἄμφω διαφόρως.

1084 in Int. p. 182, 16-25, προκείμενον γὰρ εὑρέθην τῇ τις ἄθροισας δικαίως ἐστὶν. Η ἐξόν ἐστιν ἡνα καὶ ἀληθείας μετέχει ό λόγος τὴν ἀκολουθοῦσαν (καὶ μᾶλλον ὡς οὐδὲ πέντε τοιαύτης προτάσεως παραδείγματα τῷ Ἀριστοτέλῃ), οὓς δὲν ἐπὶ αὐτῇ ὑπομεινόν το έχει τὸν ὑποκειμένον καὶ ἐστίν ἀπλὴ καὶ ἐπὶ καθολοῦ καὶ καταφατική, δεδεμένη ἐπέσχειν αὐτῇ πρότασιν ὑπομεινόν μὲν ἔχουσαν τὸν ὑποκειμένον οὐκέτι δὲ ἀπλήν ἀλλ’ ἐκ μεταθέσεως, καὶ πάλιν καθολοῦ μὲν καὶ αὐτὴν οὖσαν οὐκέτι μὲν τὸν κατάθεται ἀλλ’ ἀποφαίνει ποιά οὖν ἐστιν πρότασις ἐκ ὑπομεινόν τού ὑποκειμένου ἐκ μεταθέσεως καθολοῦ ἀπόφασις. οὕτως δὲ καὶ ἔργον αὐτὴς ἀπόθεσις ὡς ἄθροισας δικαίως ἀνθρώπωσιν τῷ δικαίως ἐστὶν καὶ τῷ ὑδίῳ ἐστιν αὐτῇ ἄρα ἔκειν ἔφεται.
definite subject, transposed and universal? No doubt, the one which says: 'No man is not-just', or 'not-animal'; this, therefore, will follow from the initial one."

Ammonius strives to state the canon of Proclus as a *regula inveniendi*, i.e. as a principle which allows us to find every categorical proposition from another, and his argument, which could reflect the genuine reasoning of Proclus, is quite impressive: Proclus would start from a consideration of all the formal characteristics of the categorical proposition. And given that every proposition can vary its quality, quantity, indefiniteness and definiteness of its subject- and predicate-terms, he displays the complete variation of these factors, as he did when he (in Ammonus' report) calculates the number of all the categorical propositions. Accordingly, the canon intends to be as universal as it can be applied to every categorical proposition.\(^{1085}\) So, since Ammonius believes that the canon works plainly, as the case of the universal propositions can exhibit, and that the unquantified ones do not contradict it,\(^{1086}\) he had reasons to praise the discovery of his master and benefactor.

A final remark must be made in connection with the already generalized name of 'canon of Proclus'. A further discussion will be also advanced in relation to this question: what does the canon correspond in modern logic to? First. From the two first passages quoted above, one can infer that the expression κανώνας τεχνικώς refers to the four indications or rules which compose the so-called canon of Proclus (i.e. keep the subject, change the predicate, etc.). According to these rules (καθ’ οὐς), one can discover the other proposition of a pair of propositions which are equivalent. Therefore, to call the general rule of Proclus a 'canon' (from these κανώνες) is a metonymy, for here one takes the part (i.e. the four indications) instead of the whole (i.e. the general rule). The name that Ammonius suggests can be inferred from that which he says Aristotle did not give, namely, a θεώματα.\(^{1087}\) One could use,

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\(^{1085}\) Amm. *in Int.* p. 181, 32-p. 182, 11.

\(^{1086}\) See discussion on canon of Proclus and unquantified propositions in the next section.

\(^{1087}\) cf. above *in Int.* p. 181, 30.
accordingly, the expression 'the theorem of Proclus', but 'theorem' is not always a correct translation of εἰκόμα, and it is not in this case, for what Proclus gives is not a theorem, but rather a general rule of deduction or transformation. M. Soreth points out that the canon of Proclus corresponds to the principle (Prinzip) of non-modal equipollence, and she recalls that Stephanus (in Int. p. 49, 27f) in reporting the canon of Proclus mentions the term ἰσοσύνες. This would suggest that a more correct name for the canon of Proclus would be 'the principle of Proclus', but this name, again, advances the difficulties that 'theorem' does. Proclus' discovery is analogous to the discovery that the modern logician Augustus de Morgan made in the last century about the negation of formulae in propositional calculus, and that has come to be named by 'the law of de Morgan', (or sometimes 'the laws of de Morgan').

This could suggest, then, that a more appropriate name for the canon of Proclus is also analogous, namely, the 'law of Proclus'.

Second. When Soreth points out that the canon of Proclus is the principle of the so-called qualitative equipollence in traditional logic, she is following a name which was used by F. Ueberweg. Though this logician does not make the correspondence, it is easy to see that in the table which he provides for this qualitative equipollence the first formula is the one calculated by Ammonius with the help of the canon, the second is given by Aristotle at 20a. 20-23, and the two remaining can also be calculated by the canon. In fact, it is easy to see that each (horizontal) pair of propositions below verifies the rules of the canon: they (a) maintain the quantity, and (b) the subject, and change (c) the predicate and (d) the quality. The table is this:

1088 M. Soreth (1972), p. 410, n.77. "Der Kanon des Proklos ist das Prinzip der sogenannten 'qualitativen' (im Gegensatz zur 'modalen') Aequipollenz in der traditionellen Logik."
Soreth, then, infers correctly from here that the canon of Proclus corresponds to what Ueberweg called 'qualitative equipollence'.

Now, the name that Ueberweg used is one of at least seven which different logicians have stipulated for the logical operation that relates (horizontally) each pair of propositions. English logicians have finally adopted for this operation the name of obversion, following A. Bain. So, in fact, J.N. Keynes, A.N. Prior, M. and W. Kneale. And the last-named have defined it thus:

"Every standard-form categorical proposition is logically equivalent to its obverse, so obversion is a valid form of immediate inference for any standard-form categorical proposition. To obtain the obverse of a proposition, we leave the quantity and the subject term unchanged, change the quality of the proposition, and replace the predicate term by its complement."

The name of this operation is not important. The important question is how to define obversion. And whether or not obversion corresponds to the canon of Proclus. On this point, the logicians will be divided, for the question is actually the same as whether the obversion involves reciprocity in entailments (=equivalence), and the same as whether Aristotle accepted equivalences at 20a. 20-23 or, in general for propositions with indefinite predicate. The logician who accepts that obversion implies the concept of equivalence (as I. Copi above), will have to identify obversion with the canon, and also that Aristotle sees equivalences at 20a. 20-23. On the contrary, the logician who does

1091 Cf. J.N. Keynes (1906), p. 133.
1093 J.N. Keynes (1906), p. 133.
1095 Martha and William Kneale (1978), p. 57 and see there Index.
not accept equivalences at 20a. 20-23, or that obversion implies the concept of equivalence, is not to identify obversion with the canon. So, obversion, where the concept of equivalence (=reciprocity of entailments) is implied, is the same as the canon of Proclus. Obversion without equivalence is not the same as the canon.

(v) Is there any inconsistency between An. Pr. I, 46 and PeriH. 10?

M. Soreth has made the point that Aristotle at An. Pr. I, 46 maintains a limited concept of the indefinite predicate (eingeschränkten Begriff des infiniten Prädikates), while in PeriH. 10 an unlimited one (uneingeschränkt). The difference lies in the fact that Aristotle in the exposition of An. Pr. I, 46 does not make propositions with indefinite predicate to be equivalent to any other one (i.e. to any proposition with a definite or privative predicate). Obviously, equivalences occur in PeriH. 10. Aristotle by himself, in fact, at 20a. 39-40, presents an equivalence and, according to Boethius (Porphyry) and Ammonius, he also presents another two at 20a. 20-23.

Now, since these equivalences are related to one another, for they (according to Ammonius) can be generated from the canon of Proclus, and the one at 20a. 39-40 is (according to Boethius) a mechanical transformation of 20a. 20-23, either the canon of Proclus or the rule of transformation that Boethius presents in commenting 20a. 39-40, assumes a unlimited concept of the indefinite predicate—which is not, let us reiterate it, present at An. Pr. I, 46.

Soreth is quite right to see an absence of equivalences in An. Pr. I, 46, and so to suggest further investigation concerning the relation of these two sections of Aristotle's logical writings. Her categories of 'limited' and 'unlimited' concept of indefinite predicate sometimes suggest that they are a way of approaching

1098 cf. here later (vi) A rule of transformation in propositions with indefinite subject.
the problem which avoids facing it in terms of a clear contradiction in Aristotle. However, there are reasons to assume that this difference cannot be transformed into an inconsistency between *An. Pr.* I, 46 and *PeriH.* 10.

There are some points, in fact, which do not square completely with her view. First, Ammonius' and Boethius' expositions of *PeriH.* 10 are quite different one from another, so that they have actually two 'doctrines' to answer to this difficulty. In Boethius' commentary, the only comparison with, and every allusion to the text of *An. Pr.* I, 46 is made during the exposition of 19b. 22-24, i.e. when the point is the understanding of the correct arrangement between privative, simple and indefinite propositions. The allusion here is prompted by the difficulty of *PeriH.* 19b. 22-24, for Aristotle himself,1099 conscious perhaps of the difficulty of this text, refers (19b. 31) to the text of *Analytics* as a way of helping us to understand the correct order and sequence of the propositions in question. So *An. Pr.* I, 46 does not play any further role in Boethius' commentary. Boethius might, accordingly, say simply that *An. Pr.* I, 46 and *PeriH.* 10 must be related one to another only as to the explanation of 19b. 22-24, and that a supposition that both expositions are symmetrical and equivalent is not to be made.

Let us note now that Porphyry in explaining 19b. 22-24 assumes that privative and indefinite propositions (whether unquantified or quantified) are equivalent ('to be not-just' is the same as 'to be unjust'), and that he similarly assumes this equivalence to be present at *An. Pr.* I, 46. So that for Porphyry (also for Boethius) Aristotle would also assume an unlimited concept of the indefinite predicate at *An. Pr.* I, 46. In fact, let us recall that Aristotle at *An. Pr.* I, 46 says how privative and simple propositions are arranged in a diagram which is similar to that of 19b. 22-24, but he does not specify how privative and indefinite propositions are ordered one to another in this diagram. Porphyry, then, interprets that privative propositions are introduced in the diagram by maintaining similarity to indefinite ones, for these two

1099 Let us note that Ackrill (1963), p. 143 supposes this reference of 19b. 31 to be a "later addition to the text of the De Interpretatione, whether put in by Aristotle or by an editor". Ackrill, unfortunately, does not give an argument for this observation.
kinds of proposition are equivalent. Besides, this can be confirmed: when Porphyry treats quantified propositions, he does not only apply this equivalence in order to produce a similar order and arrangement between quantified and unquantified propositions (i.e. between both diagrams), but also he introduces another two equivalences: namely, 'Some man is just' is equivalent to 'not every man is not-just' and 'no man is just' to 'every man is not-just'. Since both diagrams are similar, and that of the unquantified relates to that of An. Pr. I, 46, it follows that, for Porphyry, Aristotle also assumes equivalences in the text of the Analytics.

So, given that, for Boethius and Porphyry, Aristotle accepts both in An. Pr. I, 46 and PeriH. 10 that propositions with indefinite predicate can be equivalent to other non-indefinite propositions (i.e. privative and definite ones), Aristotle would assume a unlimited concept of the indefinite predicate in both texts.

Soreth also sees a sign of this change of concept between one exposition and another in the fact that in An. Pr. I, 46 negations follow from affirmations, but in PeriH. 10, one must accept that, affirmations also follow from negations, for here equivalences (i.e. reciprocal entailments) are introduced. However, in Boethius' commentary the statement that 'negations follow from affirmations' (whether unquantified or quantified) does not seem to be more than a rule to be observed when the diagrams are to be construed correctly, and in no case a logical principle which could be counted at the same level or importance as, for instance, 'the simple negation follows from the indefinite affirmation' or 'privative and indefinite affirmations are equivalent'. That negations follow from affirmations is not a rule in Boethius' commentary; it is rather a posteriori statement which is derived from the observation of the diagram produced for 19b. 22-24, and whose validity is confirmed further when the diagram of the quantified propositions is construed.

Now, the equivalences presented by Aristotle in PeriH. 10 are all conceived as equipollences, i.e. as pairs of propositions

1100 cf. above Part II, 1., A., 1.2 Quantified Propositions, (i. 2) Porphyry's exposition.
which do not alter their coincident truth values if formal transformations are operated.\textsuperscript{1101} One could say that this concept is not assumed in \textit{An. Pr.} I, 46. However, the concept of equipollence is an operational concept, i.e. one related to how an equivalence is obtained. Accordingly, the concept of equipollence does not properly assume another context than that which is assumed by the equivalences of \textit{PeriH}. 10. In other words, an equipollence is a kind of equivalence, so that one should not maintain that the concept of equipollence in \textit{PeriH}. 10 will imply another context than that which is assumed in \textit{An. Pr.} I, 46. In any case, in commenting on equipollences, Boethius neither needs to make further relation to the text of \textit{An. Pr.} nor does he have to justify why Aristotle does not introduce equipollences in \textit{An. Pr.} I, 46, for (as was said earlier) the explicit relation to this text (made by Aristotle at \textit{PeriH}. 19b. 31) is only a clue to understanding how the propositions of 19b. 22-24 must be arranged.

The case of Ammonius is different. He presents a contrapositive relation between privative and indefinite propositions, not an equivalent one as Porphyry does. That means that 19b. 22-24 is explained by only non-reciprocal entailments (i.e. one proposition follows from another), so that equivalences are not presented. Ammonius, then, cannot claim, unlike Porphyry, that Aristotle also presented equivalences in \textit{An. Pr.} I, 46.

Now, Ammonius relates his exposition of 20a. 20-23 (where Aristotle presents equivalences) to the canon of Proclus, which he extends to every categorical proposition whether quantified or unquantified. M. Soreth thinks that Ammonius was conscious that the canon of Proclus assumed an unlimited concept of the indefinite predicate and that this concept was different from that which Aristotle assumed in \textit{An. Pr.} I, 46.\textsuperscript{1102} And she interprets the discussion that Ammonius provides after the presentation of

\textsuperscript{1101}The equipollence at 20a. 39-40 is produced by replacing the subject term by the corresponding indefinite name in the propositions of 20a. 20-23. Cf. here later (vi) \textit{A rule of transformation in propositions with indefinite subject.}

\textsuperscript{1102}ibid. p. 411. "Der Kanon des Proklos setzt (falls er als allgemeingültiges Prinzip gedacht war, woran zu zweifeln kein Grund besteht) einen anderen Begriff des infiniten Prädikates als den von \textit{An. Pr.} I., 46, voraus. Dessen war sich auch Ammonius völlig bewusst."
the canon of Proclus as one intending to harmonize these two concepts. Ammonius' intention, however, is different here. It is not so specific, and although he refers here to An. Pr. I, 46, the reference is part of his general argument attempting to justify the canon of Proclus as a universally valid law, applicable to every categorical proposition, whether unquantified or quantified. This is already clear from the conclusion that Ammonius draws at the end of this discussion.

Ammonius' argument can be divided into three parts: (a) How can the canon of Proclus be applied to propositions whose subjects are non-existent (e.g. the goat-stag). (b) How does the canon agree with the fact that the simple negation cannot be converted into an indefinite (or transposed) affirmation. And (c) How does the canon agree with the passage of An. Pr. I, 46 (51b. 25-27: "Nor is to be not-equal the same as not to be equal; for there is something underlying the one, viz. that which is not-equal, and this is unequal, but there is nothing underlying the other.").

In Ammonius' discussion, these three points are subordinated to (a). We have examined (a) earlier, so that we can simply apply those reasons to our discussion now. Through (a), Ammonius intends to prove that the canon is valid independently of the signification of the subject- and predicate-term of a categorical proposition. One could say: beyond the signification of 'man' and 'just'. Ammonius states the doctrine that non-existents are predicated κατὰ συμβεβηκός, (secundum accidens)

1104 Let us note that W. Cavini (1985), pp. 23-25, has also given an exposition of this passage. His analysis does not consider Soreth's point, and he seems unaware of her paper. Cavini's analysis, in general, squares quite well with our discussion here, although he does not relate the canon of Proclus to his discussion.

1105 Ammonius concludes here that the canon is a universal law: τούτων δὲ διαφορετικῶν φανερόν ὅτι καὶ ἐπὶ τῶν ἀπροσδιοριστῶν προτάσεων οἱ ἐφερμένοι κανόνες προκειμένου, εἴ μὴ τὰς ἰδίες προτάσεις κατηγορούμεναι λάβομεν, ἄλλα μόνην τὴν σχέσιν τῶν κατηγορούμενων πρὸς τοὺς ἐν αὐτάς ὑποκειμένως πολλαπλασιωμένην. ("And so it is clear that the mentioned rules of the quantified propositions also work in the case of the unquantified ones, if we take the propositions which are predicated not in their entirety, but we only examine the relation of the predicates to the subjects in these propositions." (in Int. p. 186, 10-14).

but not falsely as a result of this.\textsuperscript{1107} When 'is' is predicated \textit{secundum accidens}, it is a mere syntactical link, and 'is not-just' is, in consequence, coextensive with 'not-just', (which is an indefinite name which applies truly to everything whether existent or non-existent), and so it is coextensive with the absolute negation 'is not just'.\textsuperscript{1108} Accordingly, 'is not-just' is true of non-existent things just as 'is not just' does.\textsuperscript{1109}

Now, this is precisely Ammonius' answer to the question of whether the canon of Proclus is also valid for unquantified propositions. According to Ammonius, the canon is valid, if one takes into consideration only the relation (\textit{σχέσις}) of the predicate to the subject, (i.e. if one takes the expressions 'is not-just', 'is not just', etc.) and not the complete proposition.\textsuperscript{1110} Ammonius' point seems to be reasonable, for if between 'a man is just' and 'a man is not not-just' there is no equivalence, but the latter follows from the former,\textsuperscript{1111} the canon is verified if the subject is taken out: 'is just' = 'is not-not-just'. Ammonius indeed rests content with explaining that the canon can work in terms that in unquantified propositions there is not the restriction that affirmations do not follow from negations, but (as in the case of the quantified propositions) the affirmations follow from negations and the negations follow from affirmations. To accept that in unquantified propositions the affirmations do not follow from negations would imply that the canon is not valid for every categorical proposition.

\textsuperscript{1107}In fact, he argues, it is not because the goat-stag does not exist that one has to say that a proposition where the goat-stag is subject-term is necessarily false. Cf. \textit{in Int.} p. 184, 15-16. And above Part I, 2.2, (viii. 2).
\textsuperscript{1108} \textit{in Int.} p. 186, 14-17. πάν γὰρ τὸ ἐὰν δικαίαν ἀνάγχεται ἐγένεται μὴ δικαίαν, τὸν ἐὰν ἐκεῖν ἐπὶ μὴ δικαίαν λέγεται κατὰ συμβεβηκός κατηγορούμενον, καὶ πάν ὁ ἐστὶ μὴ δικαίαν, ἀνάγχεται μὴ ἐγένεται δικαίας, καὶ ἐκλειστος σεφός ἐν τῇ σοφίᾳ δικαίαν ἀποφαίνεται. ("For it is necessary that everything which is not just is not-just when the 'is' which is predicated of what does not exist is accidentally said, and necessary that everything which is not-just is not just; and these things the learned Eleatic in \textit{Sophist} [238b. ff] makes clearly manifest.").
\textsuperscript{1109} Cf. \textit{also in Int.} p. 184, 7-9. τὸ γὰρ ἐστὶν οὐ δικαίος οὐ μόνον ἐπὶ ἀνθρώπων ἀδικών ἀδίκων ἡ μέση ἐὰν ἐχον ἐχον ἔχοντα ὡς καὶ ἐπὶ περικότων μετέχειν ἄλλως, ἄλλα καὶ ἐπὶ λόγου, οὐ τύχου, καὶ τοῦ πολυθρησκοῦ τραγωδίου. ("In fact, 'is not-just' is true not only in the case of unjust men or those who are neither just nor unjust, but also in the case of those who have no disposition [of justice] at all, and even in the case of a stone, if it so happened, and the much-spoken-of goat-stag.").
\textsuperscript{1110} Cf. \textit{in Int.} p. 186, 10-14 (text quoted and translated above).
\textsuperscript{1111} As indicated here above: 1., A., (ii.4).
So, Ammonius limits his explanation to the point that the canon is not inconsistent with unquantified propositions, because here also affirmations follow from negations, if 'is' is predicated accidentally.

When he discusses point (b), Ammonius clarifies that this use of 'is' does not contradict that 'to be not-just' is more specific than 'not to be just' and that, in general, the negation absolute is always more general than the transposed (or indefinite) affirmation. 'Not to be just' follows from 'to be not-just', and this is not convertible, but this is always verified where 'is' is not predicated *secundum accidens* but καθ᾽ αὑτό, i.e. predicated by itself. Equally, in the case of 'a man is not-just' and 'a man is not just': the second proposition always follows from the first, and this is because the proposition is predicated in its entirety, and 'is' is said by itself: it is said of a subject which is something *in re*.

Ammonius, in this sense, makes an allusion to An. Pr. I, 46, which is already an indication that he is not primarily concerned with finding a agreement between this text and PeriH. 10, but rather with finding their mutual difference. His allusion to An. Pr. I, 46 is subordinated to his doctrine that an 'is' κατὰ συμβεβηκός is a merely syntactical 'is', though not false because of this. The text runs:

"Nor is to be not-equal the same as not to be equal; for there is something underlying the one, viz. that which is not-equal, and this is unequal, but there is nothing underlying the other." (51b. 25-27).

Ammonius says that Aristotle here was speaking καθ᾽ αὑτό, not *secundum accidens*. If this is so, then here 'not to be equal' is more general than 'to be not-equal'. The same should be applied to the examples used by Aristotle in this chapter: 'to be not-good',

1112 In Int. p. 186, 3-8. μᾶλλον οὖν ἐξήν ἀπορεῖν πῶς συνάσσεται ταῦτα τοῖς περὶ τὸ πέρας τοῦ πρῶτο τῶν Ἀναλυτικῶν λεγομένων ὡς τὴν μὲν ὅτι μὴ ἔστω ὅπως ὕποκειτα τι, καὶ τούτο ἐστὶ τὸ ἄποσιν, τῇ δὲ μὴ δειν ὅσι ὑποθέντο. πρὸς ὃ δηλουόμεθα φησομεν, ἐφ᾽ ὅν τὸ ἔστι καθ᾽ αὑτό κατηγορεῖται, ταῦτα διαρέχεσθαι τῶν Ἀριστοτέλην. ("One therefore ought to wonder rather how these things will make sense with those which are said towards the end of the first [book] of the Analytics, namely 'there is something underlying in what is not-equal, and this is unequal, but there is nothing in what is not equal'. In respect of this, we will say clearly that Aristotle determines these things for those cases where 'is' is predicated by itself.").
'to be a not-white log'. In all of them 'is' is predicated καθ' αὐτό as all of them assume an subject which exists and has certain qualities in re.1113

The discussion above shows that Ammonius and Boethius might explain the point advanced by Soreth in a quite different manner. Boethius thinks that both An. Pr. I, 46 and PeriH. 10 assume an unlimited concept of the indefinite predicate, as in both texts Aristotle assumes equivalences. The non-occurrence of explicit equivalences in the former text is due, in Boethius' opinion, only to the fact that Aristotle does not explain how privative and indefinite propositions are arranged one to another. However, as Porphyry interprets it, these kinds of proposition are equivalent, and that explains the order of the diagram implied in 19b. 22-24, which is similar to that of quantified propositions, and common to that of An. Pr. I, 46. In Ammonius, there are no equivalences in his interpretation of 19b. 22-24. Accordingly, the discussion of the point by Soreth derives from Ammonius' discussion of general validity of the canon of Proclus. Here, the reference of Ammonius to An. Pr. I, 46 intends only to distinguish expressions like 'to be not-equal' or 'not to be equal', which are καθ' αὐτό, from those like 'is not-just' or 'is not just', which are κατὰ συμβεβηκός. The distinction is necessary, thinks Ammonius, because the canon is also consistent for unquantified propositions, if the second type of expressions are considered and, in general, if 'is' is predicated κατὰ συμβεβηκός. The point that transpires in Ammonius' discussion is that Aristotle at 20a. 20-23 (also 20a. 39-40) makes properly a logic of propositions with indefinite predicate, but earlier, at 19b. 22-24 and 32-35 (quantified propositions), he was concerned with the logical relations of propositions in which 'man' means man and 'just' just.

Neither Boethius nor Ammonius (despite their different positions) advance sufficient grounds to make the point that Soreth has raised. However, in any case, it must be considered

1113It is worth noting that Ammonius' answer has the indirect support that Aristotle in An. Pr. I, 46 uses the formulae τὸ εἶνα μὴ ἴσον and τὸ μὴ εἶνα ἴσον, (and so too for 'to be not good'/'not to be good'); moreover, to mention a white log should be by itself an indication that he was referring to things with real qualities. On the contrary, the relations of predicate to subject which Ammonius mentions in his argument are characterized by expressions like θετὸν οὐ δίκαιος, or δίκαιος οὐκ ἔστι.
that the expedient that Aristotle in *PeriH.* 10 is interested in a logic of the indefinite names is by itself already a good reason to explain why here, unlike the literality of *An. Pr.* I, 46, Aristotle introduces equivalences.

**(vi) A rule of transformation in propositions with indefinite subject**

Aristotle at 20a. 37-39 states, as we have seen above, a logical dissimilarity between quantified propositions with indefinite and definite subject: these two kinds of proposition are not equivalent (*non consentiunt*).

"'Every not-man is just' does not signify the same as any of the above, nor does its opposite, 'not every not-man is just'. [20a. 39-40] But 'every not-man is not-just' signifies the same as 'no not-man is just'."

According to Boethius' commentary, Aristotle introduces this logical dissimilarity in view of a further point, namely, that quantified propositions with indefinite subject are not logically dissimilar one to another. Aristotle in fact specifies which kind of logical relation these propositions can have one to another: namely, they can be equivalent:

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1114 See above Part II, B. The Indefinite Subject, (ii) Dissimilarity in quantified propositions.

1115 *in Int.* 2, 8-17, p. 341.

1116 i.e. τὸ δὲ πᾶς οὐ δίκαιος οὐκ ἄθρωπος τῷ οὕτως δίκαιος οὐκ ἄθρωπος ταύτου σημαίνει.
The passage makes a remarkable point: Aristotle takes this equivalence between quantified propositions with indefinite subject just as he took earlier the equivalences of 20a. 20-23, i.e. those which he stated for propositions with definite subject (and definite or indefinite predicate).

The commentary suggests that one should understand this new equivalence in the same context as the two presented at 20a. 20-23. Even more, Boethius seems to imply that the new equivalence at 20a. 39-40 is not more than another case produced by an identical procedure:\footnote{\textit{in Int.} 2, 24-5, pp. 341-2.}

\begin{quote}

\textit{nam sicut in his, quae finitum habeant subiectum, infinitum vero vel finitum praedicatum, adfirmationem ex finito subiecto et infinito praedicato eam scilicet quae dicit est omnis homo non iustus sequebatur simplex universalis negatio quae ex utrisque finitis constat id est nullus homo iustus est, ita quoque in his permutatis tantum subjectis idem evenit.}
\end{quote}

Boethius in fact observes that just at 20a. 20-23 'every man is not-just' followed from 'no man is just',\footnote{Boethius here presents the first pair of 20a. 20-23 in the reverse order that he accepted earlier (cf. \textit{in Int.} 2, 15-19, p. 327; and above Part II, \textit{C}, (b) \textit{Equipollences}). But this reverse does not lead to contradiction, for the propositions here (20a. 20-23) are equivalences (cf. \textit{ibid.} (b) \textit{Equipollences}), so that one follows from another and vice versa. Here Boethius could \textit{ex professo} present the relevant pair (or rather \textit{his} relevant pair, since his text is different from the rest of the texts by the ancient commentators), in order to show that this and the other pair at 20a. 20-23 are equivalent.} so too now one can infer that 'every not-man is not-just' will follow from 'no not-man is just', if only the definite subject-term in the first equivalence ('man') is replaced (\textit{permutare}) by the indefinite one ('not-man'). The commentary suggests that this procedure is a rule, a 'formal rule of transformation' or a 'rule of replacement' as we could call it.

The application of this rule enables us to find a new equivalent pair of propositions from an initial one, and the obvious question of why Aristotle did not present more cases or examples is immediately answered by the commentary: that is...
because Aristotle thought it was easy to find the other equivalences (ceteras) from the sample which he gives us:^{1119}

et has quidem duas propositiones adscripsit solam in his consequentiam, ceteras autem, quod putabat intellectu esse faciles neglexit.

Accordingly, one could find another new equivalent pair of propositions, from an initial one, by only replacing the definite subject-term by the corresponding indefinite subject-term. Let us take the remaining pair of 20a. 20-23: Aristotle says here 'Not every man is not-just' follows from 'Some man is just'. According to the rule of replacement, the new equivalence will be: 'Not every not-man is not-just' follows from 'Some not-man is just'.

The rule is mechanical and works plainly. The commentary makes, accordingly, an extension in order to provide the rest of the equivalent pairs, so that this matter does not seem neglected (*nos autem eas ne quid relictum videatur adponimus*).^{1120} In this development, the equivalent pair provided by Aristotle, plus that which we have inferred, and two more are given:^{1121}

(a) 'Every not-man is not-just' = (a') 'No not-man is just'  
(b) 'Every not-man is just' = (b') 'No not-man is not-just'  
(c) 'Some not-man is just' = (c') 'Not every not-man is not-just'  
(d) 'Some not-man is not-just' = (d') 'Not every not-man is just'

It is worth noting that these new equivalent pairs can be brought to their original form, if in similar fashion, the indefinite subject-term is replaced by the corresponding definite one. The original equivalent pairs are the following:

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^{1119} *in Int.* 2, 10-12, p. 342.  
^{1120} *in Int.* 2, 12-13, p. 342.  
^{1121} The equivalent pairs are given in a vertical line by the commentary. Here in a horizontal line.
This restitution, as we could call this exercise, shows that the pairs (e)-(e') and (g)-(g') are those which are given by Aristotle at 20a. 20-23. Therefore, it confirms what the commentary maintains, namely, that the pairs with indefinite subject are formulated from those of 20a. 20-23, if here one only replaces the definite subject-term by the corresponding indefinite one.

It is worth noting that the restitution above introduces a doubt: namely, Where do the equivalent propositions in (b), (d), (f) and (h) come from? Boethius says that he will give the remaining two equivalences as if they were known (note above eas and ceteras), but it is clear that Aristotle in PeriH. 10 does not give these equivalences, nor does Boethius have mentioned them before. In fact, Aristotle in PeriH. 10 has presented explicitly only three equivalences: two at 20a. 20-23 (according to Boethius and Ammonius), and one at 20a. 39-40.

The origin of the mentioned equivalences is puzzling. The fact that they can be derived mechanically from (a) and (c), and from (e) and (g), resolves our doubt only partially, for Boethius ultimately does not explain how they are produced and originated. To assume that Boethius knew the canon of Proclus does not have any basis, and an assumption like this seems, rather to be, incorrect. In fact, Boethius neither alludes to Proclus and his canon nor he is conscious of another mechanical procedure than that he presents for the subject-term. If Boethius had known the canon, he would have used or, at least, mentioned it. But his silence is absolute. Boethius' unawareness is here similar to that which he shows about the 12 modal patterns through which Proclus calculates the number of the categorical propositions: if

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The pairs of unknown origin can be mechanically obtained. Let us take (e) above. If one replaces here the indefinite predicate-term by the definite one, and in (e'), similarly, the definite predicate-term by the indefinite one, the equivalence in (f) will follow. This is a kind of rule of replacement too. It is clear that this procedure can be applied in (a), (c), and (g) in order to obtain the other pairs whose origin puzzles us.

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Boethius had known these patterns he would have used them, because they improve the calculus. Besides, even though one can derive the pairs of unknown origin with the help of the canon, it will not follow that they were effectively derived from here, for one thing is that they can be derived by this means, and other, quite different, is that they were derived by Boethius (or Porphyry) by conscious application of the canon. So where do the mentioned pairs come from? The hypothesis that the mechanical rules which are seen in the canon of Proclus were implicit in the commentary tradition of PeriH. is plausible. The aspect of discovery with which Ammonius presents the canon does not disprove this explanation. But this answer is purely hypothetical. The crucial obstacle is that Boethius does not provide any further discussion of this matter.
2. The Two-term Propositions

(i) General considerations

As the ancient commentators realized, Aristotle in PeriH. assumes the existence of two general groups of categorical propositions. The one is constituted by propositions with three terms or, as Aristotle calls them, "those in which 'is' is predicated additionally as a third thing" (19b. 19 f.). The other group is formed by propositions in which only two terms there occur: namely, a subject (name) and a predicate (verb).

The difference between these two groups is a syntactical or, to put it in another way, a specific one, for the syntactical properties of one group are not possible in the other. Boethius is quite clear about it:1123

*quando autem est tertium adiacens praedicatur, quod principaliter praedicatur aut nomen erit aut infinitum nomen.*

As the ancient commentators also realized, Aristotle makes a further division in two-term propositions. He distinguishes between propositions like (a) 'a man is' and (b) 'a man walks'. This distinction is not a specific one (since both types are two-term propositions), but one based on the kind of verb which is predicated; in fact in (a) the verb is 'is', while in (b) the verb 'is', as another formula of Aristotle says (20a. 3), "does not fit" (μὴ ἀφιέρωσῃ).

Now, the fact that the two- and three-term propositions have a different syntactical structure and constitute different groups of categorical propositions does not imply that they cannot have some relations one to another. In fact, Boethius shows that two-term propositions are involved in the generation of three-term ones, which suggests a first relation.1124 Apart from this,

1123 *in Int. 2, 2-4, p. 267. Cf. also above Part I, 4., (b) The categorical proposition with three terms.*
1124 *cf. above Part I, 4., (iii. 2) The generation of categorical propositions.*
there is, moreover, another relation between these two groups. In fact, at 20a. 3-7, Aristotle suggests this when he says:

20a. 3 'Εφ' δειν δε το ἐστι μὴ ἄρμόττει, οἷον ἐπὶ τοῦ ὑμαίνει καὶ μάτηζεν, ἔπι τούτων τὸ αὐτὸ ποιεσθεῖν ὡς ἄν το ἐστι προσήμπτητο. οἷον ὑμαίνει πᾶς ἄνθρωπον - οὔχ ὑμαίνει πᾶς ἄνθρωπος, ὑμαίνει πᾶς οὐκ ἄνθρωπος - οὔχ ὑμαίνει πᾶς οὐκ ἄνθρωπος.

So Ackrill:

"In cases where 'is' does not fit (e.g. with 'recovers' or 'walks') the verbs have the same effect when so placed as if 'is' were joined on, e.g.:

(a) 'every man walks'
(b) 'every man does not walk'

(d) 'every not-man does not walk'
(d) 'every not-man walks"

(ii) The equivalence between three- and two-term propositions

Boethius explains that a proposition like 'every man walks', i.e. one in which 'is' does not fit, can be validly transformed into another like 'a man is walking', i.e. one in which 'is' is predicated additionally as a third thing, because the verb of the former contains the verb 'to be':

Sunt quaedam propositiones in quibus est quidem tertium adiacens praedicatur et hoc sono ipso et prolacione cognoscitur, aliae vero sunt in quibus tale verbum praedicatur, quod tertium quidem adiacens non praedicetur, habeat tamen continente intra se verbum est.

1125 in Int. 2, 7-12, p. 314. ("There are, indeed, some propositions in which 'is' is predicated additionally as a third thing, and this is known by its sound itself and expression, while there are others in which the verb which is predicated is of such a kind that a third one is not predicated additionally, although what is present and included in it is the verb 'is'.").
As a result, a proposition in which 'is' does not fit will signify the same as (*idem significare*) another in which 'is' is predicated additionally as a third thing. Boethius takes as example one of the propositions given by Aristotle at 20a. 3-7, and argues:\(^{1126}\)

\[
\text{si quis enim hanc propositionem quae dicit omnis homo currit solvat in participium atque verbum, faciet omnis homo currens est et idem significat participium verbo coniunctum quod significat verbum, quod utraeque conplectitur. nam cum dico omnis homo currit, omni homini actionem praesto esse pronuntio; quod si idem rursus dicam omnis homo currens est, eandem actionem homini rursus adesse proponit. idem igitur significat verbum currit quod currens est.}
\]

Boethius concludes, then, a general doctrine of equivalence between two- and three-term propositions:\(^{1127}\)

\[
\text{et in ea propositione quae dicit omnis homo currit licet in prolatione est non dicatur, tamen tertium potestate praedicatur, quod hinc cognoscitur, si tota propositio dissolvatur in participium scilicet atque verbum.}
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That the doctrine of equivalence between two- and three-term propositions occurs in other contexts than *PeriH.* is a fact that comes to be supported by a pertinent observation made by J.

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\(^{1126}\) *in Int.* 2, 5-13, p. 315. ("In fact, if someone resolves this proposition 'every man runs' into participle and verb, he will produce 'every man is running', and the participle together with the verb signifies the same as the verb signifies, which comprehends both things. For, when I say 'every man runs', I say immediately that an action is present in every man, but equally if I say now 'every man is running', [this proposition] presents the same action in man. Thus, the verb 'runs' signifies the same as 'is running'.")

\(^{1127}\) *in Int.* 2, 14-18, p. 315. ("And although in this proposition: 'every man runs', 'is' is not said in its physical expression, 'is' is predicated as a third thing by principle, which is verified if the complete proposition is resolved into participle and verb."). Here, *potestate* corresponds to δύναμις. *'Potestas'* is certainly Boethius' common translation for δύναμις. Cf. *in Isagogen* p. 37, 2; 41, 20; 49, 17 (Busse ed.). In the passage quoted later, (Amm. *in Int.* p. 177, 4-18), a scholarly version of Boethius' exposition, this word occurs again. The most likely source of this word is Alexander of Aphrodisias (cf. here later (iv) *The case of a syllogism in Plato*).
Brunschwig. He reminds us that Aristotle both at Met. V (1017a. 27-30) and Physics I (185b. 28-31) indicates this doctrine, in these contexts, however, further reflection on this doctrine of equivalence there does not occur.

Boethius' comments on this doctrine of equivalence are remarkable. His words are, besides, the only testimony of it. Ammonius gives signs that he knows a scholarly version of the doctrine in question, but again he refers to a delusive

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1128 J. Brunschwig, Papers in Hellenistic Philosophy, Cambridge University Press, 1994, p. 65. (Brunschwig has used the expressions 'X (verbs) type' and 'X (is verbing)' to illustrate the equivalence which we mention).

1129 Met. 1017a. 27-30: "For there is no difference between 'the man is recovering' and 'the man recovers', nor between 'the man is walking' or 'cutting' and 'the man walks' or 'cuts'; and similarly in all other cases." (W.D. Ross transl. The Revised Oxford Translation, Oxford 1991).

1130 Phys. 185b. 28-31: "So some, like Lycophron, were led to omit 'is', and 'walks' instead of 'is walking', for fear that if they added the word 'is' they should be making the one to be many—as if 'one' and 'is' were always used in one and the same way." According to Brunschwig (1994), p. 65, the passage shows that "certain sophists, concerned not to damage the unity of the subject by seeming to identify it with an attribute other than itself, had recommended replacing a proposition of the 'X is (adj)' type by a paraphrase of the 'X (adjectives)' type." Brunschwig observes accordingly that both reductions are different, but Aristotle endorses only the first method.

1131 In Int. p. 177, 4-18. ἀκόλουθον ἔχεται διὰ τοῦτον ἐν ταῖς ἑνεργείαις τὸ ἔστι προσκαινομοῦμεν ἐχωθείς τοῦ κατηγορομένου ὀνόματος, σον τοῦ δήκαλος, προποτόμεμεν τὸ ἀρνητικόν μόριον οὐ ποιεῖ ἀπόφασιν ἀλλὰ κατάφασιν ἐκ μεταβέβαιες τῆς ἑνεργείας οὐ δίκαλος ἔστιν, οὔτω καὶ ἐν ἄλλοις ἑνεργείαις περιέχεται τὸ ἔστιν ἐν τῇ κατηγορομένῃ ῥήματι, διαλογισμοῦ τοῦ ῥήματος έδεικνύον, καθαρά καὶ προτερόν ἐλέγομεν, εἰς τῆς ἐν ᾗ οἰκείας αἰτίας μετοχήν καὶ τὸ ἔστιν, προποτόμεμεν πολὺ τὸ ἀρνητικόν μόριον τῆς μετοχής οὐ ποιήσα ἀπόφασιν ἀλλὰ κατάφασιν ἐκ μεταβέβαιες· ἢ μέν γὰρ λέγουσα προτασιαν ἑνεργείας μαζεύει ταὐτὸν ὀμολογεῖον φθέγγεται τῆ ἑνεργείας μαζεύειν ἔστιν, ἔτηται δὲ, φασί, διὰ τοῦτον ἐν τῆς ἑνεργείας οὐ βαζεύειν ἔστι κατάφασιν μητέρων πολὺ ἐκ μεταβέβαιες ἀλλ’ ὡς ἀπόφασιν, οὔτε τοῦ προβλημάτος άξιον, άξιον, εἰπήθησαν οὖν τὸς γὰρ ἢ ἀποκλίθης ἢ ὅτι τοῦ μὲν ἑνεργείας οὐ δίκαλος ἔστιν κατέφασιν καθεύνει τὴν δὲ ἑνεργείας οὐκ ἕγανεν ἔστιν ἀπόφασιν, οὔτε τοῦ Ἀριστοτέλεους οὔθεν τοιούτων διὰ τῶν παρ’ αὐτῶν λεγομένων ἐμφαίνοντος. ("Others assumed that [Aristotle], through these things, was examining the question whether in the same manner as happens in the propositions that predicate additionally of a subject term an 'is' in actu (ἐνεργείας), e.g. of 'just', the negative particle which is attached to the predicate (προποτόμεμεν) does not make a negation, but a transposed affirmation, like in 'a man is not-just', so too [whether] (in the propositions in which 'is' is contained in potentia (δυνάμει) in the verb which is predicated, when this verb is resolved, as is said above [p. 55, 24-25], into the proper participle in itself and 'is'), the fact of attaching again the negative particle to the participle would not make a negation but a transposed affirmation. In fact, the proposition 'a man walks' says, admittedly, the same as 'a man is walking', and it is inquired, then, they say, whether, for this reason, 'a man is not-walking' must be said to be again a transposed affirmation, but not a negation. But this problem, I think, is not worth investigating, (for who would err in taking 'a man is not-just' as an
representation of the original. On this basis, Ammonius dismisses the importance of the point, and interprets 20a. 3-15 from the perspective that dominates in his commentary: the number of the categorical propositions. Accordingly, he interprets this passage as one in which Aristotle teaches us how to make the negation for propositions in which 'is' does not fit.

(iii) Objections to the doctrine of equivalence: the indefinite participle

Boethius' commentary notices that the equivalence between two- and three-term propositions creates difficulties. In fact: How should an affirmation like 'every man is not-walking' be reduced to its equivalent two-term form, if the affirmation 'every man walks' is equivalent to 'every man is walking' and, on the other hand, the negation 'every man does not walk' is equivalent to 'every man is not walking'? Is—as Boethius asks—'every man is not-walking' an affirmation or a negation? Does 'every man is not-walking' signify the same as 'every man is not walking'?

affirmation, and 'a man is not-recovering' as a negation?) —besides Aristotle does not indicate anything of this kind in this passage [20a. 3-15].

—Two further observations must be made: (a) Ammonius accepts that according to Aristotle a verb can be resolved into participle and the verb 'to be': what Ammonius does not accept is the doctrine of equivalence referred to above. (b) In the text quoted above, προτάτημενον (=‘attached to (the predicate)’) is a rather free translation, but it expresses the idea. Ammonius means 'preposed', 'pre-arranged', because in τῇ Σικατίνιον, the negative particle, is preposed to δικαίος, and not after it, as it would be in a negation.

1132 cf. a similar case here above: Part II, A., 1.1., (ii.5) Porphyry's and Ammonius' expositions. That the version given by Ammonius is a deceptive one is clear not only because he does not mention Alexander as one who maintains the doctrine in question, but also because Ammonius refers only to one of two questions which accompany this doctrine. Boethius will clarify that not only the question of whether (a) a proposition like 'a man is running' is affirmative or negative, but also one more difficult to answer, namely, (b) whether 'a man is not-running' is equivalent to 'a man is not running', a question on which Ammonius says nothing, at least explicitly, for he might maintain their equivalence on the basis of the canon of Proclus: cf. here (vi) Boethius' interpretation of the syllogism.

1133 in Int. p. 177, 19 ff.

1134 in Int. 2, 29-12, pp. 315-316. "Now, someone will doubt whether in the same manner as an affirmation cannot be generated from an indefinite verb, but a negation always arises from this expression, so too, if the same proposition is resolved into participle and verb, whether an affirmation
dubitabit autem aliquis an sicut ex infinito verbo fieri adfirmatio non potest, sed semper negatio ex hoc praedicamento fit, ita quoque si eadem propositione solvatur in participium atque verbum, an ex infinito participio possit adfirmatio fieri. quae igitur enim an sicut in hac propositione quae dicit omnis homo currit qui ita proponit dicens omnis homo non currit facere adfirmationem non potest, sed sine dubio negationem facit, ita quoque si eadem solvatur in participium et verbum, ut dicat quis omnis homo currens est, si fiat infinitum non currens et dicatur omnis homo non currens est, an haec adfirmatio sit an certe negatio tantundem valens tamquam si aliquis dicat omnis homo non est currens.

The questions raised by the commentary, namely, (a) Whether 'every man is not-running' is an affirmation or negation, and (b) Whether 'every man is not running' is equivalent to 'every man is not-running', are parts of the main question: (c) Is a two-term negation (e.g. 'every man does not run') equivalent to the corresponding indefinite affirmation (i.e. 'every man is not-running')? All the questions can be seen in the following diagram:

(iv) *The case of a syllogism in Plato*

In Boethius' commentary, the further discussion and certainly all this question, depend on Alexander of
Aphrodisias. According to Boethius' report all this can be clarified from a syllogism of Plato. The report suggests that (a) 'every man is not-running' is an affirmation (this was asked at (a)). Also, that (b) 'every man is not running' is effectively equivalent to 'every man is not-running' (this was asked at (b)). Accordingly, a further equivalence, namely, that between 'every man does not run' and 'every man is not-running' can also be deduced:

sed fuerunt qui hoc cum ex multis aliis tum ex aliquo Platonis syllogismo colligerent et quid ex ea re definirent doctissimorum virorum auctoritate cognoscerent. ex duabus enim negativis syllogismus fieri non potest. in quodam enim dialogo Plato huiusmodi interrogat syllogismum: sensus, inquit, non contingunt substantiae rationem; <substantiae rationem> quod non contingit, nec ipsius veritatis contingit notionem: sensus igitur veritatis notionem non

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1135 in Int. 2, 15, p. 317. The fact that Alexander has paid attention and analyzed in detail the case of the syllogism at *Theaet.* 186c. 5-e. 10 is not surprising. His treatment of the theme of indefinite names and verbs (as explained above: cf. above Part I, 5., (c) Alexander's testimony), but also his commentaries on An. Pr. manifest a sufficient logical expertise to have focused on this point. (Other examples of Alexander's logical skill can be seen in his comments on An. Pr. But see especially in An. Pr. 218, 7 ff., and see comments on it by R.W. Sharples, *The school of Alexander?*, in Aristotle *Transformed*, London 1990, p. 104). The critical assessment of J. Barnes is also important to consider (see J. Barnes et al. (1991), *Introduction*). Besides, that Alexander was familiar with this kind of transformation seems to be clear from a notice by Simplicius (in I. De caelo i, c. 3, p. 62, 11-17), who refers to Alexander and Themistius as explaining that Aristotle reasons from negatives premisses at De caelo 269b. 29-31. This syllogism has been analyzed by F.W. Zimmermann (1991), p. 239, n. 5; and (ibid.) p. 240, n. 1.

1136 in Int. 2, 12-26, p. 316. ("However, there were some who, together with many others, inferred this from a certain syllogism of Plato, so that what they determined from this matter, they knew by authority of the most learned. Indeed, from two negative [propositions] there cannot exist a syllogism. Plato in a certain dialogue [cf. *Theaet.* 186c. 5-e.10] discusses this syllogism: sense, he says, does not apprehend the essence of the substance; what does not apprehend the essence of the substance, does not apprehend a notion of truth either: sense, in consequence, does not apprehend a notion of truth. It is manifest then that a syllogism has been produced with only negative propositions, which cannot happen, and therefore, they say [as an explanation of this] that the indefinite verb, which is 'does not apprehend', is put instead of the indefinite participle, i.e. 'is not-apprehending'. In fact, many others have the capacity to employ frequently an indefinite verb, which is put instead of an indefinite name. Because of this, it is said that a verb always produces a negation, if it is indefinite, but participles or names, if they are indefinite, can produce an affirmation.").
Boethius' report suggests that the syllogism which is seen in Plato is not a singular case, and actually it permits us to make all the deductions which we make above, for the syllogism, in fact, is formed by two negative premisses and it is conclusive. In principle, this kind of syllogism is impossible, but in fact, the reports points out, the syllogism is perfectly conclusive, and this is because the negative premisses which occur in the syllogism are, actually, a replacement of affirmative propositions with indefinite predicate. Let us observe the syllogism in question:

"Sense does not apprehend the essence of the substance; what does not apprehend the essence of the substance, does not apprehend a notion of truth either. Therefore: sense does not apprehend a notion of truth."

It is evident that here there is a syllogism with only negative premisses, which is impossible according to the laws of syllogism that Aristotle states in Prior Analytics, but, according to Boethius, it is conclusive, and this is because the indefinite participle (i.e. 'is not-apprehending'), which originally made the syllogism to be conclusive, has been replaced by the indefinite verb 'does not apprehend'.

Therefore, the complete argument transmitted in this report is thus: A universal negation of two terms (e.g. 'every man does not run') is equivalent to an indefinite universal affirmation (e.g.

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1137 An Pr. I, 24, 41b. 6-13.
1138 in Int. 2, 21-24, p. 316. videtur enim ex omnibus negativis fecisse syllogismum, quod fieri non potest, atque ideo aiunt infinitum verbum quod est non contingit pro participio infinito posuisse, id est non contingens est.
'every man is not-running'), because if this is not so, Plato could not have reasoned correctly, as he did, with two negative premisses. The proof stated by Boethius' report grounds its force on the authority of Plato and other learned authors, but all it intends to show that since it is impossible to reason with only negative premisses, the premisses of this syllogism are necessarily further transformations of affirmative propositions. Accordingly, since the only possible transformation of a negative proposition of two-term into an affirmative one is by means of the replacement of the indefinite verb by an indefinite participle, i.e. by means of the corresponding indefinite affirmation, it follows that the equivalence in question is correct.

The way in which Alexander sets this equivalence is strange. It is also strange that Boethius does not resume the thread of the argument to give a direct answer to the two questions that he expressly proposes (i.e. (a) and (b) above). Apparently, he believes that what someone can infer from the case of the syllogism is obvious, but this is not his usual way of exposition. Besides, if one takes the point made by the argument, as here is explained, it creates further doubts on which Boethius does not comment. These doubts must be resolved now, but before approaching them, let us analyse two points which could require a further clarification: first, Does Plato produce the mentioned syllogism? Second, Does the mentioned replacement produce a valid syllogism?

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1139 Boethius' report adds in fact: et ideo quotienscumque a magnis viris infinitum verbum et duae negationes in syllogismo proponuntur hac ratione defenditur, quod dicatur verbum infinitum pro participio esse propositum, quod participio nominis loco in propositione praeeditur. ("And for this reason every time that an indefinite verb and two negations [i.e. two negative premisses] are proposed in a syllogism by learned men, it is defended by this reason, [namely,] that the indefinite verb is proposed instead of the participle, and the participle is predicated into the proposition as a name.")
(v) Conclusion and non-conclusion of syllogisms with indefinite premisses

The question of whether Plato was conscious of the syllogistic technicality that Boethius indicates is surely controversial. We can instead try to resolve the question of whether this syllogism can be reasonably derived from Plato.

Meiser's edition gives a valuable notice: the syllogism in question can be found at *Theaetetus*, p. 186. In fact, the exact passage seems to be *Theaetet. 186c. 5-e. 10.* Here, the notions of sense (*δεινος = sensus*), being (*οὐσία = ratio substantiae*), and truth (*ἀλήθεια = notio veritatis*) are referred to. Socrates and Theaetetus realize that someone who cannot apprehend (καταχθόν) being, cannot apprehend truth. After that, since they accept that 'to apprehend truth' is the same as 'to have knowledge' (*ἐπιστήμη*), the dialogue will state the following reasoning:

\[
\begin{align*}
\text{Everyone who cannot apprehend being, cannot apprehend truth} \\
\text{Everyone who cannot apprehend truth, cannot have knowledge} \\
\hline
\text{therefore: Everyone who cannot apprehend being, cannot have knowledge}
\end{align*}
\]

However, since Socrates and Theaetetus call (186e. 3-4) that which cannot apprehend being 'sense', they will infer that sense does not apprehend being and, accordingly, it does not apprehend truth either. Therefore, the further syllogism, which is that indicated by Boethius, can be identified in the dialogue:

\[
\begin{align*}
\text{sense does not apprehend being [= essence of the substance]} \\
\text{what does not apprehend being does not apprehend truth [a notion of truth]} \\
\hline
\text{therefore: sense does not apprehend truth}
\end{align*}
\]


\[1141\] *Ibid.*, "SOC: That is, [sense:] something which, we agreed, plays no part in grasping truth, since it doesn't even grasp being."
It can be maintained, therefore, that the syllogism which is indicated by Boethius' report represents the reasoning that Socrates and Theaetetus maintain in this part of the dialogue.\textsuperscript{1142}

Now, does this replacement produce a valid syllogism? For a clearer analysis, let us obtain a simplified version of the initial syllogism. Let us represent 'sense' by S; 'the essence of the substance' by E; and finally, 'a notion of truth' by T. Thus:

\begin{center}
\begin{align*}
S & \text{ does not apprehend } E \quad \text{(P1)} \\
\text{What does not apprehend } E & \text{ does not apprehend } T \quad \text{(P2)} \\
\hline \\
\text{Therefore: } S & \text{ does not apprehend } T
\end{align*}
\end{center}

It is clear that the syllogism is formed by only negative premisses. The syllogism in this form is not conclusive. Its premisses exclude one term from another. It is clear also the the minor premiss is universal, i.e. it is one which means 'In every case, what does not perceive E does not perceive T'. Now, if the indefinite verb 'does not apprehend' is replaced by the indefinite participle 'is not-apprehending' in order to obtain, as Boethius indicates, affirmative premisses with an indefinite predicate, we obtain the following:

\begin{center}
\begin{align*}
S & \text{ is not-apprehending } E \\
\text{In every case, what is not-apprehending } E & \text{ is not-apprehending } T \\
\hline \\
\text{Therefore: } S & \text{ is not-apprehending } T
\end{align*}
\end{center}

\textsuperscript{1142} It is worth adding that the syllogism in question expresses important theses of Plato's theory of knowledge, and it is also relevant to the doctrine maintained by Plato in \textit{Theaetetus}. Indeed: Is knowledge perception? It does not seem so, for there are things which are not perceived and we have knowledge of them. Accordingly, they must be known by means of something which is not perception (= thought). In fact, being, common qualities, likeness, sameness, goodness, etc., are among the things which are known by not-perception (= thought). So, it seems to be that what does not apprehend being, does not apprehend truth. And what does not apprehend truth is not knowledge. But what does not apprehend being is perception, therefore: perception does not apprehend truth and it is not knowledge either. (Cf. also D. Bostock \textit{Plato's Theaetetus}, Oxford 1988, pp. 110-145, and especially pp. 128-145).
This syllogism is already conclusive, despite its awkward presentation. It can, however, be presented in a mood of the first figure (*Barbara*), to make the conclusion more evident: it will be sufficient to transpose the premisses. Thus:

Every which is not-apprehending E is not-apprehending T (P2)
S is not-apprehending E (P1)

Therefore: S is not-apprehending T

The remarkable fact is that the replacement of the negative premisses by affirmations with indefinite participle transforms a scheme entirely exclusive and not-conclusive into an inclusive and conclusive one. In fact, in the initial scheme, S is excluded from E, and thus T from S (since E is excluded from T). But if, as indicated, the replacement is operated, then the scheme is entirely inclusive.

**(vi) Boethius' interpretation of the syllogism**

According to Boethius' report, the fact that the syllogism of Plato's *Theaetetus* is conclusive implies that a universal negation with two terms (e.g. 'every man does not run') is equivalent to (*tantundem valens tamquam*) the corresponding indefinite universal affirmation ('every man is not-running'). However, the case of the syllogism cannot be taken as a definitive proof. This is the first difficulty. Secondly, Boethius' report does not explain whether this equivalence is absolutely valid or only under specific and restricted circumstances, as in the case of the syllogism. Third, whether the equivalence in question (on the assumption that it is valid) can also be verified in unquantified, particular and singular propositions. Finally, How this presumed equivalence makes sense taken with the rest of the logical relations already demonstrated earlier.

As is clear, the case of the syllogism leaves many points unsolved, and even, in the event that they could be answered satisfactorily, it does not seem a straight way of extending the logic of the indefinite names. It is tempting to assume that
Ammonius was conscious of this when he decided to disregard the doctrine involved in the case of the syllogism.\textsuperscript{1143} However, the first of these difficulties can be resolved. According to Boethius and Ammonius, Aristotle (20a. 20-23) maintains the following equivalence:

\begin{itemize}
  \item[(a)] 'every man is not-just' = 'no man is just'
\end{itemize}

Now, it easy to see that the following equivalence follows from above if the predicate terms ('not-just' and 'just' are replaced respectively by 'not-running' and 'running':

\begin{itemize}
  \item[(a')] 'every man is not-running' = 'no man is running'
\end{itemize}

But, since the following equivalence is also verified, namely:

\begin{itemize}
  \item[(b)] 'every man is not running' = 'no man is running'\textsuperscript{1144}
\end{itemize}

It follows, from (a') and (b), that:

\begin{itemize}
  \item[(c)] 'every man is not running' = 'every man is not-running'.
\end{itemize}

It is also clear that this equivalence can be confirmed by the canon of Proclus. In fact, one of two leaves always (a) the subject and (b) the quantity unchanged, but (c) the quality and (d) the predicate change. Besides, other proofs can also be found.\textsuperscript{1145}

\textsuperscript{1143} Ammonius disregards the importance of this problem at \textit{in Int.} p. 177, 15 ff.: \textit{o\the\upsilon\tau\eta\; \tauο\upsilon \; προβλήματος \'αξίων, \'ομικρής \'ευτέρειας \διύως}. Cf. above n. 1131.

\textsuperscript{1144} Cf. A.N. Prior (1962), p. 135. "The second rule of equipollence is that if 'not' is placed after a sign of universality, the result is equivalent to the contrary of the original (...) Thus 'Every B is not an A' = 'No B is an A', and 'No B is not an A' = 'Every B is an A'. (In ordinary speech the first of these equivalences is not always observed —we often use 'Every B is not an A' to mean 'Not every B is an A')."

\textsuperscript{1145} E.g. The following pair is accepted to be equivalent: (a) 'every S is P' = 'no S is not-P'. If this is so, the negation of the pair in (a) is also equivalent, namely, (a') 'every S is not P' = 'no S is not not-P'. But the last proposition in (a') is equivalent to (i) 'no S is P' (for 'is not not-P' = 'is not P' cf. above Part II, c., (iii)). But (i) is equivalent to (ii) 'every S is not-P' (see table of obversion, or canon of Proclus, or above). Therefore, 'every S is not-P' = 'every S is not P'.
Now, the second difficulty is directly resolved from above, for it is now clear that the equivalence implied by Boethius' report (that in (c)) is absolutely valid, i.e. independently of the case of the syllogism in *Theaetetus*.

The third doubt can also be dissipated through data provided by Boethius' comments on logic of the indefinite names. In fact, for the case of singular propositions, the point is immediate: Boethius (also Ammonius) by interpreting Aristotle's account of the singular propositions (20a. 23-30), says that:

(d) 'Socrates is not-wise' = 'Socrates is not wise'

Therefore, it immediately follows:

(d') 'Socrates is not-running' = 'Socrates is not running'.

What about the particular propositions? Here too, with the help of what has been set out earlier, an equivalence can be demonstrated. Indeed, from 20a. 39-40, the following equivalence was derived:1146

(e) 'some man is not-just' = 'not every man is just'

Therefore (by replacing the predicates as is indicated above):

(e') 'some man is not-running' = 'not every man is running'

But, the following equipollence is also valid:1147

(f) 'not every man is running' = 'some man is not running'

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1147 cf. A.N. Prior (1962), p. 135. "The first rule of equipollence is that if 'not' is placed before the sign of quantity, the result is equivalent to the contradictory of the original (...). Thus 'Not every B is an A' = 'Some B is not an A'.
Hence:

(g) 'some man is not running' = 'some man is not-running'

Let us note that this result can also be confirmed by the canon of Proclus, or by the table of obversion, if one accepts that it contains equivalences.

Should we extend these equivalences to unquantified propositions? No. Because, as is clear from 19b. 22-24, An. Pr. I, 46, and also from Boethius' and Ammonius' comments on these texts, that 'a man is not-just' is not equivalent to 'a man is not just'. They say, in fact, that the second follows the first proposition, so that an equivalence here is not necessary as the earlier cases are. Therefore:

(h) 'a man is not-just' is not equivalent to 'a man is not just'.

According to this, the last question is immediately answered: The equivalence proposed by Boethius' report, i.e. that in (c), accords with the earlier logical relations set out by Aristotle and commented on by Boethius and Ammonius. Let us clarify, finally, that the relations here proved for particular and singular propositions, and disproved for unquantified ones, are implicit in Boethius' commentary and they do not contradict what has been demonstrated earlier.
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