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Ciro Giacomelli | Padua

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Ciro Giacomelli University of Padova 

ciro.giacomelli@unipd.it

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Article

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Abstract

In this paper, I shall examine the available codicological evidence regarding the earliest transmissions of Aristotle's *Organon*, a compilation of logical works crafted during late antiquity. This in-depth examination of the earliest extant manuscripts indicates that the *Organon* circulated in a two-volume edition. Each volume contained almost the same amount of text: the first comprised Porphyry's *Introduction*, Aristotle's *Categories*, *On Interpretation*, and the two *Analytics*, while the second contained Aristotle's *Topics* and *Sophistical Refutations*.

Keywords

Codicology, codex, scroll, Greek manuscripts, Aristotle, *Organon*, ancient manuscript 'editions'

1. Introduction

The transition from scroll to codex is one of several bottlenecks that has influenced our knowledge of the transmission of ancient texts. The codex – the form we are still familiar with – was a radically different book form to the scroll. The introduction of the codex at the beginning of the Christian era led scholars, at least in the past, to believe that the new form and the new religion were interconnected. This transition took place in a time of great political and cultural change and helped shape the passage from Classical Antiquity to Late Antiquity, and into the early Middle Ages.

As often happens, reality is more nuanced than philological reconstructions. The new book form coexisted for centuries with the old one, and there is little evidence, if any, supporting the hypothesis that the passage from one to the other implied a selective process of any significance, i.e., a process which would have affected the canon of ancient literature known to us today. The loss of ancient texts took place when the codex was already well-established and had little to do with material circumstances. What mattered – culturally and historically – was preserved and copied; the form of its transmission was of less importance.¹

¹ For a classical presentation of the issue, see Reynolds and Wilson 1991, 34–36: '[t]he change from roll to codex involved the gradual but wholesale transference of ancient literature from one form to another. This was the first major bottle-neck through which classical literature had to pass'. Cavallo 1986 offers a broader treatment of the problem, with particular reference to Greek texts. The studies collected in Blanchard 1989 are still a crucial reference on the topic. On the supposed Christian origin of the codex, see the critical assessment in Bagnall 2009 (with all previous literature).

In terms of the transmission of texts, the passage from scroll to codex is not as important as believed in the past; however, the transition played a significant part in the formation of the corpora of ancient works – i.e., the mostly late-antique or medieval clusters of books and/or shorter texts transmitted together. The part it played in forming such *corpora* is still in need of further investigation. When the scroll was the prevailing support for texts, long works consisting of several books (Greek βιβλίον, *biblion*, a word used for both the textual unit and the physical reality of each scroll) were unitary only in the author's intention. Each section corresponded to a separate scroll, often, but not necessarily, stored in the same casket. Thucydides' *Historiae* or Xenophon's *Hellenika* are good examples of such texts.²

The restricted capacity of the scroll occasionally led ancient scholars and scribes to introduce reading-aids to help the reader to study the text in the correct sequence. Such aids included elaborate subscriptions at the conclusion of a textual unit – a single book – which then introduced a new unit or book. The scribes had recourse to the system of *reclamantes*, i.e., catchwords which allowed the reader to find the right scroll in order to continue reading the text in the correct sequence.³ Other more purely bibliographical aids were the so-called stichometries and the *pinakes* (Greek πίνακες). The former are detailed subscriptions stating the measures (or number of lines, *stichoi*) of each book – a matter possibly related to both philological and practical needs, since the scribe was paid based on the length of the texts he copied; the *pinakes* were the indexes referring to the chapters included in the scroll, detailing their content. Such aids allowed ancient readers to find what they were looking for without having to unroll the whole book.⁴

Like the papyrus scroll, the earliest codices were made of papyrus leaves, which were often cut in odd shapes; these were the same leaves as used in the production of scrolls; they were relatively limited in size and the texts were normally written in narrow columns. Over time, the potential of the new book form became more evident, and it developed into larger manuscripts, consisting of several quires.⁵ Parchment became more common, and long-line layout, allowing for a more capacious page, was more frequently used.⁶ The more mature codex could finally house entire works under a single cover, giving unity to the once scattered scrolls/*biblia*.⁷

Traces of the passage from single-scroll transmission to that found in late-antique codices can still be detected in medieval manuscripts: the practice of writing detailed *pinakes* and indicating where a new textual unit begins and ends, often accompanied by a doxology and decorated bars, remained common throughout the Byzantine millennium, and was even employed when the scroll

² Cf. Canfora 2002, 59–67.

³ See Corcella 2013, 43–62 (with previous literature).

⁴ On stichometry, and bibliometric subscription in general, see Del Mastro 2014, 23–30 and Corcella 2013, 31–35. For the *pinakes* and their bibliographical role, see the general overview offered by Acquafredda 2015, 13–18 (with examples taken from classical, late-antique, and Byzantine texts).

⁵ See, for example, Boudalis 2018, 45–48.

⁶ See Turner 1977, 35–36. The multi-column layout, clearly modeled on the one in papyrus scroll, remained the standard for high-end books also in late antiquity (cf. Marichal 1990).

⁷ On the typology of the early codex and its later development, see Turner 1977, which remains the only complete survey of the extant documents.

was long forgotten, surviving as a liturgical fossil. Other obsolete devices, such as catchwords and stichometric subscriptions, are rarer, but they can still be found even in much later manuscripts, where they were religiously copied – often in a very corrupted form – by scribes who most likely did not know their function.⁸

The passage from scroll to the late-antique codex had a significant impact in the ways in which texts were copied and transmitted. Long works, such as those of Polybius, Diodorus and Livy, could not be copied into a single codex and had to be transmitted in more than one physical unit. To this day, each of these works is too large to fit into a single printed volume. Consequently, they were originally transmitted in *pentads* (groups of five books) and *decades* (groups of ten books). Therefore, the surviving portions and the lost parts of these extensive works always form sequences of five or ten books. As for the late-antique editions, we can still see how they were structured simply by identifying what has been lost and what has survived.⁹

Since the majuscule script was the standard book-script in the early days of codices, the capacity of a late-antique and proto-Byzantine codex was not as large as that of later examples; the latter were produced when the minuscule script was already commonly used in the production of literary manuscripts. The minuscule script was originally limited to documents and personal papers and its use in literary manuscripts was another rather slow process that probably started in the early ninth century CE.¹⁰ Traces of the passage from the late-antique codex to a more capacious format – admittedly less striking than those detectable for the passage from the scroll to the codex – can still be observed in the oldest surviving minuscule manuscripts. Homogeneous sequences of texts, originally forming a single codex, can be reconstructed by looking at the layout of each section of a later manuscript, and by paying close attention to the codicological gaps marking the passage from one to the other.¹¹

2. The early transmission of Aristotle's logical treatises and the formation of the *Organon*

In this paper, I shall try to outline the earliest transmission of Aristotle's treatises on logic and theory of argumentation, focusing on the material aspect of the oldest manuscripts transmitting them. This account begins with the earliest papyrological evidence and takes us up to the middle-Byzantine manuscripts of the ninth to the eleventh century CE. A particularly important step in the transmission of this body of work is the production of the so-called *Organon*, the canonical collection of logical works transmitted under the name of Aristotle, arranged thematically from the particular (nouns) to the general (theory of argumentation), and opened by the crucial *Introduction* (the Εἰσαγωγή, *Eisagogé*). The latter was written by the Neo-Platonist Porphyry (third–fourth

⁸ On the traces of ancient stichometry in medieval books, see the old, but still valid, study by Burger 1892.

⁹ Cf. the data presented by Canfora 1974, 25–30.

¹⁰ On the passage from the majuscule to the minuscule script, see the important survey by Messeri and Pintaudi 2000 (part. 70, where it is stated that the passage was a rather long process, starting as early as the fourth century CE and culminating around the eighth century CE, when the cursive minuscule script was slowly adapted and introduced into the production of literary manuscripts). A more recent overview is offered by Ronconi 2021.

¹¹ See Ronconi 2007, 21–23.

century CE) and would have served as a companion to the whole set of treatises (*Categories, On Interpretation, Prior and Posterior Analytics, Topics, and Sophistical Refutations*).¹²

As I shall argue, the birth of the *Organon* – the tool of philosophical practice – is closely associated with the introduction of the codex as a standard book form. Prior to the introduction of the codex, the structure of the *Organon* was purely theoretical and was based mainly on the reading-lists of the Neo-Platonic school: the unitary transmission of the corpus was only possible when the new book form allowed for a comprehensive edition.

Our survey starts with the few relics of the oldest scrolls and codices transmitting the treatises attributed to Aristotle. It is a well-known fact that, while Plato's *Dialogues* enjoyed a remarkable success in Hellenistic Egypt, the works of Aristotle seem to have left only a few traces.¹³ This is not the place to review the scanty evidence concerning the earliest phases of the formation of the Aristotelian corpus, but it seems that the many, often contradictory, legends surrounding it – legends which shroud the fate of Aristotle's library in a certain amount of mystery – might have some foundation.¹⁴ It is a known fact that the works belonging to the now canonical Aristotelian corpus are little represented papyrologically, while some of those excluded from that canon – the most important of which is surely the *Constitution of the Athenians* – are transmitted only on papyrus. The treatises on logic attributed to Aristotle represent a partial exception to this rule, but there is a clear reason for their unusual success: these works were not copied in order to understand Aristotle's thought, rather, they had a place in the Neo-Platonic curriculum and served as an introduction to the study of Plato's *Dialogues*.¹⁵

Based on the evidence recorded in the *Trismegistos* (TM) database (last consulted July 2024), and not including commentaries or paraphrases, only four papyrus-fragments preserve passages of the works included in the Greek *Organon*.

- TM 59297, P.Ryl.Gr. 510 Ro + P.Giss.Bibl. 307 Ro, *Topics*, second century CE. Papyrus-roll.
- TM 63775, P.Harris 175a, *Categories*, second–third century CE. Papyrus-roll.
- TM 59302, P.Oxy.24.2403, *Categories*, beginning of the third century CE. Papyrus-roll.
- TM 59305, Berlin, Ägyptisches Museum und Papyrussammlung P 5002, *Posterior Analytics*, late fifth century CE. Papyrus-codex.

It should be noted that the earliest fragments of Aristotle's logical works come from scrolls, meaning that each of these ancient books most probably transmitted only a single treatise. This also implies that we have no evidence of any *Corpus-Überlieferung* of these works prior to the early-Byzantine

¹² A presentation of the *Organon* and its early history is offered by Brunschwig 1994. On the role of Porphyry's *Introduction* as a premise to the entire Aristotelian logical corpus, see Barnes 2003, particularly xiv–xxiii, and Chiaradonna 2016.

¹³ The overview of the papyrological evidence offered in Privitera 2011 should be approached with some caution.

¹⁴ See Primavesi 2007.

¹⁵ For the place occupied by the *Organon* in the Neo-Platonic curriculum see, for instance, Barnes 2005, exp. 48. On the reception of the *Organon* among Christian writers, and particularly in the works of Didymus the Blind (fourth century CE), see CPF I.1*, 289–305 and Zambon 2012, 151–174.

period. Only one of these four fragments comes from a late-antique papyrus-codex, viz., the Berlin papyrus 5002, written in a single column in a rather nice, yet now quite faint, sloping-majuscule that can be dated to the late fifth century.¹⁶ The Berlin fragment, consisting of the lower part of a single page of the original codex, transmits in its *recto* and *verso* a portion of the beginning of *Posterior Analytics* (71b19–72a38, with many lacunae), and is considered to be the ‘second page of a manuscript of this work’ (even if we have no indication of its possible collocation within a larger codex).¹⁷ In 2004, Christian Brockmann highlighted the importance of this fragment for reconstructing the early history of the transmission of the *Organon*. In his paper, Brockmann observed that the papyrus-fragment agreed with the testimony of a now fragmentary Byzantine manuscript – Sinai, Monastery of Saint Catherine, New Findings, gr. M(εμβράνινοϛ) 13 – against the text of several middle-Byzantine manuscripts of the tenth–eleventh century CE. The Sinaiticus consists of eleven parchment folios that can be dated paleographically to the late ninth–early tenth century CE, coming from a (possibly complete) edition of the *Organon* (see below, § 3). Such an agreement in wrong readings suggests that both the late-antique papyrus-codex and the Sinaiticus go back to the same ancestor.¹⁸ Even if it is impossible to reconstruct the original size of the Berlin-papyrus, it is tempting to see in this fragment one of the first witnesses of the Neo-Platonic *Organon* later inherited by the Byzantine textual-tradition and the forerunners of the Byzantine codices transmitting the logical corpus in its entirety.¹⁹

By looking at what remains of this late-antique codex, we are able to reconstruct the capacity of a single leaf (densely written on about forty-two lines per page), corresponding to approximately fifty-four lines of Bekker’s edition (that is: a page of the papyrus comprises about twenty-seven lines of Bekker’s edition). Given that the whole *Organon* consists of about 14.720 printed lines of text, the whole corpus, not including Porphyry’s *Introduction*, would have required a manuscript of at least 273 leaves, or 546 pages, a number which is clearly not impossible for Byzantine codices but is only very rarely documented in late-antique manuscripts made of papyrus leaves. If the Berlin papyrus really does come from a complete edition of the *Organon*, we may assume that it was probably subdivided into more than one tome.²⁰

¹⁶ Digitised images of the manuscript are accessible on the *Berliner Papyrusdatenbank* website <<https://berlpap.smb.museum/01570/?lang=en>>. For a new edition and palaeographical assessment of the fragment cf. *CPF* I.1*, 251–256, part. 252. On the late-antique and early Byzantine sloping majuscule and its different stylizations, see Cavallo and Maehler 1987, part. 38.

¹⁷ This was already noted by the first scholar who dealt with the fragment: Landwehr 1885, 21: ‘Da nun der diesem vorausgehende abschnitt 52 druckzeilen fasst, so ist die vermuthung nicht ungerechtfertigt, dass uns das zweite blatt eines codex erhalten ist, welcher die *Ἀναλυτικὰ ὄσπερα* umfasste’, see also Brockmann 2004, 51.

¹⁸ Brockmann 2004, 53–54.

¹⁹ Cf. Carlini 1989, xvi–xvii, on late-antique philosophical papyri in general. See also *CPF* I.1*252, where it is stated that this papyrus-fragment ‘is almost contemporary to the medieval archetype of the surviving manuscripts of the *Organon*’.

²⁰ See the measures illustrated in Turner 1977, 82–84. There is comparatively little information concerning the capacity of a late-antique codex and, since this book form consists of separate quires, its size was virtually unlimited, provided it was still possible to handle or bind. The largest known papyrus-codex (in Coptic) contained at least 638 pages (fourth or fifth century), and slightly later Latin parchment codices could be even bigger. We have no information concerning the actual placement of the Berlin-fragment within its original gathering and there are no legible traces of a signature and/or of page numbering.

3. The Byzantine Middle-Ages: the first witnesses of the corpus

When dealing with the *Organon* the first issue facing the philologist and the text-historian is the huge number of manuscripts in which the whole corpus or parts of it are transmitted. According to the most reliable approximations – a complete census is almost impossible – treatises from this body of logical texts are found in about 200 Greek manuscripts, most of which are still unexplored. Thus, it is not surprising that modern scholars have paid more attention to the few older witnesses of the *Organon* and neglected most of the later manuscripts.²¹

After the Venetian *editio princeps* of 1495,²² the first modern edition of this series of texts is the one included in the Aristotelian *opera omnia* printed by Immanuel Bekker in 1831. The German scholar based his text on two main manuscripts: A (Vatican City, BAV, Urb. gr. 35) and B (Venice, Biblioteca Nazionale Marciana, Gr. Z. 201), but he also mentions the readings of manuscript C (Paris, BnF, Coislin 330) and D (Paris, BnF, Grec 1843), though only selectively and very inconsistently.²³ Bekker's *recensio* was later expanded and improved in the monumental two-volume edition of the *Organon* prepared by Theodor Waitz in 1844/46, where twenty-six witnesses are described and at least partially collated.²⁴

All subsequent editions of the *Organon* or of single parts of it – including the most recent and reliable ones – are based on a very limited number of particularly old witnesses, the so-called *vetustissimi*, which I shall present briefly in this section of the paper.

The *vetustissimi*, in the broadest sense, are all the Greek manuscripts of the *Organon* copied before the twelfth century CE. This classification, as we shall see, is far from satisfactory and leaves room for improvement.²⁵

The earliest Byzantine manuscripts of the *Organon* are now fragmentary. They are Paris, BnF, Supplément grec 1362, two leaves transmitting passages from the *Sophistical Refutations* written in an attractive sloping ogival majuscule that is datable to the late eighth–early ninth century CE,²⁶ and a single leaf transmitting a fragment of *On Interpretation*, found in Damascus in the twentieth century and now lost, which is datable to the late ninth–early tenth century CE.²⁷

Three almost perfectly contemporary manuscripts open the list of the *vetustissimi*. The first one is *S*, the manuscript mentioned above, the Sinai, Monastery of Saint Catherine, New Findings, gr. M(εμβράνινος) 138. *S* consists of eleven parchment leaves transmitting fragments of *Categories*, *On Interpretation*, *Prior* and *Posterior Analytics*, and *Topics*. The script is a pure minuscule written

²¹ Maksimczuk 2022 has recently attempted a reappraisal of the so-called *recentiores*, i.e., all manuscripts copied from the thirteenth century onwards – but see also Maksimczuk 2023a – based on both textual and material evidence.

²² On the *editio princeps* of the *Organon* and its manuscript sources see Maksimczuk 2023b.

²³ Bekker 1831.

²⁴ Waitz 1844, 1–29.

²⁵ For a more detailed presentation of these manuscripts, see Brockmann 2019, 210–211 and Giacomelli 2023.

²⁶ On this manuscript, see Astruc and Concasty 1960, 684–685 and Harlfinger 1971, 40. On the sloping ogival majuscule, see Orsini (2019), 133–164. A good basis of comparison for dating the Paris-fragment is Paris, BnF, Grec 510, attributed to the second half of the ninth century.

²⁷ See Harlfinger 2000, 156, with plates xvii–xviii, and Weidemann 2014, xii–xiii.

The Vetustissimi

S = Monastery of Saint Catherine, New Findings, gr. M(εμβράνινος) 138

(late ninth–early tenth century CE)

n = Milan, Biblioteca Ambrosiana, L 93 sup. (second half of the ninth century CE)

A = Vatican City, BAV, Urb. gr. 35 (late ninth–early tenth century CE)

B = Venice, Biblioteca Nazionale Marciana, Gr. Z. 201 (dated 954 CE)

V = Vatican City, BAV, Barb. gr. 87 (tenth century, second half CE)

d = Florence, Biblioteca Medicea Laurenziana, Plut. 72, 5 (tenth century, second half CE)

in the ninth–early tenth century CE, with many layers of marginal and interlinear corrections added by later hands (twelfth–thirteenth centuries CE).²⁸

Second comes *n*, Ambrosianus L 93 sup., a late ninth century–early tenth century manuscript, containing what we shall start to call the first part of the *Organon* (see below § 4): *Categories*, *On Interpretation* and the two *Analytics*.²⁹

Neither *S* nor *n* were written in a way which would allow the addition of substantial scholia in their margins, and it is worth pointing out that, prior to these earliest examples, no late-antique or Byzantine codex was able to accommodate systematic exegetical paracontent of the kind first found in the third *vetustissimus*, codex *A*, Vatican City, BAV, Urb. gr. 35,³⁰ and which became common thereafter. The Urbinas was copied by the calligrapher Gregory for the then deacon Arethas (who later became bishop of Caesarea). The production of this manuscript can be precisely placed in the fifteen years between 888 CE, when Arethas was ordained deacon, and 902/903 CE, when he was consecrated bishop. Personally, I am inclined to think that Arethas commissioned this manuscript in the earlier part of this period rather than later. The core text occupies a small part of the written surface, while the scribe left ample margins for a full-scale commentary that Arethas himself copied in his typical small-sized majuscule up to fol. 18^r. The margins of the remaining folios were left blank for several centuries, and only in the late twelfth century CE did a second annotator start to add new materials taken from later commentaries.³¹

²⁸ On the Sinaitic fragments see Reinsch 2001, with the observations by Brockmann 2004.

²⁹ A description of this manuscript is available at *CAGB digital* <<https://cagb-digital.de/id/cagb5612290>> (Diether R. Reinsch, 1977, with some bibliographical updates); more recently, see also Valente 2018 (with previous literature). A full digitization of the manuscript is available at <<https://digitallibrary.unicatt.it/veneranda/0b02da82800b9d17>>.

³⁰ For the first examples of commented *Organon* manuscripts and their layout, see Acerbi and Bianconi 2020, 246–248. The earliest manuscripts with scholia, such as Vat. Urb. gr. 35, present a fix-ratio for main-text and commentary, often leading to an awkward presentation of the exegetical paratexts. For the terminology and the different layout strategies, see Maniaci 2006.

³¹ Vat. Urb. gr. 35 is probably one of the most studied and reproduced witnesses of Aristotle's works: Follieri 1969, 28–32, offers an accurate codicological and paleographical presentation of it. A survey of the more recent literature on the manuscript can be found in Agiotis 2021, lviii–lix, to which one should now add Valente 2022, exp. 99–100. A recent description of the manuscript (2021), by Domenico Surace, is available at *CAGB digital* <<https://cagb-digital.de/id/cagb6745850>>. Arethas' scholia were edited by Share 1994.

The three remaining *vetustissimi* are about fifty years – or two human generations – younger than the first ones. In chronological order, they are:

- *B*, Venice, Biblioteca Nazionale Marciana, Gr. Z. 201. The Marcianus was subscribed in November 954 by the celebrated calligrapher Ephraim, possibly an intellectual in his own right rather than a simple scribe. It contains the complete *Organon* accompanied by a rather limited corpus of scholia penned in distinctive majuscule by the same Ephraim.³²
- *V*, Vatican City, BAV, Barb. gr. 87. *V* is a small-format codex (mm 203 × 150). The Barberinianus was written by a single scribe in a slightly sloping minuscule (*minuscule penchée*) which can be dated to the middle, or perhaps the second half, of the tenth century CE.³³ The scribe of the Barberinianus, as shown by Dieter Harlfinger and Diether Roderich Reinsch, also copied a few folios of Paris, BnF, Grec 1741, an important collection of rhetorical texts assembled in Constantinople.³⁴
- *d*, Florence, Biblioteca Medicea Laurenziana, Plut. 72,5. The Laurentianus is a composite manuscript, assembled over the course of several centuries. Folios 6^r–212^r transmit the first half of the *Organon* (from Porphyry's *Introduction* up to the *Posterior Analytics*) and include a brief treatise on hypothetical syllogisms, which is not separated or distinguished from the end of the *Posterior Analytics*. This older part of the manuscript, penned in a quite cursive, yet elegant, minuscule, was dated to the second half of the tenth century CE by Dieter Harlfinger.³⁵

These manuscripts are the ones properly called *vetustissimi* and *vetusti*. Modern scholars often include among the *vetustissimi* a handful of slightly later manuscripts, which I have also considered.

As above, I shall proceed in chronological order, occasionally supplementing the existing literature. The oldest of these additional *vetusti* is manuscript *c*, Vatican City, BAV, Vat. gr. 1024. Originally a complete *Organon*, the Vaticanus is now missing the first three treatises. This manuscript was penned by a single scribe in an informal minuscule, full of abbreviations, which can be dated to the late tenth–early eleventh century CE. The Vaticanus was later restored by the Byzantine scholar, Isidore of Kiev, in the fifteenth century. This manuscript bears traces of catchwords (*reclamantes*) at the end of the third book of the *Topics*, a phenomenon that is also found in Urbinas 35 and that clearly goes back to the earliest phases of the transmission of the text.³⁶

³² A description of this manuscript is available at *CAGB digital* <<https://cagb-digital.de/id/cagb9967971>> (Ciro Giacomelli, 2022); a digitisation of the manuscript is available at *Internet Culturale: cataloghi e collezioni digitali delle biblioteche Italiane* <<http://www.internetculturale.it>>. A detailed palaeographical study of Marc. gr. 201 is offered by Perria 1977–1979, part. 41.

³³ Capocci 1958, 114–119.

³⁴ Harlfinger and Reinsch 1970, 32. On the Parisian manuscript, see also De Gregorio 1991, 482–483.

³⁵ See the description published in *AG*: 475–480 (a slightly enhanced version now accessible also here: *CAGB digital* <<https://cagb-digital.de/id/cagb8839146>>).

³⁶ Valente 2018, 114 offers a brief presentation of the content of this manuscript. On the traces of *reclamantes* at the end of the third book of *Topics*, see Corcella 2013, 53.

Next comes *C*, Paris, BnF, Coislin 330. The date and structure of this manuscript is somewhat controversial. Although it is commonly dated to the eleventh century and is considered to be a composite manuscript, I think that the Coislinianus is more likely to be an almost completely unitary product of a late eleventh, early twelfth century workshop. *C* transmits the whole *Organon*, with a lacuna involving part of the *Topics*, without primary scholia.³⁷

Manuscript *u*, Basel, Öffentliche Bibliothek der Universität, F.II.21, was written somewhat later. The Basileensis is a rather understudied manuscript, penned by two main scribes in a minuscule script that can be dated to the twelfth century CE. Paul Moraux, who described *u* in the *Aristoteles Graecus* catalogue, placed the activity of the second scribe in the thirteenth century CE, but Giancarlo Prato corrected this assessment, dating this part of the manuscript to the twelfth century CE.³⁸ I think that, once more, the supposed restoration of the manuscript is the result of the rather linear copying-practices of a twelfth century *scriptorium*.³⁹

The youngest of the above-mentioned manuscripts, *D*, Paris, BnF, Grec 1843, is a paper manuscript which, in its oldest codicological unit, was dated by Christian Brockmann to the late twelfth century CE, more precisely, ‘around 1200’.⁴⁰ The older part of *D*, as demonstrated by Brockmann, was copied on the now fragmentary Sinaiticus when it was still complete, and its text is therefore extremely important when it comes to assessing the textual value of its model, of which only a few leaves are still preserved. When evaluating the text of *D*, however, one must take into account the fact that the Parisinus is a learned edition of the *Organon*, with an added set of scholia drawn from other sources and therefore possibly contaminated. Where it is possible to compare the text of *D* with the still extant fragments of the Sinaiticus, it is quite clear that the Parisinus reflects its text *post correctionem*, and it is therefore impossible to distinguish the different layers of contamination that are still visible on the Sinaitic fragments, corrected, as mentioned earlier, much later by several hands.⁴¹

4. Traces of a late-antique edition in two volumes.

The overview of the oldest manuscript of the *Organon* offered in the preceding section of this paper serves as an introduction to a codicological hypothesis substantiated by the study of these manuscripts. While writing a description of manuscript *B* (the Venice-*Organon* copied by Ephraim in 954 CE) a particular feature struck me as very odd (Figs 1–2). Between *Posterior Analytics* and *Topics*, I could clearly see a codicological discontinuity for which I could find no obvious

³⁷ For a detailed presentation of this manuscript, I refer to Giacomelli 2023, 152–154, with all previous literature. A digital copy of the manuscript is available at *Gallica*, Bibliothèque nationale de France <<https://gallica.bnf.fr/ark:/12148/btv1b525023022>>.

³⁸ Prato 1994, 119.

³⁹ See *AG*: 28–30 (accessible at *CAGB digital*: <<https://cagb-digital.de/id/cagb7350715>>, with updates).

⁴⁰ Brockmann 2019, 211. An updated description of the manuscript by Diether R. Reinsch is accessible at *CAGB digital* <<https://cagb-digital.de/id/cagb2488871>>; the manuscript itself is now digitized on *Gallica*, Bibliothèque nationale de France <<https://gallica.bnf.fr/ark:/12148/btv1b10511052n>>.

⁴¹ See Brockmann 2004, 53–56. On the descentance of the Sinaiticus see also Weidemann 2023, with reference to previous works by the same author.

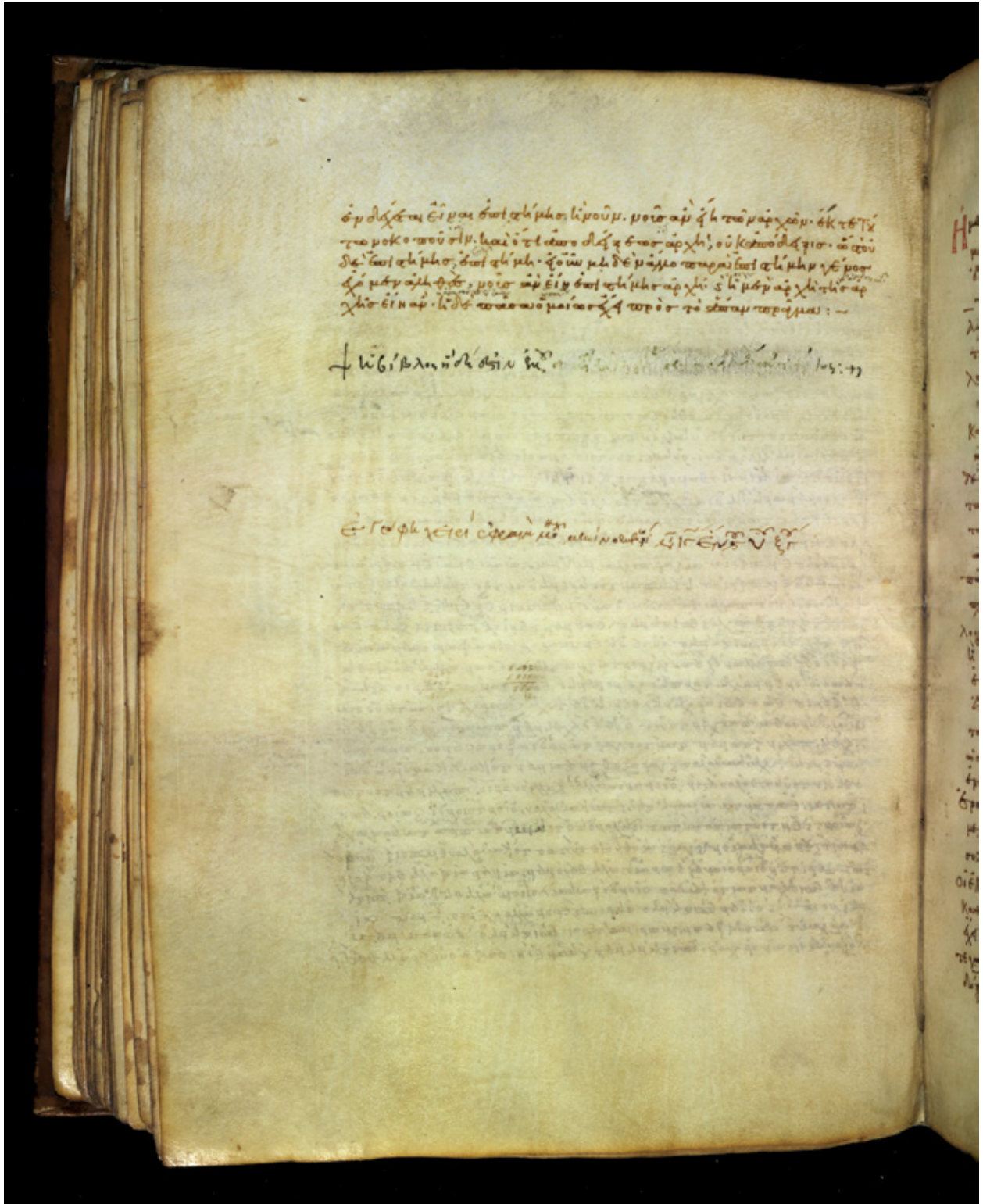


Fig. 1: Venice, Biblioteca Nazionale Marciana, Gr. Z. 201, fol. 111v; public domain.

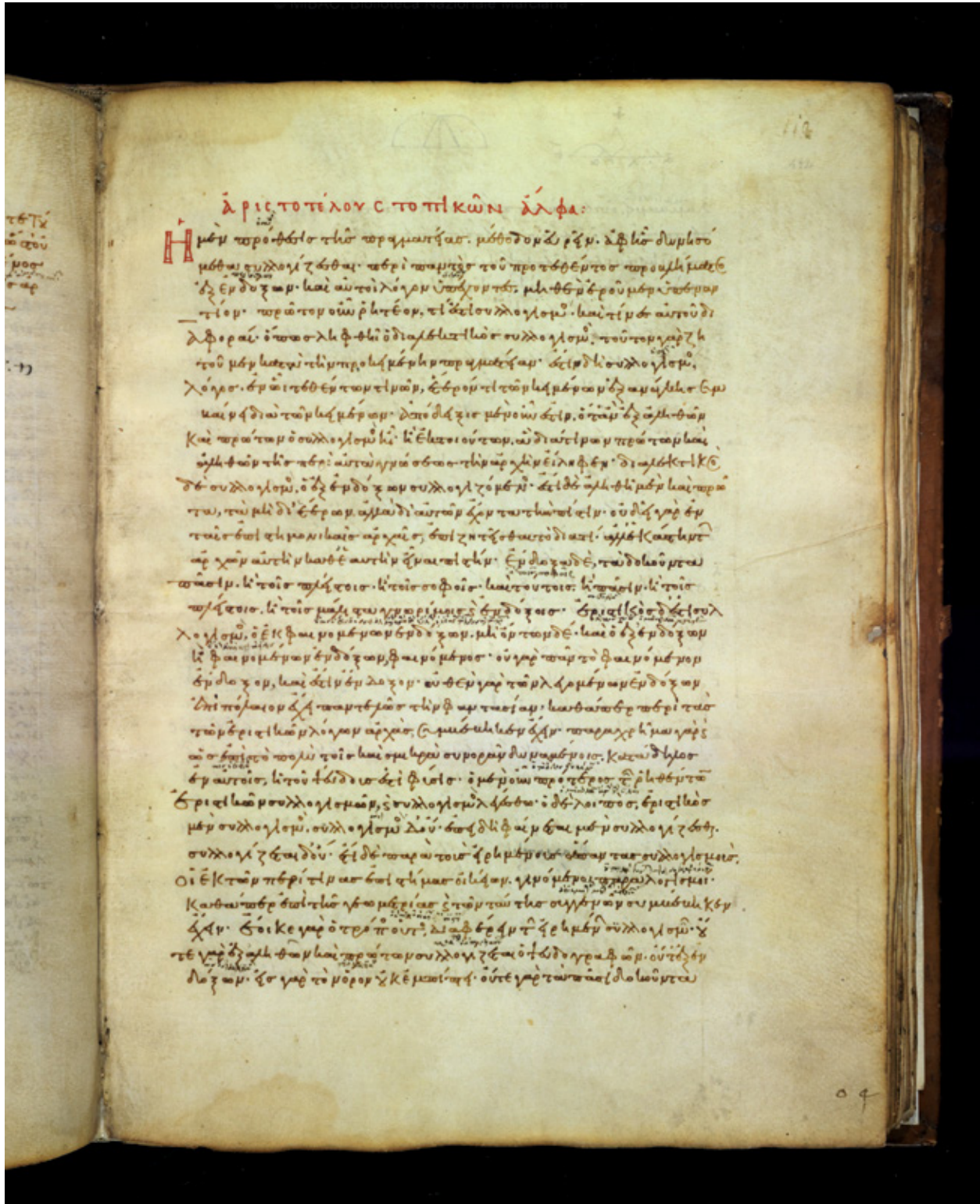


Fig. 2: Venice, Biblioteca Nazionale Marciana, Gr. Z. 201, fol. 112r; public domain.

explanation: folio 111^v, where *Posterior Analytics* ends, is almost completely blank and contains only five lines of text, with no subscription. In these five lines, a much later hand, possibly that of John Argyropulus (1393–1487), copied part of Ephraim’s original colophon; on the same folio (111^v) a fifteenth century owner of the manuscript, Demetrius Trivolis, made a note of his ownership; this was later erased by Cardinal Bessarion (died 1472), its last owner.⁴²

Following this gap, *Topics* begins on fol. 112^r, and this is not by accident: the discontinuity occurs within a quire and it is not a ‘raccord imparfait’, or ‘imperfect joining’, – to use a term coined by Paul Canart – between two different quires.⁴³ In other words, Ephraim, who could easily have avoided such a waste of space and parchment, wanted to mark a clear separation of two textual units. In order to understand this situation, I investigated the oldest witnesses of Aristotle’s *Organon* presented in the first part of this paper.

The synoptic study of the nine oldest manuscripts of the *Organon* proves to be quite illuminating, as one can appreciate by looking at the table annexed to this paper. But first, a couple of caveats: manuscript *S*, the Sinaiticus, is too fragmentary to be taken into account, while codex *D*, its apograph, is not just a facsimile of its model, but rather a scholarly manuscript of the *Organon* with a special layout, changing according to the size of the exegetical paracontent – in Italian it is called ‘a bilanciamento variabile’ – and allowing the scholia to run in sync with the Aristotelian text.⁴⁴

Taking *D* into account alongside the oldest manuscripts would be misleading, since the space allotted to each treatise of the *Organon* was not measured on the source-manuscript, rather, it is the result of a more complex design.

Six out of seven of the remaining manuscripts present a major codicological and textual gap between the end of *Posterior Analytics* and the beginning of *Topics*. This gap coincides with the one found in the Marcianus:⁴⁵

- The oldest non-fragmentary witness of the *Organon*, Ambrosianus L 93 sup., ends with *Posterior Analytics*, and while the last quire has lost its last three leaves, it is obvious from the layout of the last written page that the scribe considered it finished, and wanted to fill the empty space with an elaborate subscription ornate in a way reminiscent of late-antique motives (Fig. 3).⁴⁶
- Urb. gr. 35 shows material damage at the end of *Posterior Analytics* and the *verso* of the last written leaf was left blank.

⁴² On the provenance of Marc. gr. 201, see Giacomelli 2021, 260–261.

⁴³ See Canart 1998, 50 and Canart 2007, 422.

⁴⁴ Maniaci 2006 coined the expression.

⁴⁵ Concerning the terminology, see Ronconi 2007, 20–23. According to Ronconi, a ‘cesura testuale maggiore’ can be detected when the scribe, at the end of a textual unit, leaves a blank space at the bottom of the last page and starts writing the following textual unit on the following folio. A more recent and complete survey of the main codicological discontinuities that can be observed in any given manuscript is offered in Andrist et al. 2013, 83–109.

⁴⁶ The Ambrosianus is the only *vetustissimus* in which definite traces of an ancient ‘correction’ of the text can be found in the subscriptions of some of the treatises; Reinsch (quoted in n. 40) offers a good description of such texts. This practice is found in late-antique editions of pagan and Christian texts alike; cf. the overview offered by Cameron 2011, 421–497.

- The oldest codicological unit of Laur. plut. 72, 5 ends again with *Posterior Analytics*, followed in the text by a short treatise on hypothetical syllogisms, which is a long late-antique scholium interpolated in the text by a scribal mistake. On folio 212^r, following the *subscriptio* which marks the end of *Posterior Analytics*, we find another obvious codicological gap.⁴⁷
- The scribe of Vat. gr. 1024 left the greater part of the last folio of the *Posterior Analytics* blank, but this was filled with annotations by later hands.
- In Coislin 330 the end of *Posterior Analytics* marks a clear codicological gap as well as the end of a quire. The scribe who penned the second part of the *Organon* was not the one who penned the first part, although they were contemporaries (Fig. 4).
- The same happens in the slightly later Basileensis *u*, where the *verso* of fol. 168 is left completely blank (remarkably, this is the only codicological discontinuity that can be observed in this manuscript) (Figs 5–6).

Such a regular textual and codicological break is not found at the end of any of the other treatises of the *Organon* – in the manuscripts examined here – and is therefore quite remarkable. The only codex *vetus* not presenting the *caesura* is Barberinianus 87, where the end of the *Posterior Analytics* is followed by the beginning of the *Topics* on the same folio. The two texts are separated only by a later decorative frieze, which can be found, almost identical, at the end of each text transmitted by the Barberinianus.

I have tried to explain the codicological break based on the evidence collected so far. It would seem that the early transmission of the *Organon* was divided into two distinct volumes of approximately the same size: the first included Porphyry's *Introduction, Categories, On Interpretation* and the two *Analytics* (*Prior* and *Posterior*). The second volume included *Topics* and *Sophistical Refutations*. Looking at the content, the text included in the first volume occupies pages one to ninety-nine in Bekker's edition (not counting the short *Introduction* by Porphyry), while the second one transmits the portion of the *Organon* printed on pages 100–184; ninety-nine and eighty-five pages respectively. Such a well-proportioned subdivision reflects, I believe, the reduced capacity of late-antique manuscripts compared to the average middle-Byzantine manuscript, penned in minuscule script.

Is this a purely speculative hypothesis? If we look again at the evidence offered by the *vetustissimi*, we shall see that the physical subdivision of the *Organon* is still clearly documented by Ambrosianus L 93 sup. and Laurentianus plut. 72, 5. These two manuscripts are in fact the remnants of a complete edition of the *Organon* still subdivided into two volumes, the second of which is now missing. The remaining manuscripts, on the other hand, are the result of the conflation of two different codices, marked by the codicological and textual *caesura* described above.

⁴⁷ The text of *Posterior Analytics* ends on fol. 210^v and is followed, without any discontinuity, by a short text on the ὑποθετικοὶ συλλογισμοί (edited by Waitz 1844, 9–10; this treatise reads like a long scholium, possibly added in the white space left at the end of the text in the model – or one of its ancestors – of the Laurentianus, see also Bobzien 2002), copied by the same scribe, which continues up to fol. 212^r, where the scribe wrote the subscription indicating the end of the *Analytics*. Folio 212^v, originally blank, was later (eleventh–early twelfth century CE?) filled with a grammatical text on propositions taken, it would seem, from the *Etymologicum Magnum*.

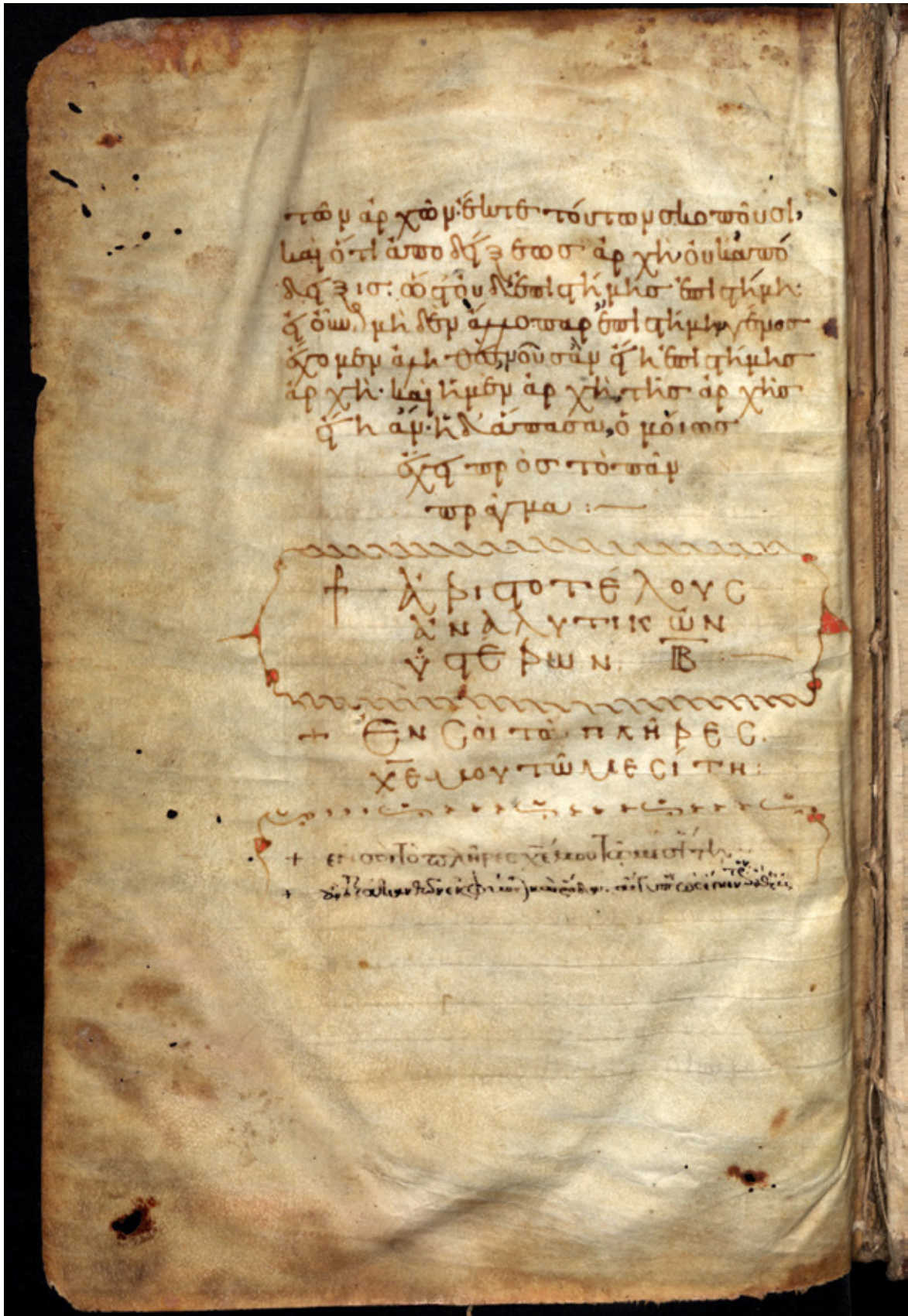


Fig. 3: Milan, Biblioteca Ambrosiana, L 93 sup., fol. 254^r; published with permission of the Veneranda Biblioteca Ambrosiana.

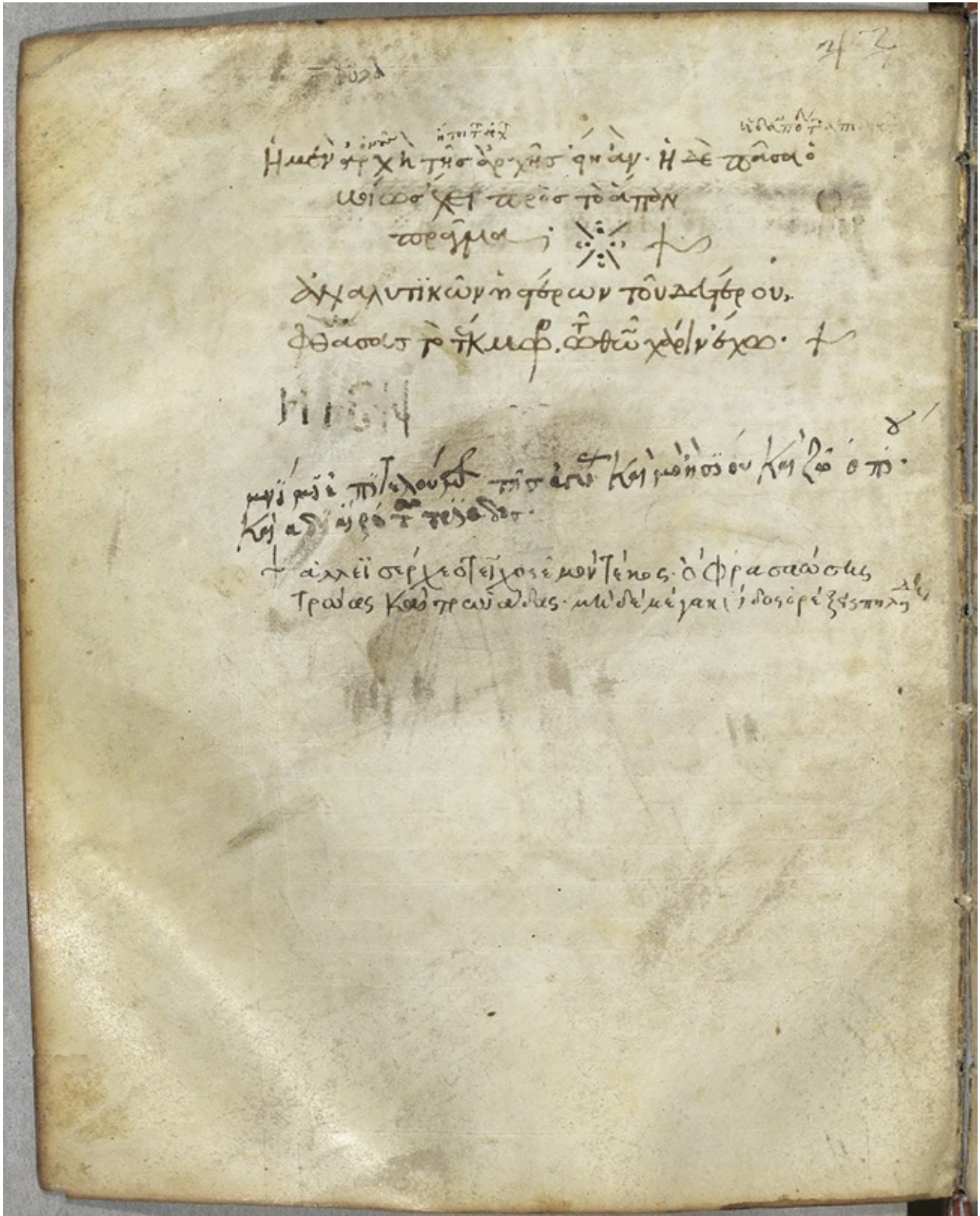


Fig. 4: Paris, BnF, Coislin 330, fol. 200r; Source gallica.bnf.fr / Bibliothèque nationale de France.

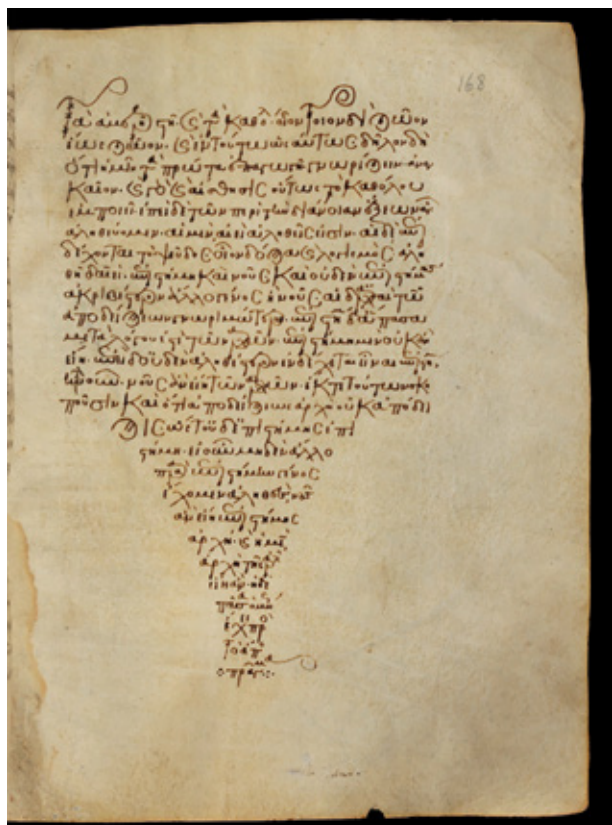


Fig. 5a: Basel, Öffentliche Bibliothek der Universität, F.II.21, fol. 168^r; published with permission of the Library.

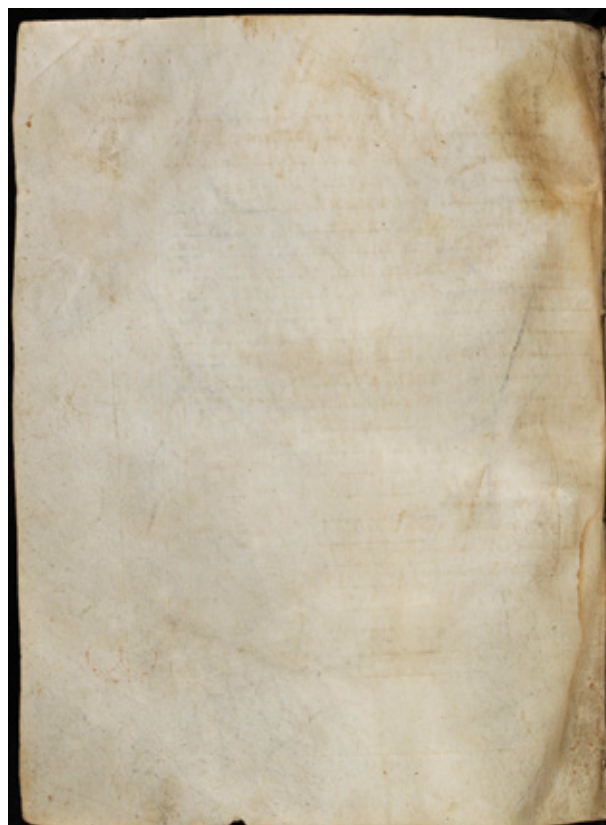


Fig. 5b: Basel, Öffentliche Bibliothek der Universität, F.II.21, fol. 168^v; published with permission of the Library.

While most of the *vetustissimi* are direct copies of a two-volume edition of the *Organon*, still bearing traces of the codicological and textual gap found in their models, the slightly later Barberinianus 87, the only one presenting the *Organon* in a continuous sequence, seems to be a copy of an already unitary manuscript. In this case, the textual gap at the end of the *Posterior Analytics*, just a meaningless fossil of the original two-volume edition of the corpus, was omitted in order to save space and parchment.

Having postulated such a subdivision of the *Organon*, I wondered whether it was possible to observe any textual consequence of such a split transmission. The results of the investigations carried out in the last century by Lorenzo Minio-Paluello, Sir David Ross, Jacques Brunschwig, Richard Bodéüs, and, more recently, by Hermann Weidemann (who edited *On Interpretation* in 2014), all show that the Greek manuscripts so far collated for the first four treatises of the *Organon* can be divided in two classes. The first is most purely represented by manuscripts *A* (Urb. gr. 35) and *B* (Marc. gr. 201); the second seems to be limited to *n* (Ambrosianus L 93 sup.), the Sinaitic fragments, and a few later representatives of this branch, such as *D* (Paris. gr. 1843). The text of these two classes differs in several hundred readings and it is quite clear that they go back to two different *recensiones*, i.e., two late-antique editions of the *Organon*, differing in hundreds of readings that cannot be simply dismissed as ‘mistakes’.⁴⁸

⁴⁸ See the *stemma codicum* in Weidemann 2016, xxvii.

The text of *n* and *S* seems to be shorter and less polished from a rhetorical point of view, and its readings often agree with the Syriac translation by George of the Nations, completed in the eighth century CE.⁴⁹ In these two families, I think, we can easily recognize a pattern, which has already been explored for Aristotle's physical corpus, and which is transmitted in two different editions, both of which go back to late-antiquity.⁵⁰ In the case of the *Organon*, however, the situation is complicated by extensive contamination, dating back to the earliest phases of the Byzantine transmission of the text. This circumstance opens new paths towards the investigation of the manuscript transmission of the *Organon* and its *stemma codicum*. If this hypothesis is correct, we should look for the second volume of Ambrosianus *n*, transmitting its peculiar recension of *Topics* and *Sophistical Refutations*. For the second part of the *Organon* – *Topics* and *Sophistical Refutations* – where the Ambrosianus is missing, the textual tradition again seems to be split into two main branches. According to Ross, Brunschwig and Reinsch, for *Topics*, we can also see a rather clear two-family *stemma codicum*: on the one hand, we have the *AB* pair, and on the other, the contaminated Coislin 330 (*C*), the Sinaitic fragments, Par. gr. 1843 (*D*, a direct copy of the Sinaiticus), and finally the Basel manuscript *u*. I think that, despite several layers of inevitable contamination (especially in the later witnesses), these manuscripts should be regarded as transmitting the second volume of the textual recension which is more purely represented, in its first part, by the ninth century Ambrosianus *n*.⁵¹

⁴⁹ Cfr. Minio-Paluello 1957 and Ross and Minio-Paluello 1964, ix. A more complete and accurate assessment of this Syriac translation is yet to be done.

⁵⁰ On this point, see the recent overviews by Boureau 2018 and Primavesi 2022 (part. 532–571).

⁵¹ Giacomelli 2023 offers a detailed textual demonstration of the two different recensions.

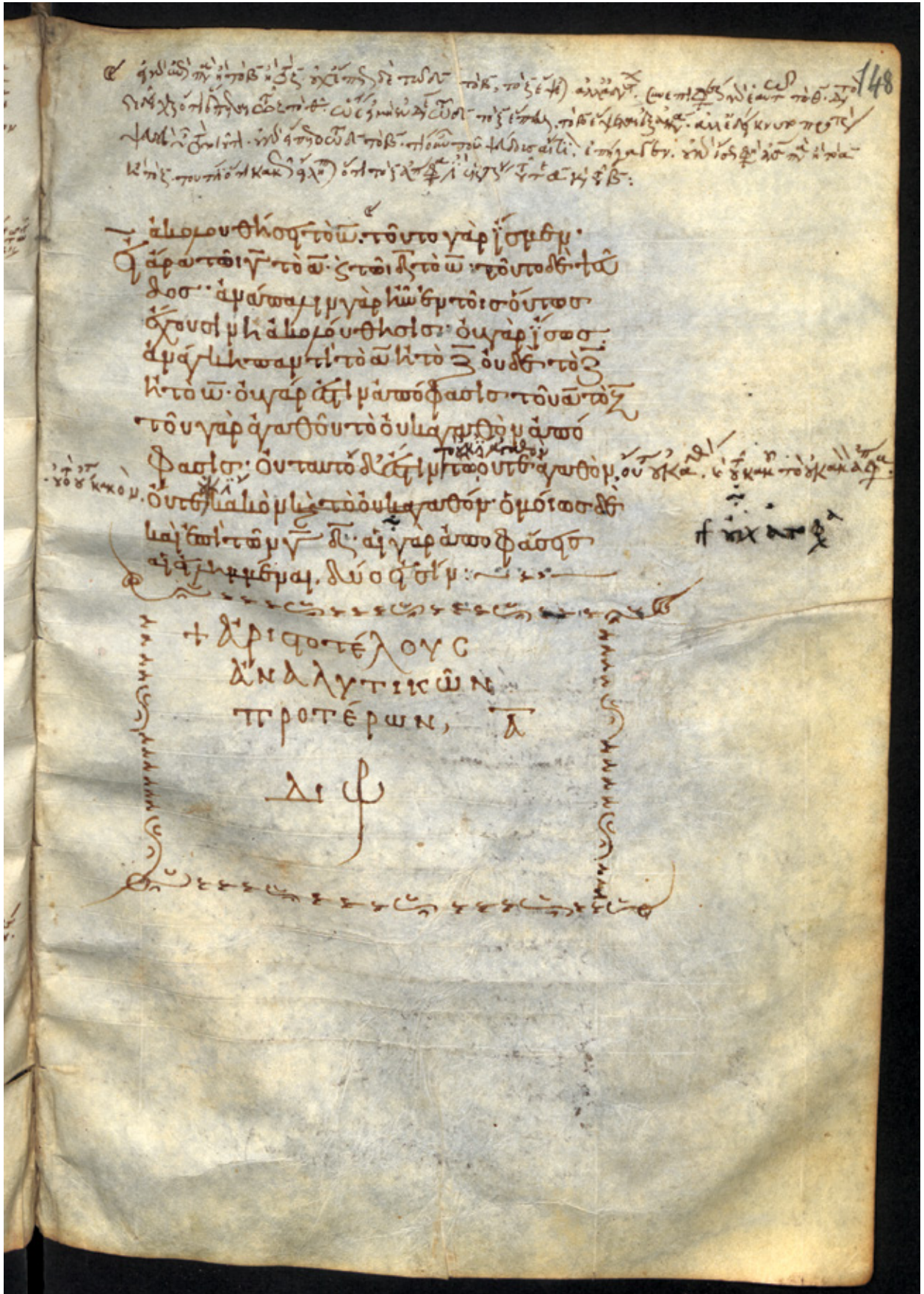


Fig. 7: Milan, Biblioteca Ambrosiana, L 93 sup., fol. 148r; published with permission of the Veneranda Biblioteca Ambrosiana.

Appendix

Codicological and textual *caesurae* in the oldest witnesses of the *Organon*

Legenda

* = beginning of a new quire.

+ = the text begins on the recto of a new folio within the same quire.

° = presence of a significant blank space (in Greek ἄγραφον), corresponding to half or more of the written space.

	<i>Porphyry's Introduction</i>	<i>Categories</i>	<i>On Interpretation</i>	<i>Prior Analytics</i>	<i>Posterior Analytics</i>	<i>Topics</i>	<i>Sophistical Refutations</i>
n	1 ^r –19 ^{o52}	+24 ^r –60 ⁵³	60 ^v –79 ⁵⁴	*80 ^r –189 ^{v55}	+190 ^r –254 ^{v56}	–	–
A	3 ^r –20 ^{v57}	+22 ^r –54 ^v	54 ^v –74 ^o	+75 ^r –192 ^{v°}	+193 ^r –264 ^{o58}	+265 ^r –399 ^{v°}	+400 ^r –441 ^r
B	1 ^r –9 ^v	+10 ^r –26 ^{r59}	26 ^v –36 ^r	36 ^r –85 ^o	85 ^v –111 ^{v°}	+112 ^r –166 ^r	166 ^r –183 ^v
V	1 ^r –13 ^r	13 ^r –35 ^v	35 ^v –48 ^{v°60}	+49 ^r –120 ^v	120 ^v –165 ^v	165 ^v –259 ⁶¹	259 ^v –287 ^v

⁵² The *Introduction* is followed by the *Vita Hesychii* on fol. 20^r; on the verso of fol. 19, a more recent hand penned a diagram *De quinque vocibus* (namely, on the five terms or predicables).

⁵³ *Categories* ends in the first folio of a new quire. The text is closed by an elaborate subscription occupying the second half of fol. 60^r: τέλος Ἀριστοτέλους κατηγοριῶν. / + Χριστῶι τῶι θεῶι τελεία / χάρις. τῶι ἀεὶ συ/νεργοῦντι τοῖς φι/λολόγοις καὶ / φιλοθέοις. *On Interpretation* begins without any gap on the verso of the same folio.

⁵⁴ Blank space of about 4 lines and subscription indicating a correction of the text (see above § 4).

⁵⁵ Folios 80–90 are restored (fourteenth century CE?). There is a considerable gap between the first and the second book of *Prior Analytics*: on fol. 148^r there is another subscription indicating a correction of the proceeding book (Fig. 7), while the verso is occupied by a detailed index of the chapters of the second book. The text of the new book begins on fol. 149^r, within the same quire.

⁵⁶ Folio 254^v is occupied for the most part by a subscription closed by a short Byzantine dodecasyllable: ἐν σοὶ τὸ πλήρες / Χριστέ μου τῶ μεσίτη.

⁵⁷ Folio 20^v is almost entirely covered by text but is followed by a completely blank folio (21), possibly prepared for scholia written by Arethas, who only used its *verso*.

⁵⁸ Folio 264^r presents a noticeable blank space in its second half and the verso is untouched.

⁵⁹ At the end of *Categories*, without any alteration to the general layout of the page, Ephraim added a short epigram, possibly late-antique: see Bevegni 2002.

⁶⁰ This is the only codicological gap between two texts copied in the Barberinianus: the beginning of *Prior Analytics* was copied on the recto of the last folio of the quire, leaving a rather large blank at the end of *On Interpretation*, only partially filled with scholia and diagrams.

⁶¹ The transition from *Topics* to *Sophistical Refutations* is located in a restored section of the manuscript (fifteenth century CE?).

d ⁶²	7 ^r –21 ^v	21 ^v , 23 ^r –50 ^r ⁶³	50 ^r –67 ^v	67 ^v –152 ^v	153 ^r –210 ^v ^o	–	–
c	–	–	–	1 ^r –64 ^v	64 ^v –136 ^v ⁶⁴	*137 ^r –266 ^v	266 ^v –309 ^r
C	2 ^r –17 ^r	17 ^r –43 ^r	43 ^r –58 ^r	58 ^r –149 ^v ⁶⁵	+150 ^r –200 ^v ⁶⁶	*201 ^r –277 ^r ⁶⁷	277 ^v –304 ^r
u	1 ^r –11 ^r	11 ^r –30 ^r	30 ^r –42 ^v	42 ^v –121 ^v	121 ^v –168 ^r ⁶⁸	*169 ^r –287 ^r	287 ^v –323 ^v
D ⁶⁹	–	3 ^r –10 ^v ⁷⁰	–	127 ^r –177 ^r ⁷¹	177 ^r –205 ^r ⁷²	*209 ^r –334 ^r ⁷³	*336 ^r –385 ^v

Abbreviations

AG = P. Moraux (ed.), *Aristoteles Graecus. Die griechischen Manuskripte des Aristoteles, I, Alexandrien–London* (Berlin/New York: De Gruyter, 1976).

CPF = *Corpus dei papiri filosofici greci e latini (CPF)*. [...] part I: *Autori noti*, 1* (Florence: Leo S. Olschki editore, 1989).

⁶² The description is limited to the older kernel of the manuscript.

⁶³ Folio 22, with a *Vita Aristotelis*, was added in the fourteenth century CE.

⁶⁴ Even if the gap occurs at the end of one quire, and before the next, this is the only instance of blank space in the preserved part of the manuscript.

⁶⁵ There is a *vacuum* of about two lines of text at the end of *Posterior Analytics*, immediately after the subscription. The gap is almost negligible.

⁶⁶ There is a noticeable blank space (three quarters of the page) at the end of *Posterior Analytics* (fol. 200^v). These folios seem to have been added slightly later and they rejoin the older kernel of the codex at the beginning of the *Topics*. The end of the text is followed by a metrical subscription: Ἀναλυτικῶν ὑστέρων τοῦ δευτέρου / φθάσας τὸ τέκμωρ, τῷ θεῷ χάριν ἔχω.

⁶⁷ The last part of the text is written in the shape of an inverted triangle, with a vacuum of about four lines of text at the end of the page.

⁶⁸ The last part of *Posterior Analytics* is again shaped like an inverted triangle, while the verso of the same folio was left blank. This is the only codicological and textual gap of such kind detectable in this manuscript.

⁶⁹ The description involves only the older kernel of the manuscript (12th–13th century CE).

⁷⁰ Mutilated at the beginning and at the end.

⁷¹ Mutilated at the beginning, the sequence of folios is disrupted (correctly: 127^r–144^v, 148^r–176^v, 147^{r-v}, 177^r).

⁷² The text of *Posterior Analytics* is followed by an excerpt taken from Philoponus' commentary, copied by the same scribe on the blank folios at the end of the quire. The last folio of the quaternion (fol. 208) was left blank and was later filled by more recent readers with annotations, scribbles and other kinds of unrelated materials.

⁷³ The text of *Topics* is followed by scholia covering the last folios of the quire. *Sophistical Refutations* is introduced by the prologue of Michael of Ephesus' commentary (twelfth century CE), while the Aristotelian text begins on fol. 336^r, on a new quire.

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