

Severus Sebokht On Deductions in Aristotle's Prior Analytics

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Abstract

Syriac philosophers were particularly fascinated by Aristotle's *Prior Analytics* and the syllogistic system it describes. The basic curriculum of logic in Syriac worked up towards a full description of the assertoric syllogisms and so a number of introductions to logic survive in Syriac which include substantial descriptions of this system. The present paper offers a first edition and translation of one of these descriptions, written by Severus Sebokht in the seventh century. We have also offered a comprehensive Greek-Syriac glossary as a contribution to the better understanding of the development of the philosophical lexicon in Syriac and Arabic. The text offers some insight into the manner in which Greek philosophy was respected and taught in the mediaeval Syriac milieu.

Little is known about the life of this Severus, one of the more extraordinary members of the Syriac *intelligentsia* of Late Antiquity.¹ He seems to have been abbot-bishop of Qenneshre² in the middle years of the seventh century, where he became the teacher of at least two other bishops whose names are prominent in the annals of the Syriac philosophers, Athanasius of Balad and Jacob of Edessa.³ According to the chronicle tradition, he died in AD 667.⁴ Beyond this, it is the content of his works that speaks most clearly of his knowledge and his capacities. His most substantial contributions came in the fields of astronomy and mathematics, and these have been comprehensively described in recent publications.⁵ Although much of his work is built on the foundations of Greek science and philosophy, he harboured an equally high regard for the achievements of Indian science. He is the first person known to us, west of India, to know of and describe the numeric system that we still use today.⁶

¹ H. Hugonnard-Roche, "Sévère Sebokht", in R. Goulet (ed.), *Dictionnaire des Philosophes Antiques*, CNRS-Éditions, Paris 2016, vol. 6, pp. 230-5.

² This name can refer either to the Hellenophile monastery on the Euphrates, more often spelled Qenneshre in modern literature, but more often Qenneshrin in the ancient; or to the city of Chalcis south of Aleppo, always referred to in Syriac as Qenneshrin. The distinction of spelling is largely a modern convenience, however – even in the so-called *Qenneshre Fragment*, the monastery in actually called not Qenneshre but Qenneshrin (F. Nau, "Notice historique sur le monastère de Qartamin, suivie d'une note sur le monastère de Qennešrê", *Actes du XIV^e Congrès international des Orientalistes, Alger 1897*, I-II, E. Leroux, Paris 1906, vol. II, pp. 37-135, part. pp. 89-125).

³ The data is not absolutely clear, however. Severus is frequently referred to in colophons etc. variously as Bishop or Abbot of Qenneshrin. The notion that Severus was abbot of the monastery on the Euphrates and not a bishop of Chalcis may only be inferred from his deep knowledge of Greek philosophy and the statement in Michael the Syrian (*Chronique de Michel le Syrien*, ed. J.-B. Chabot, E. Leroux, Paris 1901, Vol. II, p. 470) that Athanasius of Balad studied at the monastery of Qenneshrin (*sic*), and that Severus was a teacher of his.

⁴ In the year of the Greeks 978, according to Michael the Syrian (*Chronique de Michel le Syrien*, Vol. II, p. 435 Chabot, tr. 453).

⁵ É. Villey (ed.), *Les sciences en syriaque*, Geuthner, Paris 2014 (Études syriaques 11), especially the articles on Mathematics, Astronomy, and Geography.

⁶ E. Reich, "Ein Brief des Severus Sebokht", in M. Folkerts – R. Lorch (eds.), *Sic Itur ad Astra. Studien zur Geschichte der Mathematik und Naturwissenschaften*, Harrassowitz, Wiesbaden 2000, pp. 478-89; H. Takahashi,

Aristotelian logic was, for all learned Syrians, the foundation stone of all science. It was for this reason that the early books of the *Organon* were translated and summarised in Syriac in a variety of combinations in the sixth-eighth centuries.⁷ Of Severus's four known philosophical writings, three concern the *De Interpretatione*, viz. a pair of letters addressed to Bishop Aitalaha of Nineveh and the periodeutes Yunan, and a translation from Persian of a summary by the philosopher known as Paul the Persian. His fourth extant work on the *Organon* is the summary of the syllogistic which is entitled in the mss *On Deductions in Aristotle's Prior Analytics* and which is here edited and translated for the first time.

Date

It is extremely unusual for any ancient Syriac text to carry its own date of composition in a way that has survived the centuries. Severus's treatise *On Deductions in Aristotle's Prior Analytics*, however, seems to be an exception. The colophon in one of the manuscripts (D), dated by its cataloguer to the late eighteenth century, reads as follows:

Written by Severus Sebokht in year 949 of the Greeks, in the month Haziran, in the very year that the king of Byzantium, or Constantinople, came to Amid and went down from Amid to Babylon.

949 of the Seleucid era corresponds to AD 638. Moreover, the composition of the treatise is not only given a date but is even triangulated with other historical events. We are told that it was written in the same year in which the king (in this case Heraclius) passed through Amid on his campaign towards Babel. This seems at first sight to be a reference to Heraclius's famous campaign to Ctesiphon – but this took place not in 638, but in 628 (which would equate to 939 of the Seleucid era), and there is no tradition of his passing through Amida – in fact his route to the famous battlefield of Nineveh took him much farther east, from Armenia via Lake Urmia. He may possibly have passed through Amida and even wintered there on his return journey (winter of 628/9), in which case the chronological notice in our ms may be a reflection of this.⁸ Alternatively, Theophanes tells us of an imperial stay at Amida during a previous campaign in 623/4.⁹ Again, in 630 Heraclius made efforts to effect ecclesiastical union and called a major council at either Theodosiopolis or Mabbug/Hierapolis, at which our own Severus Sebokht seems to have been present.¹⁰ However, both these solutions would require an emendation of the text of the colophon. The alternative possibility is that this is a reference to another tradition, viz. that Heraclius in 638 gathered a special army at Amida and led it against the Arab invaders.¹¹

In any case, it seems likely that the date itself (whether or not it was originally 949) was found in a very old colophon by a scribe who then attached to it a chronological notice culled

“Between Greek and Arabic: The Sciences in Syriac from Severus Sebokht to Barhebraeus”, in H. Kobayashi – M. Kato (eds.), *Pages in Transmission of Sciences: Greek, Syriac, Arabic and Latin, Organization for Islamic Area Studies*, Waseda University, Tokyo 2010, pp. 16–39.

⁷ G. Kessel, “The Syriac Commentary Tradition: An Update”, in H. Hugonnard-Roche – E. Fiori (eds.), *La philosophie en syriaque*, Geuthner, Paris 2019 (Études syriaques 16), pp. 389–416.

⁸ Agapius, *Kitab al-'Unyan* (*Patrologia orientalis* VIII, fasc. 3), p. [205].

⁹ Theophanes, *Chronographia* 312.

¹⁰ *Chronique de Michel le Syrien*, Vol. II, p. 412 Chabot.

¹¹ A.N. Stratos, *Byzantium in the Seventh Century*, I-II, Hakkert, Amsterdam 1972, Vol. II, p. 76.

from some chronicle or other. Michael has Severus dying in 978 (=AD 667), so 628 and 638¹² are both reasonable options. It remains remarkable that this unusual notice survives in only one, and that a very late and heavily edited, witness to Severus's treatise.

The manuscript witnesses

- L** BL, *Add.* 14660, ff. 47b-54a. 9th / 10th cent. [Wright, *Catal.* III, 1160]
A BL, *Add.* 17156, ff. 3a-5b. ?9th cent. Extant only for §21-30 [Wright, *Catal.* III, 1162]
C Chaldean Patriarchate of Baghdad (CPB) 223, *olim* Mosul 35, ff. 90b-111a. 16th cent.¹³
 This book was heroically saved from destruction in modern times. Elements of it have been copied a number of times over the years. At least two of its known apographs do contain our text. These need not be discussed further nor given sigla for the purposes of textual reconstruction.
 i) Berlin Sachau 226 (= Berlin *Syr.* 89), ff. 63b-79a. Dated 1882. The scribe was not aware of some of the glaring errors in the syllogistic tables and reproduced them verbatim from his source. [Sachau, *Catal.*, 337].
 ii) Baghdad, Chaldean Monastery 174 (*olim* Notre-Dame des Semences, Vosté 55). 19th cent.
M Mingana *Syr.* 44, 83b-95b. Dated 1574/5, Dayr Za'faran Monastery. The ms was located in Mardin in 1829, at which time it was removed to Mosul (c.1800). [Mingana, *Catal.*, 114].
D Cambridge, *Add.* 3284, ff. 35a-45b. 18th cent. [Wright, *Catal.*, 886].¹⁴
Bdj A ms once in the possession of the Chaldean scholar Paul Bedjan.¹⁵ Lost in 19th cent.
δ The recension represented by **M** and **D**.

M and **D** represent a recension of the text that is quite distinct from that represented by **LAC**. The common ancestor of **MD** clearly produced an abbreviated version of the whole treatise. The principal characteristic of this **MD** recension is a substantial shortening of many sections by the excision of words, clauses or whole sentences that seemed extraneous to the point at issue, or which appeared to him self-evident from the context. There are also sections which must originally have been written out in continuous prose (as in the other mss), but which the editor of the **MD** recension has collocated instead into the form of a table. Further, the same editor has "updated" certain items of vocabulary throughout the text, e.g. ܕܘܪܝܘܬܘܢܝܘܬܝܘܢ for ܕܘܪܝܘܬܝܘܢܝܘܬܝܘܢ, and ܘܠ for ܘܟܘܠ.

D is unlikely to be a descendent of **M** on account of the very unusual dating in the colophon in the former (see under "Date" above). **M** is some centuries older than **D** and yet does not contain this evidently ancient colophon. Hence it seems most unlikely that **D** could be an apograph of **A**. More likely they are close, but independent, testimonies to one and the same recension (**δ**).

¹² *Chronique de Michel le Syrien*, Vol. II, p.453.

¹³ G. Kessel – N. Bamballi, "Field Notes on Syriac Manuscripts II: A Philosophical Manuscript Mosul 35 Rediscovered", *Hugoye: Journal of Syriac Studies* 21.1 (2019), pp. 21-42.

¹⁴ A. Baumstark, *Geschichte der syrischen Literatur*, Weber, Bonn 1922, p. 246, n. 11, erroneously gives the shelf mark as Cambridge 3287.

¹⁵ A. Van Hoonacker, "Le traité du philosophe syrien Probus sur les *Premiers Analytiques* d'Aristote", *Journal Asiatique* 16 (1900), pp. 70-4; H. Hugonnard-Roche, "Un cours sur la syllogistique d'Aristote à l'époque tardo-antique: le commentaire syriaque de Proba (VI^e siècle) sur les *Premiers Analytiques*. Édition et traduction du texte, avec introduction et commentaire", *Studia graeco-arabica* 7 (2017), pp. 105-70, part. pp. 123-4.

L and A are, by some distance, the earliest witnesses to the text. They are also very similar (A is extant only from §21-30). Their common ancestor (ϣ) contained many transparent errors, which are readily supplied from the much less error-strewn C. The difficulty of drawing up a stemma of ms descent is made more uncertain, however, because of the tendency, evident from time to time in both C and MD, to “correct” errors in the received text. In fact, the systematic and predictable nature of the treatise lends itself rather readily to accurate scribal emendations. In most texts, the chances of a scribe hitting upon a correct emendation are somewhat remote and not often to be reckoned with – but in this text such correct emendations may rather be considered quite likely to occur. Hence, just because C carries a good reading at a certain place does not imply that it has preserved that good reading from a better tradition.

Nonetheless it is only shared errors that may be a sure guide to the descent of manuscripts. While these are few, they are significant:

At the opening of §9, a comparison of L and C indicates a substantial omission in the former via homoeoteleuton, as indicated by [...]:

C	<p> ١. ليليا من نكحها نكحها ٢. فليلا فليلا : ليليا نكحها ٣. ليليا نكحها : ليليا نكحها ٤. ليليا نكحها : ليليا نكحها </p>
L	<p> ١. ليليا من نكحها نكحها ٢. فليلا فليلا : ليليا نكحها ٣. ليليا نكحها : ليليا نكحها ٤. ليليا نكحها : ليليا نكحها </p>

This omission in L is also reflected in the δ recension:

MD	<p> [...] ليليا من نكحها نكحها ٢. فليلا فليلا : ليليا نكحها ٣. ليليا نكحها : ليليا نكحها </p>
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This text is in all essentials the same as L, save that the editor of the δ recension has additionally omitted ليليا نكحها نكحها in an attempt to solve the problem of a meaningless text in his source. But without recourse to the correct solution, M's text was doomed to be as useless as L's. A common ancestor of L and δ must have already have contained this error.

A series of further, less dramatic, agreements in error between L and δ confirm their consanguinity:

- §10: ١٥ for ١٥ ١٥ ١٥
- §10: ١٥ om.
- §13: ١٥١٥ for ١٥١٥ [a rather obvious error once the correct reading has been seen in C]
- §15: ١٥١٥ for ١٥١٥
- §16: ١٥١٥ for ١٥١٥

L has very many special errors of its own vis à vis all other witnesses, testifying to a sloppy scribe, although occasionally holding onto a good reading which has been misunderstood everywhere else (e.g. 22§ ١٥١٥) – which is not surprising in such an early witness. But with A alone it does share a number of significant conjunctive errors (which would no doubt be more numerous were A extant for the whole treatise):

§22 𐌹 om.

§23 𐌹𐌲𐌻𐌹 for 𐌹𐌲𐌹𐌲 (orthographical only)

§23 𐌹𐌻 for 𐌹𐌺𐌹 (a strange, and non-reproducible error)

§26 𐌹𐌲𐌹𐌲𐌹 for 𐌹𐌲𐌹𐌲𐌹 (A has corrected the clear error *in marg.*)

§27 𐌹 for 𐌹 (i.e. 4 for 5, in the numbering of the parts of the table)

§30 𐌹𐌲𐌻𐌹 for 𐌹𐌲𐌹𐌲

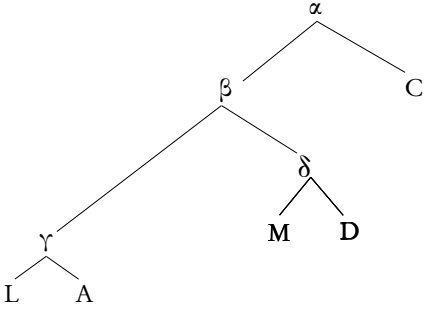
§30 𐌹𐌲𐌻 for 𐌹𐌲𐌹

§30 𐌹𐌲𐌻𐌹𐌹𐌲𐌹𐌲 𐌹𐌲𐌻 𐌹𐌲𐌻 𐌹𐌲𐌻 𐌹𐌲𐌻 : 𐌹𐌲𐌻 𐌹𐌲𐌻 om. (homoe.)

A does also have some distinctive errors of its own (e.g. 23§ 𐌹𐌲𐌻𐌹), and L has many such. To summarise:

1. LA share significant conjunctive errors not found in other mss. They represent very similar texts, while each also has its own special errors. They therefore have a common ancestor not shared by other mss: γ .
2. MD are (as demonstrated above) two distinct witnesses to a heavily edited and abbreviated recension of the whole treatise (δ). This nonetheless shares conjunctive errors with γ , with whom it must share a common ancestor: β .
3. C does not share any special errors with any other witness – all its errors are either its own (e.g. the very strange §6 𐌹𐌲 for 𐌹𐌲𐌻), or else are found throughout the tradition and can be ascribed to the most recent archetype of all copies. The testimony of C is therefore worth the same weight as all the others put together. The earliest recoverable text (α) contains very few errors in need of conjectural emendation, and those few are easily corrected.

On this basis, we can draw up the following stemma:



D has vanishingly few variants vis à vis M, hence unless otherwise stated the siglum M is used in the apparatus to signify δ .

All portions that were omitted by the editor of the δ recension are enclosed within the symbols ' '.

As usual with mediaeval Syriac texts, punctuation varies enormously between the mss, and the text offered here does not precisely represent any one ms or group of mss in its pointing and punctuation. Common orthographical variations (e.g. 𐌹𐌲𐌻 – 𐌹𐌲𐌹𐌲 or 𐌹𐌲𐌻𐌹 – 𐌹𐌲𐌻𐌹𐌲, *et plur. al.*) are also too frequent and inconsequential to be noted in the apparatus. For the most part, the orthography of L has been followed only out of respect for its greater antiquity. The spelling of Greek loan words is especially variable. Consistent differences in the spelling of a Greek word have been noted in the apparatus only on the first occasion.

Outline of the treatise

1. Overall goal of the treatise
2. The basic structure and summary of *Prior Analytics*
3. Terms
4. Tenses, matters, and definitions; the square of oppositions
5. The four types of premise, together with their basic conversions
6. How to form three-premise deductions, and why there are three figures
7. What the modes are and what the three figures have in common
8. Special properties of the 1st and 2nd figures
9. Special properties of the 3rd figure, and summary of the treatise so far
10. The different ways in which deductions can be described
11. How some commentators describe the deductions
12. The nine possible modes in the 1st figure, with examples
13. Generation of the demonstrable modes of the 1st figure from the non-demonstrables
14. Table to illustrate the generation of the demonstrable modes
15. Analysis of the demonstrable modes back into the non-demonstrables
16. The four [syllogistic] modes in the 2nd figure
17. Generation of 2nd figure modes from 1st figure modes
18. Table to illustrate the generation of 2nd figure modes from 1st figure modes
19. Analysis of 2nd figure modes back into 1st figure modes
20. The fourth mode of the 2nd figure is analysed *per impossibile* back into the 1st figure
21. The same tabulation can also be applied to the other three 2nd figure modes arising from the 1st figure
22. A verbal description of this method of generating the 2nd figure from the 1st figure
23. This generation reverses to become a *per impossibile* analysis of the 2nd figure back into the 1st figure
24. Table to illustrate this generation and analysis
25. The six [syllogistic] modes in the 3rd figure
26. Generation of 3rd figure modes from 1st figure modes
27. Table to illustrate this generation and analysis of 3rd figure modes
28. Summary and Purpose of the *Analytics*

Glossary of key terms

Note that the spelling of Greek loans varies considerably both across mss and also within them. The simplest forms are used here for convenience only. The Greek loans are marked with *.

ἄνθεσος	art (skill/method/procedure)
ἀνάγκη	the necessary
ἄνθεσος	contradiction*
ἀνθεσος	contradictory*
ἀνθεσος	figure (of deduction)*
ἀνθεσος	demonstrative*
ἀνθεσος	negative*
ἄρα	therefore (in the conclusion of a deduction)*
ἀνθεσος	be concluded

‏‏‏‏‏‏‏‏‏‏‏‏	be supposed
‏‏‏‏‏‏‏‏‏‏‏‏	qualitative
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	<i>per impossibile</i>
‏‏‏‏‏‏‏‏‏‏‏‏	quantitative
‏‏‏‏‏‏‏‏‏‏‏‏	property
‏‏‏‏‏‏‏‏‏‏‏‏	opposite, <i>adj.</i>
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	[an] opposition, <i>n.</i>
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	opposites, opposing pair
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	predicate*
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	subject
‏‏‏‏‏‏‏‏‏‏‏‏	is generated
‏‏‏‏‏‏‏‏‏‏‏‏	generation (of deductions)
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	matter/material (the modality of a proposition)*
‏‏‏‏‏‏‏‏‏‏‏‏	convert
‏‏‏‏‏‏‏‏‏‏‏‏	tense
‏‏‏‏‏‏‏‏‏‏‏‏	mode (of deductions)
‏‏‏‏‏‏‏‏‏‏‏‏	minor (term)
‏‏‏‏‏‏‏‏‏‏‏‏	demonstrate
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	exchange of terms
‏‏‏‏‏‏‏‏‏‏‏‏	arrange*
‏‏‏‏‏‏‏‏‏‏‏‏	produce, yield
‏‏‏‏‏‏‏‏‏‏‏‏	doctrine
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	premise-combination
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	combination
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	combination
‏‏‏‏‏‏‏‏‏‏‏‏	universal
‏‏‏‏‏‏‏‏‏‏‏‏	conclusion
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	the impossible
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏	the non-demonstrables ¹⁶
‏‏‏‏‏‏‏‏‏‏‏‏	utterance, statement
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	reduction
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	generation (of deductions) ¹⁷
‏‏‏‏‏‏‏‏‏‏‏‏	demonstrative
‏‏‏‏‏‏‏‏‏‏‏‏	inclusive, conclusive
‏‏‏‏‏‏‏‏‏‏‏‏	logical
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	necessarily*
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	the other member of the contradiction
‏‏‏‏‏‏‏‏‏‏‏‏	particular
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	reduction
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	negative
‏‏‏‏‏‏‏‏‏‏‏‏	perfect
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	justification
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	by conversion
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	demonstration
‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ / ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏	demonstrable

¹⁶ This is the usual form in L; mostly ‏‏‏‏‏‏‏‏‏‏‏‏ ‏‏‏‏‏‏‏‏‏‏‏‏ in other mss.

¹⁷ Severus sometimes uses ‏‏‏‏‏‏‏‏‏‏‏‏ and sometimes ‏‏‏‏‏‏‏‏‏‏‏‏ to mean the same thing, probably because his source intermingles the use of both $\gamma\acute{\iota}\gamma\nu\omicron\mu\alpha\iota$ and $\gamma\epsilon\nu\nu\acute{\alpha}\omega$, as also does Alexander's commentary.

כחש	determined
כחש	deduced (i.e. concluded)
כחש	the contingent
כחש	explanations and interpretations
כחש	aim
כחש	conjunction*
כחש	deduction (i.e. syllogism)*
כחש	deductive (i.e. syllogistic)*
כחש	conclusion*
כחש	subject (as an abbv. of <i>כחש</i>)
כחש	extreme (i.e. terms within a premise)
כחש	contrary
כחש	sub-contrary
כחש	obscure
כחש	distinctive
כחש	problem*
כחש	proposition/premiss* (see note §6)
כחש	determination*
כחש	distinguish
כחש	simple
כחש	categorical*
כחש	positive*
כחש	major (term)
כחש	composition
כחש	to detail (i.e. to sketch out the details of a topic)
כחש	to mean, signify
כחש	combination
כחש	analysis (usually in the sense of reduction)
כחש	theory*
כחש	proof
כחש	term
כחש	straightforwardly

The formulae for expressing the types of premises used in deductions:

כחש	all	the A premise (universal affirmation)
כחש	not any	the E premise (universal negation)
כחש	some	the I premise (particular affirmation)
כחש	not all	the O premise (particular negation)
כחש	some...not	the O premise (particular negation)

Note that Severus, like Aristotle and the commentators, use two methods of expressing a particular negation. In *Prior Analytics*, we find both:

τὸ A τινὲ τῶ B μὴ ὑπάρχει (25 a 22)

and

ἄνθρωπος οὐ παντὶ ζῶν ὑπάρχει (25 a 25)

Greek – Syriac – English Glossary

The § number in the fourth column offers only the first instance of the term found in the treatise.

ἀδιόριστος	indeterminate	ܠܘܫܗܘܢ ܠ	8
	extremes	ܠܘܫܘܘ	4
ἄκρα		ܠܝܥ	
ἀνάγειν, ἀπάγειν		ܟܝܘܬܐ ܠܝܥ	2
ἀναγωγή, ἀπαγωγή	reduction	ܠܗܘܠܘܬܐ	20
		ܠܗܘܠܘܬܐ	23
ἀνάλυσις	analysis	ܠܝܥ	2
ἀναπόδεικτος	indemonstrable	ܠܘܠܘܫܗܘܢ ܠ	12
		ܠܘܠܘܫܗܘܢ ܠ	
ἀντίθεσις	opposition	ܠܘܫܘܗܘܠܘܬܐ ܠܝܥ	2
ἀντικείμενα	opposites	ܠܠܘܬܐ ܠܝܥ	8
ἀντιστρέφειν τῷ	convert to ¹⁸	ܠ ܟܝܘܬܐ	2
ἀντιστροφῆ	by conversion	ܕܠܘܠܘܬܐ	12
ἀντίφασις	contradiction	ܘܫܘܠܘܬܐ	29
ἀντιφαστικῶς	contradictory	ܠܘܠܘܬܐ ܠܘܠܘܬܐ	4
ἀπαγωγή	see ἀναγωγή		
ἀποδεικνύναι	demonstrate	ܠܘܫܘܬܐ	13
ἀποδεικτικός	demonstrative	ܠܘܠܘܬܐ	1
	demonstrably	ܠܘܠܘܬܐ ܠܘܠܘܬܐ	5
	demonstrable	ܠܘܠܘܬܐ	5
ἀπόδειξις	proof	ܠܘܠܘܬܐ	13
	demonstration	ܠܘܠܘܬܐ ܠܘܠܘܬܐ	13
ἀπόφασις, ἀποφατικός	negation, negative	ܠܘܠܘܬܐ ܠܘܠܘܬܐ ܠܝܥ	3
		ܘܫܘܠܘܬܐ	
ἄρα	therefore	ܠܝܥ	6
γένεσις	generation	ܠܘܫܘܬܐ	13
γέννησις ¹⁹	generation	ܠܘܠܘܬܐ	13
γίγνεσθαι	be generated	ܠܘܫܘܬܐ	
δεικνύναι	prove	ܠܘܫܘܬܐ	13
δῆλος	clear	ܝܘܫܘܬܐ	4
διαίρειν	distinguish	ܟܝܘܬܐ	1
διορισμός, προσδιορισμός	determination	ܠܘܠܘܬܐ ܠܘܠܘܬܐ	2
δυνατός	be possible	ܠܘܠܘܬܐ	4
εἰς ἀδύνατον	<i>per impossibile</i>	ܠܘܠܘܬܐ ܠܘܠܘܬܐ ܠܘܠܘܬܐ	20
ἔλαττον	minor	ܠܘܠܘܬܐ	3
ἐναλλαγή τῶν ὄρων	exchange of terms ²⁰	ܠܘܠܘܬܐ ܠܘܠܘܬܐ	15

¹⁸ Severus does not seem to distinguish A ἀντιστρέφειν τῷ B (A converts into B) from A ἀντιστρέφειν πρὸς B (A and B mutually convert).

¹⁹ Alexander himself uses both γίγνεσθαι and γενεῶν to express the notion of one figure being generated from another, e.g. Alexander Aphrodisiensis *In Aristotelis analyticorum priorum librum I commentarium*, ed. M. Wallies, Reimer, Berlin 1883 (CAG II.1), p. 48.11-16.

²⁰ E.g. Alex. Aphrod., *In An. Pr.*, p. 29.26 Wallies.

ἐναντία	contraries ²¹	كلا ناه	4
ἐνδέχασθαι	be contingent	كدهي كدهي	4
ἐξ ἀνάγκης	necessarily	كدهي ك	6
θάτερον μέρος ἀντιφάσεως	the other member of the contradiction	كدهي كدهي كدهي كدهي	29
καθόλου	universal	كدهي	4
κατάφασις, καταφατικός	affirmation, affirmative	كدهي كدهي كدهي	3
κατηγορικός	categorical	كدهي كدهي	5
κατηγορούμενον	the predicate	كدهي كدهي	3
λόγος	what is said, account	كدهي	6
μέθοδος	method	كدهي	21
μείζων	major	كدهي	3
μέρος	particular	كدهي	4
ἐπὶ μέρους			
κατὰ μέρος			
ἐν μέρει			
μέσον	middle	كدهي	6
ὄρος	term	كدهي	2
πίστις	justification	كدهي كدهي كدهي كدهي	13
ποιότης	quality (of being +ve or -ve)	كدهي	8
κατὰ τὸ ποιόν			
ποσότης	quantity (referring to all or some)	كدهي	8
κατὰ τὸ ποσόν			
πρόβλημα	problem	كدهي كدهي	8
πρότασις	proposition, premise	كدهي كدهي	2
σημαίνειν	mean, signify	كدهي	4
συζυγία	conjunction	كدهي كدهي كدهي كدهي	13
συλλογισμός	deduction	كدهي كدهي	20
συμπεραίνειν, συνάγειν	conclude	كدهي	1
συμπέρασμα	conclusion	كدهي كدهي	6
συμπλοκή	combination	كدهي كدهي	7
συμπλοκή προτάσεων ²²	premise-combination	كدهي كدهي	7
συντιθέναι	compound	كدهي كدهي	23
συγκεῖσθαι		كدهي كدهي	29
σύνθεσις		كدهي	2
σχῆμα	figure	كدهي	2
τάξις	order	كدهي	2

²¹ Severus uses this term only in the context of the square of the opposition (§4). Elsewhere he always uses the more generic notion “opposition” either to refer to all forms of opposition, or else specifically to refer to contradictory pairs of opposites (as are A and O premises).

²² E.g. Alex. Aphrod., *In An. Pr.*, p. 59.10 Wallies.

τέλειος, ἀτελής	perfect	كامل	13
τιθέναι, κεῖσθαι	posit, suppose	رأى	6
ἐκτιθέναι	set out		10,30
παρατιθέναι			
τρόπος	mode	نحو	2
ὕλη	matter	مادة	2
ὑπεναντίος	sub-contrary	كالتضاد	4
ὑπόθεσις	hypothesis, supposition	كالتفرض	29
τὸ κείμενον			
ὑποκείμενον	subject	موضوع	3
		رأى	6
ὠρισμένα, τὰ ²³	determined	كالمحدد	8

²³ E.g. Alex. Aphrod., *In An. Pr.*, p. 95.7 Wallies.

By the strength of the Lord Jesus Christ we begin to copy a treatise that briefly demonstrates, or details, concerning the deductions in Aristotle's *Prior Analytics*, which was written, or rather organised as clearly as possible, by Mar Abbot Severus Sebokht bishop of Qenneshrin.¹ May the Lord always assist and uphold me. Amen.

§1 Our goal in this treatise is briefly to demonstrate, or rather to detail, the modes of the categorical deductions in the philosopher Aristotle's book *Prior Analytics*, viz. how they are composed and analysed, and also how many there are and their types, as well as how many figures there are and their types, since this is the art of logic and deduction. For us, this is useful and especially valuable for [gaining] a thorough understanding of the logical and demonstrative theories discussed in the book of *Apodeictics*. It is in [that book] that the true and the false are accurately demonstrated and distinguished by means of the skill of logic. So then, given that it is valuable to recognise what is true and reject what is false, and that it is by means of deductions that one is able to recognise them, we shall therefore derive great benefit and use from knowing what is discussed in this treatise.

§2 The treatise is divided into three chapters.² The first chapter discusses propositions and their terms, and also tenses, matters (*hulai*), and determination (*prosdiorismos*).³ Further, [it discusses] propositions, both how many kinds there are and which are those that convert, and which do not. The second chapter demonstrates what a categorical deduction is, and the number and types of its figures, then the number and types of the things [the figures] hold in common, and the number and types of their individual properties. The third chapter demonstrates [1] the composition of the deductive modes in the first figure, their number and their types; as well as [2] the composition and generation from the first [figure], together with an analysis back into the first [figure],⁴ of the modes – at least the deductive ones – in the second and third figures, their number and types, and also [3] each one of the [modes] in the abovementioned [second and third] figures.⁵

This is [the end of] what can be briefly explained about the purpose, the use, and the chapters of the treatise, although it is well-known that the order of reading it is after the book *De Interpretatione*, which in turn [comes] after the *Categories*.

§3 So let us now come to the first topic. We mentioned earlier that our goal is briefly to demonstrate the composition and analysis of the categorical deductions in the book of *Analytics*. But because in anything at all, be it physics or dotology,⁶ the basic is prior to the composite, and because propositions are prior to categorical deductions, and terms are prior to propositions, it is necessary to analyse an utterance into its component terms.

¹ In modern usage, Qenneshrin is reserved as the Syriac name for Chalcis, while the monastery of which Severus was bishop (i.e. *abbot*) was Qenneshre. Even in the earliest Syriac literature, however, Qenneshrin is very often used for both places.

² This refers to the present treatise, not to the *Prior Analytics*.

³ By the term “matters”, Severus refers to the “necessary”, the “impossible”, and the “contingent” (cf. Amm., *In De Int.*, ed. A. Busse, Reimer, Berlin 1897 [CAG IV.5], p. 88). By the term “determination”, he refers to the specifications of quantity in a premise: all, none, some.

⁴ Composition, generation, and analysis, are all technical terms used extensively in Severus's syllogistic. Deductions are generated by means of putting together terms and propositions to form premises, whilst analysis is the reverse procedure (see also Alex. Aphrod., *In An. Pr.*, p. 7.11ff. Wallies; Proc., *In Alcib.*, 179.11ff. Westerink). By “analysed”, Severus is referring to what in the western logical tradition is called the “reduction” of syllogisms, usually from one figure to another. “Generation” is the other side of this coin. Since, for example, deductions in the second figure can be “reduced/analysed” into deductions in the first figure, it can equally be said that second figure deductions are “generated” from first figure deductions. In this context, “generation” does not refer to the generation of a conclusion from premises, but to fact that some modes can be produced from others.

⁵ Ch.1 corresponds to our §§3-5; ch.2 is found in §§6-11; ch. 3 covers §§12-29.

⁶ This expression could mean a number of things, but Severus probably means the Syriac study of orthographic pointing. An alternative rendering would be “words in sentences” but in any case he means some technical study connected with language and writing.

Therefore you need to realise first of all that every categorical proposition – I mean either an affirmative (*kataphatikos*) statement that says something about something, or a negative (*apophatikos*) statement that denies something of something – is composed primarily of two terms. By “terms” I mean the subject and the predicate, such as in “a person is walking”. The predicate is either equal to the subject or superior to it, while the subject is either equal to the predicate or inferior to it. For example, in “a human is able-to-laugh” the two are equal; [but in the sentence] “a human is an animal” they are not equal, rather the subject is lesser and the predicate greater.⁷ For this reason, the predicate is referred to as the major term, while the subject is called the minor term.

They are called terms on account of their being the edges, or rather the outer extremes, of the deductive figures. For once a deduction is analysed into its extremes, i.e. the propositions of which it is composed, as we shall learn later on, then the propositions can be [further] analysed into just the subject and the predicate. And it is just because every analysis is delimited and terminated by these, i.e. by the subject and the predicate, that they are called “terms”.⁸ But if the terms are analysed into the syllables of which they are composed, then they have no meaning at all. Philosophers only trouble themselves over things that have some meaning, and not at all over things that have no meaning.

§4 Next, there are three tenses in which propositions may be composed: past, future, and present. There are also three matters (*bulai*): necessary, contingent, and impossible. There are four determinations (*prosdiorismoi*): all, not all, some, not any. The past tense is e.g. “a person walked”, while the future is e.g. “a person will walk”, and the present is e.g. “a person is walking”. The necessary matter is e.g. “a human is an animal”, while the contingent is e.g. “a human is just”, and the impossible is e.g. “a human is a stone”. The determinations “all” and “not all” are e.g. “all human is animal”, “not all human is animal”.⁹ “Some” and “not any” are e.g. “some human is animal” and “not any human is animal”.¹⁰ Moreover, some of these four determinations are universals and contraries, while others are particulars and sub-contraries, viz. “all” and “not any” are universal contraries, while “some” and “not all” are particulars and sub-contraries. Furthermore, “all” is known as the contradictory (*antiphatikos*) in relation to “not all”, and “some” to “not any”. The propositions are also given their names on the basis of these [four determinations] since within propositions they [the determinations] are located in front of the subject, as we correctly learn about all this in the book *De Interpretatione*. But this can be understood as clearly as possible in summary from this table below:

Universal contraries			
all human is animal	contra	dictory	not any human is animal
some human is animal	contra	dictory	not all human is animal
Particular sub-contraries			

⁷ For the idea of “able-to-laugh” being a predicate equal to “human” in inclusiveness, cf. Amm., *In De Int.*, p. 108.7ff. Busse, and Boethius, *In De Int.*, II, p. 162.11ff., ed. L. Minio Paluella, Desclée de Brouwer, Bruges-Paris 1965. By saying that “is animal” is greater than “human”, Severus means that within the context of the Porphyrian tree, animal is the genus of which human is a species. In the tree of genera and species, any item may be defined by predicating of it the genus immediately above. “A human is able-to-laugh” is an accidental proposition, hence “equal”.

⁸ Syriac *ṭhuma* has a similar semantic range to Greek *horos*: “boundary, edge” but also a logical “term”. Alex. Aphrod., *In An. Pr.*, pp. 14.27-15.4 Wallies.

⁹ These are A and O-type propositions respectively. In both Greek and Syriac, O-propositions (particular negations) can be expression either as “Not all A is B” or as “Some A is not B” (or, in Aristotelian terms proper, “B does not hold of all A” and “B does not hold of some A” are equivalent ways of expressing a particular negation, and both methods may be found in the *Prior Analytics*, e.g. 25 a 22 and 25 a 25).

¹⁰ These are respectively the I and the E-type propositions (particular affirmation and universal negation). E-propositions are consistently formulated this way in Syriac, as “Not any / not one A is B”.

- §5 מ85a
 מ85b
 C94b
 C95a
 L49a

§6 מ86a
 C95b

M || 2 M || 10 [הוה 15 || M om. 14 C || 12 C || 17 C || 18 M om. 17 C || 19 L || 20 C || 21 L || 23 L

§5 After this one needs to know that there are four categorical propositions: the universal affirmation, e.g. “all human is animal”, the particular affirmation, e.g. “some human is rational”, the universal negation, e.g. “not any human is stone”, and the particular negation, e.g. “not all human is grammatical”. Now of these four there are three that convert: universal affirmation, particular affirmation, and universal negation, although the universal affirmation converts into a particular affirmation, e.g. “all human is animal, some animal is human”, for these are true together; a particular affirmation converts into itself [i.e. another particular affirmation], e.g. “some human is rational, some rational is human”, for these are true together; although sometimes it converts into a universal affirmation, e.g. “some rational is person, all human is rational”.¹¹

A universal negation also converts into itself, e.g. “not any human is stone, not any stone is human”, for these are true together. However, a particular negation converts neither into itself nor into anything else, e.g. “not all human is grammatical” being true, “not all grammatical is human” would be false.¹² For [propositions] that convert are necessarily true together, or [necessarily] false together. The doctrine of [propositions] that convert is useful for understanding how the deductive modes in the second and third figures are composed and generated out of the first [figure], and also for understanding how they are analysed back into the first [figure] itself, which comes about apodeictically, i.e. demonstrably, as may be understood as far as possible from the various [sections] below.

§6 A categorical and simple deduction is an utterance from which, once a combination has been composed from a pair of propositions, some other [utterance] comes to be concluded necessarily from them,¹³ e.g. all human is animal, all animal is substance, therefore (*ara*) all human is substance. See how, once the pair [of propositions] have been posited together in combination, then some other thing is concluded. “Combination” means items that share one and the same “inclusive” term – viz. e.g. animal or human – either as the subject in both [propositions] or as the predicate in both, or as the subject in one and the predicate in the other, as will be demonstrated shortly. The “inclusive term”¹⁴ is also called “common” and “middle”. It is “common” because the two propositions share it, but [called] “middle” because it holds a middle-position in the first figure. The other two collected terms are distinctive rather than common, and are the extremes [i.e. the edges] rather than the middle.

¹¹ When he says “sometimes”, Severus appears to be making that crucial distinction between a conclusion from premises and a conclusion from matter or terms, i.e. he knows well enough that at a formal level, particular affirmations do not convert; yet a proposition's matters can be arranged such that a particular affirmation might sometimes convert. Paul the Persian makes just the same distinction, although he uses the language of “necessary” and “non-necessary” conclusions. Professor Wilfrid Hodges points out (p.c.) that Ibn al-Muqaffa' spoke of “sound conclusions” as opposed to “broken conclusions”, and that a number of Arabic logicians used the same terminology as Severus Sebokht and said that a conclusion follows “sometimes” (*marratan*), meaning that the conclusion is broken or non-necessary.

¹² This may be accurate within the material example offered (since there are no non-human things that are grammatical), but the truth of an O-proposition does not in general entail that its converse be false. The most we can say is that they are not necessarily true together, and this is the reason that O-propositions do not convert.

¹³ M has a shorter version: “Categorical and simple deductions are composed from two premises joined to each other, and then follows a conclusion (*sumperasma*)”. But Severus is paraphrasing the *Prior Analytics* itself: συλλογισμὸς δὲ ἐστὶ λόγος ἐν ᾧ τεθέντων τινῶν ἕτερόν τι τῶν κειμένων ἐξ ἀνάγκης συμβαίνει τῷ ταῦτα εἶναι (24 b 18–20). M's omission breaks up the allusion.

¹⁴ We might say “conclusive/concluding term”, for Severus here uses an expression calqued on *sunagei*, the usual term in the commentators to refer to the process of a conclusion forming out of a pair of premises. The “inclusive” term is the term that draws together the two propositions into a syllogism, i.e. a deduction. Cf. the very similar sentence in *Al-Farabi: Syllogism. An Abridgement of Aristotle's Prior Analytics*, trans. S. Chatli – W. Hodges, Bloomsbury, London 2020, p. 20.13f.

We can also know on just this basis how many deductive figures there are. There are three figures in all. The first [figure] is where the common term is predicated in one premise¹⁵ and is the subject in the other. E.g. “all human is animal, all animal is substance”. See how the common term “animal” is predicated in the first [premise] and is the subject in the second. The second [figure] is where the common term is the predicate in both premises. E.g. “all human is animal, no stone is animal”. See how the common term “animal” is predicated in both premises. The third [figure] is where the common term is the subject in both premises. E.g. “all human is animal, all human is rational”. See how the common term “person” is the subject in both premises.

§7 You next need to know that each figure has a variety of modes subordinate to it, and each mode in turn [has] a variety of deductions. But while the modes are limited [in number], the deductions are not. The figure is like a genus, while the mode is like a species, and the deductions are like the indivisibles [i.e. the particulars]. Both the figure and the mode are like a certain this [i.e. *tode ti*], but the deduction is a certain this. There are 19 modes in all: 9 in the first figure, 4 in the second, and 6 in the third.¹⁶

There are three things that the three figures have in common. First: a deduction can arise neither from a pair of particular premises, nor from a pair of negative [premises]. Second: the lesser of the [two] premises is subsumed into the conclusion (*sumperasma*), i.e. the “gathering”.¹⁷ For a negation is lesser than an affirmation, and a particular [is lesser] than a universal. Hence if one premise is a negation, then the conclusion will be negative, whereas if [one premise] is a particular, then the conclusion will be particular. Moreover, if one [premise] is a particular affirmation while the other is a universal negation, then the conclusion will be negative and particular. Third: it is not the common [i.e. middle] term that is subsumed into the conclusion; it is the distinctives that are subsumed.¹⁸

§8 The property of the first figure is that the major premise is always universal, viz. whether it be affirmative or negative, but that the minor is sometimes universal and sometimes particular, while always being affirmative. Conclusions are indeterminate both qualitatively, i.e. in terms of being affirmative or negative; and quantitatively, i.e. in terms of being universal or particular. In the first figure, the [premise] in which the common term is subject I call the major, e.g. all animal is substance,¹⁹ and the [premise] in which that same common term is predicated [I call] the minor, e.g. all human is animal.

The property of the second figure is that the major premise is always universal, while the minor is always qualitatively the opposite of the major, i.e. [in terms of being] affirmative or negative; and that all the conclusions are negative, viz. the particular ones as well as the universal. Furthermore, in both the second and the third figures I give the name “major and minor” to the [premises] that are already known from the given problem,²⁰ because each problem is a proposition. As mentioned before, every categorical proposition contains two terms, viz. subject and predicate. You must realise that when the predicate of the problem is taken together with the common [term], then this forms the major premise, whereas when the subject is taken together with the common [term], then this forms the minor premise. For instance, let it be supposed that we are to prove that no human is stone. That is the “problem”. We then state “all human is animal” – this is the minor [premise], and that “no stone is animal” – this is the major [premise].

¹⁵ Now that the discussion has turned to the construction of syllogisms, we will use the term “premise” in place of “proposition”. But the Syriac is the same in both cases, being simply a transliteration of the Greek word *protasis*.

¹⁶ The editor of the M text counts only 14 modes, there being only 4 in the first figure. This simply depends upon whether or not one counts the additional “demonstrable” five modes of the first figure (see §13).

¹⁷ Severus generally uses the native Syriac word *kunasha* (“gathering”) as a loan-rendering for *sunagoge* or *sumperasma* (“conclusion”) – occasionally offering also a transliteration of *sumperasma* glossed as *kunasha*. The M editor everywhere alters *kunasha* to a transliteration of *sumperasma*.

¹⁸ “Distinctives” is the term Severus is here employing for the extremes, as an antonym for “common”, i.e. the middle.

¹⁹ Using the example from §6.

²⁰ In the context of Aristotelian logic, “problem” refers to a proposition of the type, “are humans stones, or not?” which were considered to be the very types of propositions that underlie the syllogistic system. This is why Severus can then talk about the predicate and the subject being “construed” in the premises of the deduction: i.e. the predicate is the major term and goes into the major premise, the subject is the minor term and goes into the minor premise. Severus Sebokht was ahead of his time in placing the minor premise before the major premise, a practice adopted by Ibn Sīnā.

9 §9 תלמידיהם ויהי ויהיה...
 C98a
 M88a
 L50a
 5
 10

10 §10 ויהי ויהיה...
 C98b
 M88b
 15
 20

C99a
 M89a
 25
 L50a

30 §11 ויהי ויהיה...
 C99b
 35

M || ויהי ויהיה [] 3¹ om. M | C || 2^{aa} om. LM per homoe. | ויהי ויהיה C ||
 4 C || ויהי ויהיה 6 || L || ויהי ויהיה 5 || L || ויהי ויהיה | M || ויהי ויהיה [] om. L | ויהי ויהיה om. M | ויהי ויהיה C ||
 7 M || ויהי ויהיה ויהיה ויהיה ויהיה ויהיה 7 || L || ויהי ויהיה [] om. L | ויהי ויהיה [] om. M ||
 8 L || ויהי ויהיה [] om. M | ויהי ויהיה 9 || L || ויהי ויהיה [] om. M ||
 10 M || ויהי ויהיה [] om. M | ויהי ויהיה 11 || C || ויהי ויהיה M | ויהי ויהיה ויהיה ויהיה 10 || M || ויהי ויהיה [] om. L |
 15 M || ויהי ויהיה [] om. M | ויהי ויהיה 15 || L || ויהי ויהיה [] om. M | ויהי ויהיה C || ויהי ויהיה [] om. L |
 17 M || ויהי ויהיה [] om. L | ויהי ויהיה 17 || C || ויהי ויהיה [] om. M | ויהי ויהיה 17 || M || ויהי ויהיה [] om. L |
 19 M || ויהי ויהיה [] om. M | ויהי ויהיה 19 || C || ויהי ויהיה 19 || M || ויהי ויהיה [] om. M | ויהי ויהיה 19 || M || ויהי ויהיה [] om. M ||
 21 M || ויהי ויהיה [] om. M | ויהי ויהיה 21 || M || ויהי ויהיה [] om. M | ויהי ויהיה 21 || M || ויהי ויהיה [] om. M ||
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 33 M || ויהי ויהיה [] om. M | ויהי ויהיה 33 || M || ויהי ויהיה [] om. M | ויהי ויהיה 33 || M || ויהי ויהיה [] om. M ||
 34 M || ויהי ויהיה [] om. M | ויהי ויהיה 34 || M || ויהי ויהיה [] om. M | ויהי ויהיה 34 || M || ויהי ויהיה [] om. M ||

§9 The property of the third figure is that the minor premise is always an affirmative while the major is not distinctive, either qualitatively, i.e. [in terms of being] affirmative or negative, or quantitatively, i.e. [in terms of being] universal or particular. The conclusions, in turn, are only particular, viz. whether affirmative or negative. And this is [all] about what the figures have in common and what is proper [to each]. Up to this point we have said, in brief, as much as possible about [the following topics]: the terms, tenses, matters and determinations out of which, with which, and by which propositions are composed; how many [sorts] of propositions there are, both the universal kinds and the particular kinds; also which kinds convert; how a deduction is composed; which term is common and middle, and which [terms] are extremes and proper; also how many deductive figures there are, and how many modes each one has; and what [features] the three [figures] hold in common, and what [features] are proper to each of them.

§10 So it is now the moment to discuss each of the deductive modes of the figures – what is proper and special to each. But before getting on to them, you must realise that Aristotle sets out the premises of the deductions differently, and not as we do it. For example, we lay them out as follows: “all human is animal, all animal is substance, therefore all human is substance”. But Aristotle begins not by making “human” the subject of the common [term], but rather by making “substance” the predicate of the common [term]. He expresses it as follows: “substance [holds] of every animal, animal [holds] of every human, therefore substance [holds] of every human”. To be precise, he constructs his deductions using the letters of the alphabet. When B is the common [term], then A is the predicate, and G the subject.²¹ For example, “all G is B, all B is A, therefore all G is A”. This can be set out in the other way as “A [holds] of every B, B [holds] of every G, therefore A [holds] of every G”.²² This is the first mode of the first figure.

The second [mode] of this same figure is the one that we express as “all human is animal, no animal is stone, therefore no human is stone”. This same [mode] can be set out in the other way as “stone [holds] of no animal, animal [holds] of every human, therefore stone [holds] of no human”. The premise that we position first, he places second, and the [premise] that we [position] second, he positions first.²³ This latter [method] is the more accurate. We do it one way because we are defining things functionally, whereas he does it so as to show clearly which of the two [terms] is predicated of which. We [arrange them] according to common custom, while his is rather to explain the underlying nature, for there is no doubt that the major premise naturally comes first, while the minor premise comes second. This is [the end of the section]²⁴ about understanding how Aristotle constructs deductions.

§11 Where Aristotle constructs deductions using the letters of the alphabet, some commentators use names, [such as] “needful, right, good, evil”. For example, “all needful is right, all right is good, therefore all needful is good”, or again, “all right is good, all good is not-evil, therefore all right is not-evil”.²⁵ Seeing as these seem to be rather obscure, they are not especially illuminating for those who are just beginning the subject. But for us, our aim is rather to formulate explanations and interpretations, so we prefer to compose [deductions] by using genera and species beneath the first category, starting from first figure modes and then successively expounding each of [the modes] of the second and third [figures].

²¹ G is the third letter of the Syriac, as of the Greek, alphabet.

²² For these two ways of expressing predication, see *An. Pr.* 24 b 27; *Alexander of Aphrodisias: On Aristotle Prior Analytics 1.1-7*, trans. by J. Barnes *et alii*, Bloomsbury, London 2014, p. 28.

²³ Throughout the treatise, Severus sets out the minor premise before the major, as does Ibn Sīnā after him. This seems to be common for writers who place the subject before the predicate in the setting-out of premises. It is a feature of western tradition both to mention predicate before subject and major premise before minor.

²⁴ Lit: “these are for understanding...etc”. Severus uses this expression often to bring topics to a close.

²⁵ Similar is e.g. Alex. Aphrod., *In An. pr.*, pp. 46.25ff. Wallies.

§12 So there are nine modes in the first figure, four of which are non-demonstrable and five are demonstrable.²⁶ *The first:*²⁷ from a universal affirmation as the minor and a universal affirmation as the major, a universal affirmation is straightforwardly²⁸ deduced, e.g. “all human is animal, all animal is substance, therefore all human is substance”. *The second:* from a universal affirmation as the minor and a universal negation as the major, a universal negation is straightforwardly deduced, e.g. “all human is animal, no animal is stone, therefore no human is stone”. *The third:* from a particular affirmation as the minor and a universal affirmation as the major, a particular affirmation is straightforwardly deduced, e.g. “some animal is human, all human is rational, therefore some animal is rational”. *The fourth:* from a particular affirmation as the minor and a universal negation as the major, a particular negation is straightforwardly deduced, e.g. “some rational is human, no human is stone, therefore some rational is not stone”. *The fifth:* from a universal affirmation as the minor and a universal affirmation as the major, a particular affirmation is deduced by conversion, e.g. “all human is animal, all animal is substance, therefore some substance is human”. *The sixth:* from a universal affirmation as the minor and a universal negation as the major, a universal negation is deduced by conversion, e.g. “all human is animal, no animal is stone, therefore no stone is human”. *The seventh:* from a particular affirmation as the minor and a universal affirmation as the major, a particular affirmation is deduced by conversion, e.g. “some animal is human, all human is rational, therefore some rational is animal”. *The eighth:* from a universal negation as the minor and a universal affirmation as the major, a particular negation is deduced by conversion, e.g. “no stone is human, all human is rational, therefore some rational is not stone”. *The ninth:* from a universal negation as the minor and a particular affirmation as the major, a particular negation is deduced by conversion, e.g. “no stone is human, some human is rational, therefore some rational is not stone”. This is [the end of the section on] the first figure modes.

§13 However, the first four are called non-demonstrables, perfect, and primary. “Non-demonstrable” means that they do not need to be demonstrated with a proof. “Perfect” means that they are sufficient by themselves for their own justification.²⁹ “Primary” means that they are also the sources and origins of the generation and procreation of the other [modes], and of [their] justification and demonstration.

The other five are the demonstrables and stand in need of the primary [modes] for their own justification, since they derive their generation from them, the 5th being generated from the 1st, the 6th from the 2nd, and the 7th from the 3rd. The combination [of premises] remains the same while the conclusion is converted. The 8th and 9th are both generated from the 4th, albeit in different ways: the premises are converted while the conclusion remains the same, because it is a particular negation. As has been demonstrated, not all [deductions] convert. Those [that do so] may be readily known in brief via the table below:³⁰

²⁶ Non-demonstrable” refers to those syllogisms that do not stand in need of external proof, their validity being self-evident. “Demonstrable” are those “imperfect” deductions that require others for their proof. Severus’s terminology relates closely to Aristotle’s ἀναπόδεικτος. See, for instance, Alex. Aphrod., *In An. pr.*, pp. 6.26; 24.1-10 Wallies. In much of his treatise Severus uses the term “non-demonstrables” as the preferred way of referring to the four perfect syllogisms in the first figure.

²⁷ In M, this section has been transposed into the form of a table. LC represent what must be the original layout in continuous prose.

²⁸ i.e. ὀρθῶς, which Severus contrasts with “by conversion” (ἀντιστροφῆ) in the fifth to ninth modes.

²⁹ I.e. πῶς in the sense used by Alex. Aphrod., *In An. pr.*, pp. 43.6ff. and Arist., *An. Pr.* 68 b 8-14.

³⁰ M omits the following tables of §14, and instead refers the reader back to the previous list (§12) which, in M, is tabulated.

§14³¹

<i>Non-demonstrable modes of the 1st figure</i>	<i>Both generation and analysis of the demonstrable modes of that [1st] figure</i>
1 all human is animal all animal is substance all human is substance	5 all human is animal all animal is substance some substance is human
2 all human is animal no animal is stone no human is stone	6 all human is animal no animal is stone no stone is human
3 some animal is human all human is rational some animal is rational	7 some animal is human all human is rational some rational is animal
4 some rational is human no human is stone some rational is not stone	8 no stone is human all human is rational some rational is not stone
	9 no stone is human some human is rational some rational is not stone

§15 Now [these modes] may also be analysed back again into those same ones from which they were generated. Producing the [premise] combination of the fifth [mode], because it is identical to the first, will necessarily also produce the conclusion of the first, given that this [latter] by all accounts converts into its corresponding particular [premise], which is the conclusion of the fifth. The sixth does likewise on account of the second, and the seventh on account of the third. Moreover, producing the combinations of the eighth and ninth modes will necessarily also produce the conclusion of the fourth [mode], for the [combination of premises] of the fourth converts into the eighth and the ninth, with the first [premise] becoming the second and the second the first, by way of an exchange of terms. Whenever this [combination] is produced, the conclusion is also necessarily produced as well.

This is [the end of the section] about the composition of the nine modes that belong to the first figure; and also about the analysis of those five latter ones, which depend upon the first four, the ones called the non-demonstrables.

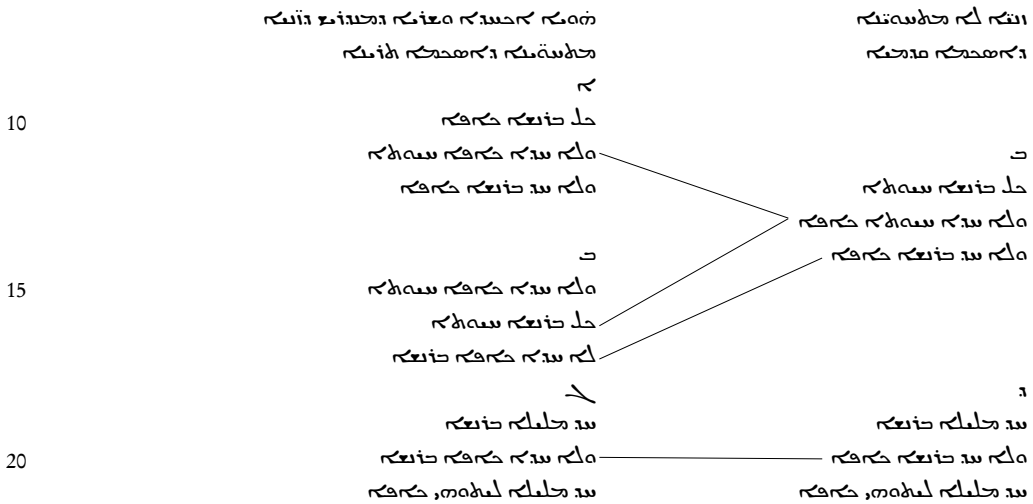
§16 We are come now to the second figure modes. There are four second figure modes.³² *The first*: from a universal affirmation as the minor and a universal negation as the major, a universal negation is deduced, e.g. “all human is animal, no stone is animal, therefore no human is stone”. *The second*: from a universal negation as the minor and a universal affirmation as the major, a universal negation is deduced, e.g. “no stone is animal, all human is animal, therefore no stone is human”. *The third*: from a particular affirmation as the minor and a universal negation as the major, a particular negation is deduced, e.g. “some rational is human, no stone is human, therefore some rational is not stone”. *The fourth*: from a particular negation as the minor and a universal affirmation as the major, a particular negation is deduced, e.g. “some stone is not animal, all human is animal, therefore some stone is not human”. This is [the end of the section about] all the second figure modes.

³¹ In C, the two columns and the nine first figure modes are correctly set out and linked to each other to show the patterns of reduction of modes 5-9 to modes 1-4. In L, the column headings are given, but the nine modes have been set out incorrectly and with no relationships shown. It seems most likely that the copyist of L did not understand what was intended in his exemplar. For the sake of clarity and likely faithfulness to Severus, this edition follows C for this table.

³² M lays out the rest of this section in the form of a table.

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1 M | 2 C | 3 M | 4 C | 5 L | 6 L | 7 M | 8 L | 9 L | 10 L | 11 L | 12 L | 13 L | 14 L | 15 L | 16 L | 17 L | 18 L | 19 L | 20 L | 21 L | 22 L | 23 L | 24 L | 25 L

§17 While the first and second modes are generated from the second [mode] of the first [figure], the third is generated from the fourth [mode] of the first [figure]. For when a universal negation that is in a non-demonstrable [deduction] is converted, it generates the second figure.³³ If the universal negation in the second non-demonstrable [mode of the first figure] is converted, and is placed in second [position], then it generates the first [mode] of the second [figure]; but if [it is placed] in first [position], [then it produces] the second [mode] of the second [figure]; and if [the universal negation] of the fourth non-demonstrable [mode of the first figure] is converted, then it generates the third [mode] of the second [figure].³⁴ However, this will be understood clearly in summary from this table below.³⁵

§18

<i>Non-demonstrable modes of the 1st figure</i>	<i>Both generation and analysis of the demonstrable modes of the 2nd figure</i>
	1
	all human is stone
2	no stone is animal
all human is animal	no human is stone
no animal is stone	2
no human is stone	no stone is animal
	all human is animal
	no stone is human
4	3
some rational is human	some rational is human
no human is stone	no stone is human
some rational is not stone	some rational is not stone

§19 Now these [second figure modes] may also be analysed back again into those [first figure modes] from which they were generated. For example, if the universal negation in the modes of the second [figure] is converted by an exchange of terms, then you would find the first and the second [modes in that second figure] being analysed into the second [mode] of the first [figure], whereas the third [mode of the second figure] is analysed into the fourth [mode] of the first [figure].³⁶ However, in the first and third [modes of the second figure] their conclusions are not converted at all, whereas when the second [mode] is converted, its conclusion is also analysed.

³³ In other notation, the EAE form of *Celarent* (first figure, second mode) produces also the EAE and AEE forms (*Cesare* and *Camestres*) in the second figure, while the first figure EIO form (*Ferio*) produces also EIO in the second figure (*Festino*).

³⁴ 1) if the major premise (E) of *Celarent* is converted and placed in second position (i.e. as the major premise, the way Severus arranges his deductions with the minor in first place), then the result is a *Cesare* deduction; 2) if the major premise (E) of *Celarent* is converted and placed in first position (i.e. as the minor premise), then the result is a *Camestres* deduction; 3) if the major premise (E) of *Ferio* is converted and placed in second position (i.e. as the major premise), then the result is a *Festino* deduction.

³⁵ M has already tabulated the second figure (§17) together with the relationships to the first figure marked with lines connecting the related modes. The following table (§18) is therefore omitted in M.

³⁶ ἀντιστροφή δὲ ὅρων or ἐναλλαγὴ τῶν ὅρων (e.g. Alex. Aphrod., *In An. pr.*, p. 29.23 Wallies) refers to a conversion only of the terms within a single premise. If the terms of the universal negation (E) that is the major premise of a *Cesare* syllogism are interchanged, a new E premise is formed, and the resulting syllogism is a *Celarent* (1st figure, 2nd mode). *Camestres* is reduced to *Celarent* in the same way, and *Festino* to *Ferio*.

§20 The fourth mode of the second figure does not analyse back into the prior [modes] and [so] proved, neither does get generated or “born” [in that way], for it contains a particular negation, which can never convert, and a universal affirmation, [which] converts into a particular affirmation; and no deduction can arise from a pair of particular premises, as has been stated earlier. But it does analyse back again per impossible and is [so] proved by way of the first non-demonstrable mode.

For example, suppose we want to prove, by way of the fourth [mode] of the second [figure], that some stone is not human, I mean as it was written above: “some stone is not animal, all human is animal, therefore some stone is not human”. Given that the opposite [of this latter conclusion] cannot possibly be true, because of the first [mode] of the first non-demonstrable [figure], which would state “all stone is human”, and that it has also been supposed [as per the second premise above] that “all human is animal”, then a false [proposition] is deduced, viz. the conclusion of a first non-demonstrable, that “therefore all stone is animal”. This is paradoxical, i.e. both absurd and impossible, for it was supposed that “some stone is not animal” – which is true.³⁷ Therefore, a universal affirmative is not deduced from the combination that we supposed; what is deduced rather is a particular negation. This is all made as clear as possible in the table below:³⁸

<i>Non-demonstrable mode of the 1st figure</i>			<i>Generation of a demonstrable mode of the 2nd figure by means of reduction per impossible</i>
1			4
all stone is human			some stone is not animal
all human is animal	contra	dictory	all human is animal
all stone is animal	contra	dictory	some stone is not human

§21 The rest of the second figure is also generated naturally out of the other non-demonstrable [modes] in exactly the same pattern. Let the non-demonstrables be set out first, and then over against the conclusion let the opposing premise be laid out [with the word] “contradictorily”.³⁹ Beneath the second of the non-demonstrables... The conclusion of this will be that which is next to the first of the non-demonstrables...⁴⁰

Next to the first non-demonstrable mode should be arranged the fourth [mode] of the second [figure]; next to the second [non-demonstrable] should be the third [of the second figure]; next to the third should be the second; next to the fourth should be the first. This is made clear by means of this table below.⁴¹

³⁷ M omits the words “which is true” (as well as the word “false” in the preceding sentence) – appositely, because it is not the truth value of the propositions that is at stake, but the validity of the forms. The reverse of the conclusion of the fourth mode cannot be true together with its own minor premise – so if the minor premise is true, then the conclusion must be true. Severus has correctly explained the *per impossibile* proof for the fourth mode of the second figure. The words “which is true” might be a scribal gloss, or may go back to Severus himself – both al-Fārābī (e.g. *Syllogism* [above, n. 14], ch.15) and Ibn Sīnā sometimes make include irrelevant remarks about an assumption being true when they are explaining *reductio ad absurdum* proofs (W. Hodges, p.c.).

³⁸ Severus now lays out a rather neat way of schematising the *reductio per impossibile* of the *Baroco* deduction (second figure, fourth mode). He always sets out the minor premise first and then the major; so by placing a *Baroco* deduction alongside and aligned against a *Barbara* deduction (first figure, first mode), then it will be visible that the conclusion of each deduction will equate to the converse of the first premise of the other. Of course, the diagram in itself does not demonstrate the proof of the *reductio per impossibile*, but it does demonstrate the symmetry of it.

³⁹ In the table below, this word ἀντιφαστικῶς links these pairs of contradictory premises.

⁴⁰ The text seems to be corrupt and something may be missing.

⁴¹ These four tables follow the pattern of the previous one, for the third mode of the second figure (*Festino*) may be proved valid by way of a *reductio per impossibile* with the second mode of the first figure (*Celarent*), and so forth, as Severus lays it out in tables. M and C have both made errors in these tables. L is accurate, albeit that the very compressed nature of its text has led to some confusion over what must have originally been the column headings, which has in turn caused L to place the tables in §20 and §21 in a single space. Severus’s original layout remains tolerably clear, however.

<i>Non-demonstrable modes</i>		<i>2nd [figure] modes</i>	
1			4
all stone is human			not all stone is animal ⁴²
all human is animal	contra	dictory	all human is animal
all stone is animal	contra	dictory	not all stone is human
2			3 ⁴³
all rational is stone			some rational is human
no stone is human	contra	dictory	no stone is human
no rational is human	contra	dictory	not all rational is stone
3			2
some stone is human			no stone is animal
all human is animal	contra	dictory	all human is animal
some stone is animal	contra	dictory	no stone is human
4			1
some human is stone			all human is animal
no stone is animal	contra	dictory	no stone is animal
not all human is animal	contra	dictory	no human is stone

§22 For the opposite of a conclusion, when combined with one of its two premises, viz. the second,⁴⁴ certainly yields a conclusion that is the opposite of its first [premise]. For when a conclusion is denied by supposing its opposite, then it is not possible for both of its premises to continue together to be [a deduction]. So if one of the two [original premises], viz. the second, is taken together with the opposite of the conclusion, then necessarily the other [premise], viz. the first, will also be denied, on account of the opposite of the other conclusion, the one that arises therefrom⁴⁵.

So it turns out that the opposite of the universal affirmative conclusion of the first non-demonstrable [mode], viz. a particular negation, together with its second premise, which is a universal affirmation, yields as conclusion the particular negation which is the opposite of the first [premise] of the first [non-demonstrable mode], and that is the fourth mode of the second [figure]. It is the same with the others, as was demonstrated earlier via the table above.

§23 Now these [second figure modes] may also be analysed back again into those [first figure modes] from which they were generated, by means of reduction *per impossibile*. Let the fourth mode of the second figure be set out first, then over against its particular conclusion let the opposite universal affirmation be placed,⁴⁶ and underneath this let its [i.e. the fourth mode's] universal affirmation be set out, the same one as has already been set out.⁴⁷ Since from this [process] is generated the combination be introduced.

⁴² In the previous few chapters, O-type premises were expressed formally as “some A is not B”. For the purposes of making the proof *per impossibile* clear, Severus here prefers to a negative particle to the A-premise: “not all A is B” (see §4-5 above, and note). Aristotle himself assumes that the premise “N does not belong to some X” and “N does not belong to every X” are equivalent for the sake of demonstrating syllogistic proofs *per impossibile* (S. Read, “Aristotle’s Theory of the Assertoric Syllogism”, online < https://www.st-andrews.ac.uk/~slr/The_Syllogism.pdf>, pp. 1-26, part. p. 10).

⁴³ C repeats the fourth mode (*Baroco*) here by mistake, leading to the third (*Festino*) taking the place of the second (*Camestres*), which is then omitted completely.

⁴⁴ I.e. the major premise - recall that Severus always treats the minor as the “first” premise and the major as the “second”, the opposite arrangement to what is usually found in modern summaries of the syllogistic system.

⁴⁵ I.e. from the first figure syllogism that is produced when combining the opposite of this fourth mode’s conclusion with its own major premise.

⁴⁶ I.e. its contradictory opposite, the A-premise that results from the deletion of the negative particle on the O-premise.

⁴⁷ I.e. the universal affirmation that *Baroco* and *Barbara* share as their major premise; recall that Severus always sets out the minor premise first and then the major.

For example, the positing of the premise-combination of the fourth [mode] of the second [figure] yields the conclusion that “not all human is animal”. Even though this is not true, it yields a true [proposition], viz. the other member of the contradiction,⁴⁸ which is the first [premise] of the first non-demonstrable [mode], which says that “all human is animal”. [The first mode of the first figure] also produces “all animal is substance”, which is the second [premise] of the fourth [mode] of the second [figure], which is also true. So the positing of “all human is animal” together with “all animal is substance”, necessarily produces also the conclusion of the first non-demonstrable mode, which is “all human is substance”. The first [premise] of the fourth [mode] of the second [figure], that “not all human is substance”, is already given; so then opposites arise in parallel together, something that is an impossibility.⁴⁹ Therefore positing the premises of the first non-demonstrable [mode] also functions as proof by means of its conclusion.

In the same way also the third mode [of the second figure] is analysed into the second [mode] of the first [figure], and the second [mode of the second figure] into the third [mode] of the first [figure], and the first [mode] of the second [figure] into the fourth [mode] of the first [figure], via re-analysis per impossibile. This is also made much clearer from this table below.

§24

<i>Analysis of the second figure modes by means of reduction per impossibile</i>			<i>Non-demonstrable modes of the first figure</i>	
[Mode] 4			[Mode] 1	
Not all human is substance	contra	dictory	All human is animal	
All animal is substance			All animal is substance	
Not all human is animal	contra	dictory	All human is substance	
[Mode] 3			[Mode] 2	
Some human is stone	contra	dictory	All human is animal	
No animal is stone			No animal is stone	
Not all human is animal	contra	dictory	No human is stone	
[Mode] 2			[Mode] 3	
No animal is rational	contra	dictory	Some animal is human	
All human is rational			All human is rational	
No animal is human	contra	dictory	Some animal is rational	
[Mode] 1			[Mode] 4	
All rational is stone	contra	dictory	Some rational is human	
No human is stone			No human is stone	
No rational is human	contra	dictory	Not all rational is stone	

And that [is all] about both the composition and the analysis of the four modes in the second figure.

⁴⁸ An expression found in the commentators: θάτερον μέρος τῆς ἀντιφάσεως (Alex. Aphrod., *In An. pr.*, p. 260.17 Wallies).

⁴⁹ By the generic term “opposites” is here meant “contradictory opposites” since an A-premise and an E-premise cannot both hold at the same time and cannot fail to hold at the same time. The commentators also frequently use the generic ἀντικείμενα to refer to premises that are in fact opposed in a contradictory manner (ἀντιφαστικῶς).

§25 Let us move on, then, and discuss also both the composition and the analysis of the modes in the third figure. We shall make good on our word just as we promised. In the third figure there are six modes in all.⁵⁰

The first:⁵¹ from a universal affirmation as the minor and a universal affirmation as the major, a particular affirmation is deduced, e.g. “all human is animal, all human is rational, therefore some animal is rational”. The second: from a particular affirmation as the minor and a universal affirmation as the major, a particular affirmation is deduced, e.g. “some human is animal, all human is rational, therefore some animal is rational”. The third: from a universal affirmation as the minor and a particular affirmation as the major, a particular affirmation is deduced, e.g. “all human is rational, some human is animal, therefore some rational is animal”. The fourth: from a universal affirmation as the minor and a universal negation as the major, a particular negation is deduced, e.g. “all human is rational, no human is stone, therefore some rational is not stone”. The fifth: from a particular affirmation as the minor and a universal negation as the major, a particular negation is deduced, e.g. “some human is rational, no human is stone, therefore some rational is not stone”. The sixth: from a universal affirmation as the minor and a particular negation as the major, a particular negation is deduced, e.g. “all human is animal, not all human is white, therefore not all animal is white”.

§26 These are all the modes of the third figure. However, the first, second, and third modes are generated from the third non-demonstrable, whilst the fourth and fifth [are generated from] the fourth non-demonstrable. Now when a particular affirmation in the non-demonstrables is converted, it generates a third figure [deduction]. If the particular affirmation in the third non-demonstrable were converted into a universal affirmation, it would generate the first mode of the third [figure];⁵² but if [it is converted] into a particular [affirmation] and arranged as the first [premise], then [it generates] the second [mode] of the third [figure],⁵³ and if [arranged] as the second [premise], then [it generates] the third [mode] of the third [figure].⁵⁴ Moreover, if you convert the particular [premise] of the fourth non-demonstrable into a universal affirmation, then it generates the fourth [mode] of the third [figure], and if [you convert it] into a particular [affirmation], then it [generates] the fifth [mode] of the third [figure]. This is also made as clear as possible in this table below.

⁵⁰ In the third figure, Severus lists the valid modes in an order different from that found in most Greek and Latin summaries and handbooks. Severus's order for the modes is: 1) *Darapti*, 2) *Datisi*, 3) *Disamis*, 4) *Felapton*, 5) *Ferison*, 6) *Bocardo* - grouped according to the first figure modes to which they reduce. As before, he continues always to list the minor premise first before the major.

⁵¹ M presents the third figure in tabular form, its text does not here follow that of the other mss.

⁵² *Darapti* is reduced to *Darii* for the sake of its proof. The way Severus expresses it is the reverse of a reduction proof; rather than stating that *Darapti* reduces by *conversio per accidens* to *Darii*, he states that *Darii* generates *Darapti*, by altering its I-premise to an A-premise.

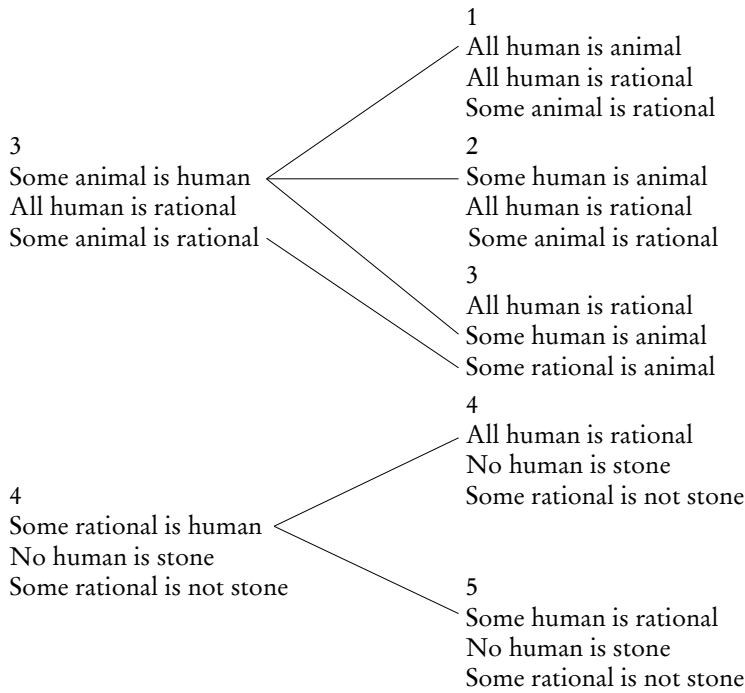
⁵³ If the I in a *Darii* syllogism is converted simpliciter, and placed as the new *minor* premise, the result is *Datisi*; or, in other words, the proof of *Datisi* is via simple conversion + *Darii*.

⁵⁴ Likewise, if the I in a *Darii* syllogism is converted simpliciter, and placed as the new major premise, the result is *Disamis*.

§27

*Non-demonstrable
modes of the first figure*

*Both the generation and the analysis of the
demonstrable modes of the third figure*



§28 Now these [third figure modes] may also be analysed back again into those [first figure modes] from which they were generated. For example, if you convert the universal affirmation in the first and the fourth [modes] of the third [figure], and the particular affirmation in the other [modes] of the third [figure], you find that, in the case of the first, second and third [modes], they are analysed into the third [mode] of the first [figure], and in the case of the fourth and fifth [modes], [they are analysed] into the fourth [mode] of the first [figure], excepting only that in the case of the third [mode], when you do the conversion, its conclusion is analysed as well, whereas with the others, the conclusion does not need to be converted at all.⁵⁵

§29 The sixth mode of the third [figure] is generated from the first non-demonstrable mode, by way of the negative method [described] above. Because of this it is only analysed back again *per impossibile*, just like the fourth mode of the second figure. For example, let the sixth [mode] of the third [figure] be set out as it was written above: “all human is animal, not all human is white, not all animal is white”. If this were not true, it would still be able to yield the other member of the contradiction, which would then be true, viz. that “all animal is white”. Furthermore, the [statement] that “all human is animal” has already been supposed to be true. This then generates a premise-combination like that of the first mode of the first figure, which stands as: “all human is animal, all animal is white, therefore all human is white”. The latter [proposition] is wholly impossible, since it was supposed to be true that “not all human is white”. And so let us analyse the supposition to which this latter one relates. Now it relates to the stated [premise], “all animal is white”. Because the latter is false, the [statement that] “not all animal is white” is true, which is the very thing that was set out to be proved from the start.

⁵⁵ In the case of *Disamis*, the conclusion is the converse of the conclusion of *Darii*, but in all the other 3rd figure modes, the conclusions precisely match the conclusions of the 1st figure modes to which they reduce.

That it is true is therefore proven by a reduction *per impossibile* in this way, when the sixth mode of the third figure, which states that “all human is animal, not all human is white, therefore not all animal is white” is analysed back into the first [mode] of the first [figure]. Again, this is made as clear as possible in the table below.

<i>Non-demonstrable mode of the 1st figure</i>	<i>Both generation and analysis of the 6th demonstrable mode of the 3rd figure</i>
All human is animal	All human is animal
All animal is white	Not all human is white
All human is white	Not all animal is white

This is [the end of the section on] the composition and analysis of the six modes in the third figure.

§30 So those are all the modes of the categorical deductions in the three aforementioned figures, which we have set down briefly and as clearly as possible, in line with Aristotle's teaching in the *Analytiks*. But the student should first realise that this book of *Analytiks* is not self-standing, rather just as the book of *Categories*, which teaches about simple namings, leads us on towards the *De Interpretatione*, and the *De Interpretatione*, which is about the initial composition of simple names, in turn leads us up towards this book of *Analytiks*, so also this book of *Analytiks*, which teaches us about the composition and analysis of categorical deductions, leads us up to using the logical treatise which [is called] the book of *Apodeictics*, which is itself the goal and high point of the whole art of logic, i.e. the instrument⁵⁶ of all philosophy, which is, according to a neat saying or definition of Plato's, “assimilation to God as far as this is possible for people”.

§LA colophon The end of this treatise, which briefly demonstrates the deductions in Aristotle's *Analytiks*. It was written by the reverend Mar Severus, bishop of Qenneshrin.⁵⁷

§C colophon The end of the written explanation of the book of *Analytiks*, which has been arranged as clearly as possible by Sebokht, who is called Severus.

§D colophon The end of the theory about *Analytiks*, written by Severus Sebokht in year 949 of the Greeks,⁵⁸ in the month Haziran, in the very year that the king of Byzantium, or Constantinople, came to Amid and went down from Amid to Babylon. It was written by the hands of a poor, weak, blameworthy and odious man, Anastasius, a priest by name, albeit in fact very far away indeed and unworthy that his name should be mentioned; yet [he did it] for the sake of the pure prayers of the readers, that they may offer a prayer of forgiveness for my humble self. [I wrote it] in the holy church of the Mother-of-God in Amid, in the south cell on the edge of the courtyard. I request, therefore, that if any brother who comes across this book should find a fault or a mistake, he should correct it as far as he can, since it is [due to] not me the scribe, but rather a confusion of the pages; and the one who forgives shall be forgiven by God. Amen.

§M colophon The end of the theory about *Analytiks*, written by Severus Sebokht. He who finds [this book] and has prayers, let him offer them for Ephrem who copied [it] in the holy monastery of Za'faran, which is called the Monastery of Mar Hananya and Mar Augen, and which is the apostolic seat of [the patriarch of] Antioch, in the year 1886 of the Greeks.⁵⁹

⁵⁶ Syr: *Organon*.

⁵⁷ On Qenneshrin, see n. 1, p. 89. C has a slightly different subscription: “The end of the explanation of the *Analytiks* which was arranged so as to make things as clear as possible by Sebokht, who is called Severus”. C adds the author's title: “Abbot Mar Severus”.

⁵⁸ AD 638. But see above, Introduction.

⁵⁹ AD 1575.