Tautologies and Transpositions:
Aristarchus’ Less Known Critical Signs

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Critical signs (σημεῖα)\(^1\) are a staple of Alexandrian criticism. Even though they probably first started to be used on Homer, ancient scholars used them for other authors as well, as papyrological evidence and some ancient and medieval sources demonstrate.\(^2\) I focus here only on the σημεῖα used by Aristarchus to study Homer. Aside from being present in important Iliadic manuscripts, especially the Venetus A (Marc.gr. Z. 454 = 822, tenth century), they can be found in ancient editions and commentaries on papyrus. In addition, a description of their function is preserved in later compendia of


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critical signs such as the so-called *Anecdota Romanum*, \(^3\) the *Anecdota Venetum*, \(^4\) and the *Anecdota Harleianum*. \(^5\)

Aristarchus used these critical signs: the *obelos* (‘spit’), a dash (—) placed next to the lines that he considered suspect but did not want to delete completely from the text, an operation called *athetesis*.' The *asteriskos* (•) indicated a line repeated elsewhere, \(^7\) and combined with an *obelos* (—) it marked repeated lines which were athetized because they were unsuitable in that specific passage. \(^8\) While these signs had been used by Zenodo-


\(^6\) *Anec. Rom.* 54.19–20 Montanari: — ὁ δὲ ὀβελὸς πρὸς τὰ ὀθετοῦμενα ἐπὶ τοῦ ποιητοῦ, ἠγούν νεοθετημένα ἡ ὀποῖα ἐπηθημένα, “the *obelos* [is used] with reference to athetized [lines] in the poet, that is, [lines] which are spurious or interpolated.”

\(^7\) *Anec. Rom.* 54.21–22 Montanari: * ὁ δὲ ἀστερίσκος καθ’ ἐκεῖνον ὡς καλὸς εἰρήμενον τῶν ἐπόν ἐν αὐτῷ τῷ τόπῳ ἐνθα ἐστὶν ἀστερίσκος μόνος, “the *asteriskos* by itself [is used] because [in the scholar’s mind] the lines are well said in that place where the *asteriskos* is alone.” On the *asteriskos* in papyri of Homer and other authors see G. Nocchi Macedo, “Formes et fonctions de l’astérisque dans les papyrus littéraires grecs et latines,” *SÉT* 9 (2011) 3–33.

\(^8\) *Anec. Rom.* 54.23–24 Montanari: *— ὁ δὲ ἀστερίσκος μετὰ ὀβελοῦ ὡς ὄντα μὲν τὰ ἐπὶ τοῦ ποιητοῦ, μη καλὸς δὲ κείμενα ἐν αὐτῷ τῷ τόπῳ, ἀλλ’ ἐν ἀλλῳ, “the *asteriskos* with the *obelos* [is used] because [in the scholar’s
tus and Aristophanes of Byzantium before him, Aristarchus introduced the *diple* (>\) to mark lines which were interesting and in need of exegesis of various kinds (regarding language, content, myth, style, etc.); the explanations for the *diplai* were to be found in the commentary that Aristarchus prepared in connection with his edition. He also introduced the so-called *diple periestigmene*, the ‘dotted diple’ (>\), to mark passages where he argued against his predecessor Zenodotus and perhaps against his Pergamene contemporary Crates of Mallos.  

These were the most common signs used by Aristarchus, and their description in the compendia match their use in the *Venetus A* and in the Aristarchean scholia transmitted by Aristeas. The compendia and the scholia mention other signs as well, but their function is not clear. On the one hand, they are very rarely used and, on the other, their function and meaning, as reported in the compendia, in the scholia, and in manuscripts, are inconsistent. In particular, with the exception of the *Anecdota Harleianum*, all the other compendia list two other...
signs used by Aristarchus: the *antisigma* (Ϙ), to indicate lines whose order was transposed and did not fit the context, and the *antisigma periestigmenon*, the ‘dotted’ *antisigma* (Ϙ·), for passages which contained tautologies. The scholia, on the other hand, also mention another sign: the *stigme*, the ‘dot’ (·). These signs or variations of them are also preserved in the *Venetus A*: three *antisigma* at Il. 8.535–537 and three *stigmai* at 8.538–540 (folio 111r); two *antisigma periestigmenon* at Il. 2.188, 192; and three *sigma periestigmenon* at 2.203–205 (folio 28r). As is clear, all these signs concern only two passages, Il. 2.188–205 and 8.535–540, where they are variously combined.

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12 *Anec.Rom.* 54.25–26 Montanari: ὁ δὲ ἀντίσιγμα καθ’ ἑαυτὸ πρὸς τῶν ἐνηλλαχμένων τόπων καὶ ἀπόδοντος, “the *antisigma* by itself [is used] with reference to passages which have been transposed and are at variance [with the context].” See also *Anec.Ven.* 276.3–4 Nauck; *Anec.Par.* 280.20–21 Nauck; Isid. *Etym.* 1.21.11.

13 *Anec.Rom.* 54.27–28 Montanari: ὁ δὲ ἀντίσιγμα περιεστιγμένον παρατίθεται ὑπὸν ταυτολογία καὶ τὴν αὐτὴν διάνοιαν δεύτερον λέγη, “the dotted *antisigma* is used when [the poet] repeats himself and says the same concept twice.” A similar note occurs also in the second set of critical signs listed in *Anec.Rom.* 55.41–44 Montanari. See also *Anec.Ven.* 276.5–6 Nauck; *Anec.Par.* 280.22–281.2 Nauck; Isid. *Etym.* 1.21.12

14 Images of all of the *Venetus A* are now available through the Homer Multitext Project, Center for Hellenic Studies: www.homermultitext.org/manuscripts-papyri/venetusA.html.

15 The letter names such as *sigma* are indeclinable, as clarified by Aelius Dionysius in his Atticist Lexicon (H. Erbse, *Untersuchungen zu den attizistischen Lexika* [Berlin 1950] 95–151): σ 15, τά σύγμα δεῖ λέγειν, ἄλλα οὐχί τά σύγματα, καὶ γὰρ ἄκλιτα τῶν στοιχείων τὰ ὀνόματα; thus I will use *antisigma* as an indeclinable word.

16 There are only three other *antisigma* in the *Venetus A*: at Il. 17.219 (folio 227r), 20.447 (268r), 24.558 (322r). An inspection of the images of the *Venetus A* shows that these three lines are indeed marked with a similar sign, which may be a very small and rather triangular *antisigma*. These *antisigma*, however, are very different from the rounded *antisigma* of 8.535–537 (111r) and cannot be by the same hand. The triangular *antisigma* at 17.219, 20.447, and 24.558 are thus probably a later addition and have nothing to do with Aristarchus. Indeed, no Aristarchean scholia are preserved at these lines (see H. Erbse, *Scholia Graeca in Homeri Iliadem (scholia vetera)* I–VII [Berlin 1969– supported by reference to passages which have been transposed and...
The analysis of these passages and their signs unveils a rather complex question about the meaning and function of those signs, for which only hypothetical solutions are possible. In this article I propose one such possible solution for the meaning of these signs by combining the testimony of the compendia with the signs found in the *Venetus A* as well as with the scholia reporting Aristarchus’ comments on those lines.

*Tautologies in Iliad 8*

It is best to begin with the second passage, which is easier to analyze. The *Venetus A* has three *antisigma* at 8.535–537 and three *stigmata* at 8.538–540 (folio 111r). These signs coincide with the explanation given by the Aristonicus scholium:


“Tomorrow his valor – companions”: because either these three lines to which the *antisigma* is opposed must remain, or the following three [sc. 8.538–540] to which the *stigmata* are opposed [must remain]. For they are written to express the same content. Aristarchus approves more of the second [three] ones because the words are more boastful.17 And Zenodotus did not even write the first three.

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17 On the need for boastfulness in these words, which are spoken by Hector, see also schol. *Il.* 8.526a and discussion in Schironi, *The Best of the Grammarians* ch. 5.4 §5.
Both the Venetus A and the scholium associate the signs with two sets of lines: Il. 8.535–537 (with antisigma) and 538–540 (with stigme), which are taken from Hector’s address to the assembly of the Trojans. The scholium claims that they are repetitive, but it is difficult to see how 535–537 could be a duplication of 538–540. Many suggestions have been made, according to whom the lines at stake are actually 532–534 and 535–537, which are indeed repetitive. In this case, the signs would be applied as follows:

εἴσιμαι εἰ κέ μ’ ὁ Τυδείδης κρατερὸς Διομήδης
πάρ νηῶν πρὸς τείχος ἀπόστεται, ἡ κεν ἐγὼ τὸν
χαλκὸν δηώσεις Ἠναρά ἕρωσται

535 • αὔριον ἦν ἀρετήν διαείσεται, εἰ κ’ εἰμὸν ἐγχος
• μείνῃ ἑπερχόμενον ἀλλ’ ἐν πρώτοισιν ὁ ὁδώ
• κεῖσται οὕτηθείς, πολέες δ’ ἄμφ’ αὐτὸν ἐταῖροι

I will know whether the son of Tydeus, strong Diomedes
Will drive me away from the ships to the wall or whether I will
slay him with my bronze and carry away his bloody spoils.
Tomorrow he will know his valor, if he can stand still
while my spear approaches him; but I think among the men
in the first ranks
he will lie wounded, and around him there will be many of his
companions

18 Il. 8.535–537, αὔριον ἦν ἀρετήν διαείσεται, εἰ κ’ εἰμὸν ἐγχος / μείνῃ ἑπερχόμενον ἀλλ’ ἐν πρώτοισιν ὁδώ / κεῖσται οὕτηθείς, πολέες δ’ ἄμφ’ αὐτὸν ἐταῖρο, “Tomorrow he [Diomedes] will know his valor, if he can stand still while my spear approaches him; but I think among the men in the first ranks he will lie wounded, and around him there will be many of his companions,” and 538–540, ἢ πλοῦν ἀνιόντος ἔσ αὔριον· εἰ γὰρ ἐγὼν ὄδος / εἰν ἀθάνατος καὶ ἀγήρως ἡματα πάντα, / τοῖμην δ’ ὥς τίτε’ Ἀθηναίη καὶ Ἀπόλλων, “at tomorrow’s sunrise. For I wish I could be immortal and ageless forever, and that I were honored as are Athena and Apollo.”


According to this evidence, *antisigma* and *stigmai* mark repetitions or tautologies. In the compendia there is only one sign for tautologies: the *antisigma periestigmenon*, the ‘dotted’ *antisigma* (·Ω or ·Œ).21 This sign can be interpreted as a combination of the individual signs mentioned by the scholia and present in the *Venetus A*: the *antisigma* (Ω) and the *stigme* (·). One possible solution to this inconsistency is to assume a corruption in the compendia, where these two different σηµεῖα, which originally were separated and used to mark the two sets of lines that made up a tautology, were combined. In fact, one compendium, the *Anecdotum Harleianum*, confirms the use of the signs as shown in the *Venetus A* and in the scholia (277.14–16 Nauck):

τὸ δὲ ἀντίσιγµα καὶ αἱ δύο στιγµαι ὅταν κατὰ τὸ ἐξής δῖς ἢ τὸ ἀυτὸ νόµια κείµενον, καὶ ἐπὶ μὲν τοῦ πρῶτου τίθεται τὸ ἀντίσιγµα, ἐπὶ δὲ τοῦ δεύτερου αἱ δύο στιγµαι.

The *antisigma* and the two *stigmai* [are used] when in the phrase the same idea is presented twice; and in the first occurrence [of that idea] the *antisigma* is placed; in the second, the two *stigmai*.22

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21 For example, *Anec. Rom*. 54.27 Montanari has ·Ω but *Anec. Rom*. 55.41 Montanari has · with only one dot (so also *Anec. Ven*. 275.15 Nauck and Isid. *Etym*. 1.21.12). A different solution is offered by *Anec. Par*. 280.22 Nauck, which has the dot on top of the *antisigma*.

22 That this might be the original note seems to be suggested also by the second set of critical signs listed in the *Anecdotum Romanum*, which does not speak of *antisigma* alone but has only this note (55.41–44 Montanari): τῷ δὲ ἀντίσιγµα καὶ τῇ στιγµῇ ὅταν δώο ὁσι διάνοια τὸ ἀυτὸ σηµεῖονα, τοῦ ποιητοῦ γεγραµµός ἁµφότερος, ὅπως τὴν ἑτέραν ἠλπίζει. τῷ δὲ χρόνῳ καὶ αἱ δύο εὑρέθησαν οὐκ ὁρθῶς ἔχουσαι, “[one uses] the *antisigma* and the dot when there are two thoughts expressed in the text and they mean the same, the poet having written them both to then choose one of the two. However, then both were found [in the text], not correctly.” The note is less clear than the one of the *Anecdotum Harleianum* cited above; yet *antisigma* and dot are still kept separate in it (even if the sign added to the same note combines them: ·Ω), since the note does not speak of *antisigma periestigmenon* as do *Anec. Rom*. 54.27–28 Montanari and *Anec. Ven*. 276.5–6 Nauck; on the other hand, *Anec. Par*. 280.22–281.2 Nauck and Isid. *Etym*. 1.21.12 speak of *antisigma cum puncto*.

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The question how Aristarchus marked tautologies seems settled: he used two separate signs, the \emph{antisigma} and the \emph{stigme} (or two \emph{stigmai}, as is suggested by the \emph{Anecdota Harleianum}))); the \emph{antisigma} marked the first part of the tautology and the \emph{stigme/stigmai} marked the second, which was the real repetition. In fact, the combination of two different signs is a better indicator than having a dotted \emph{antisigma} in both parts of the tautology, as two different signs more clearly indicate where the repetition occurs.

\textit{Transpositions in Iliad 2}

The evidence for the uncommon \emph{σημεία} in Book 2 is more difficult to assess. The passage includes the two speeches that Odysseus addresses to the Greek lords and soldiers after Agamemnon has told them to go home to test their loyalty (2.110–141). As the Greeks obey Agamemnon’s command and are preparing to leave (142–154), at Hera’s invitation Athena orders Odysseus to restrain them (155–181); Odysseus obeys (182–187) and speaks to them, addressing first the lords (188–197) and then the common soldiers (198–205). This is how the two speeches appear in the \emph{Venetus A} (folio 28r) and according to the indications in the relevant scholia derived from Aristonicus:

\textit{Ven. Ariston.}

190 \textit{‘διαμόνι’ οὖ σε ἔοικε κακὸν ὡς διεισήσασθαι, ἀλλ’ αὐτός τε κάθησο καὶ ἄλλους ἱδρεὶ λαοὺς.}

195 \textit{μὴ τι χολοσάμενος ρέξῃ κακὸν υἷας Ἀχαιῶν.}

\textit{— ἦς θυμὸς δὲ μέγας ἐστὶ διοτρεφέων βασιλῆων.}

\textit{23 Line 189 has a \emph{diple} in the \emph{Venetus A} because Aristarchus maintained that \textit{τὸν δ'} (ἐ) had to be written as two words, and not \textit{τόνδε}, as common in \textit{koine} (see Aristonicus in scho. II. 2.189b).}

\textit{24 Line 196 also has a \emph{diple periistigmene} in the \emph{Venetus A} because Aristarchus...}
Whatever king and noble man he met,  
Standing close, he would restrain him with gentle words:  
“It is not fitting to frighten you, sir, as if you were a coward,  
but please sit down and make the rest of your men sit down too.  
For you do not yet know clearly what the intention of Atreus’  
son is;

[now he is tempting the sons of the Achaeanes but soon he will  
press them.  

Didn’t we all hear what he said in the council?  
May he not do anything bad against the sons of the Achaeanes  
in his anger!  
The heart of the kings born from Zeus is proud;  
their honor comes from Zeus, and wise Zeus loves them.”

But whatever man from the simple ranks he saw and caught  
shouting,  
he would drive him with his staff and would threaten him saying:  
“Sit quiet, man, and listen to the words of others  
who are better than you; you are unwarlike and without strength,  
and you are not to be taken into account in war or in council;

25 Most likely, line 206 (σκῆπτρόν τ’ ἥδε θέμιστας, ἵνα σοις βουλεύσης),  
sometimes present in modern editions (e.g. Allen), was not read by Aristarchus,  
because it is missing from the vulgate (including the Vercellensis A) and from papyri (only some manuscripts and Dio Chrysostom preserve it); see  
apparatus of West, who omits the line. H. van Thiel, Homeri Ilias² (Hildesheim 2010), on the other hand, keeps the line but encloses it in brackets.

 argued against a reading by Zenodotus (see Aristonicus in schol. Il. 2.196b).  
The signs at line 189 and 196 do not concern the issue of the antisiona here,  
so I have not reported them here.

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in no way will the Achaeans all be kings here;
the rule of many is not good; let there be one ruler,
one king, to whom the son of Cronus of crooked counsel
gave (it).”

According to Aristonicus, Aristarchus had problems with the
content of these two speeches and signaled his reservations by
placing an *antisigma* at line 188 at the very beginning of the
passage “because of the ordering of the lines” (schol. *Il.* 2.188a,
πρὸς τὴν τάξιν τῶν ἐξής τὸ ἀντίσιγμα). In particular, Aristarchus took exception to the end of the second speech, when
Odysseus says that it is not good to have many rulers and that
they should let Agamemnon take the lead (203–205): for him,
these lines were unfitting when addressed to soldiers of lower
rank; rather, they would be appropriate when addressed to the
other Greek leaders, who would probably want more power.
For this reason, Aristarchus marked these lines with *stigmai* and
proposed to transpose them after line 192, where he put
another *antisigma* (schol. *Il.* 2.192a, τὸ ἀντίσιγμα, ὅτι ύπὸ
tοῦτον ἐδεί τετάχθαι τοὺς ἐξής παρεστιγμένους τρεῖς στίχους
[sc. 2.203–205]: εἰςὶ γὰρ πρὸς βασιλεῖς ἀρμόζοντες, οὐ πρὸς
dημότας).

Aristarchus also athetized lines 193–197, as they were not
suitable (ἀπεικότες) to the situation and not conductive to sub-
mission (schol. *Il.* 2.193a1, ἀπεικότες οἱ λόγοι καὶ οὐ προ-
τεπτικοὶ εἰς καταστολήν).26 Indeed, in these lines, Odysseus
might seem rather to urge the other Greek lords to get away
from Agamemnon before it is too late. After the transposition
and the *athetesis*, Aristarchus’ final text becomes (omitting the
athetized lines and with lines 203–205 transposed and under-
lined):

> ὅν τινα μὲν βασιλῆα καὶ ἐξοχὸν ἄνδρα κιχεὶ
> τὸν δ’ ἀγανοῖς ἐπέεσσιν ἐρητύσασκε παραστάς
> “δαιμόνι’ οὐ σε ἐτύκει κακὸν ὡς δειδίσσεσθαι,
> ἀλλ’ αὐτός τε κάθησο καὶ ἄλλους ἱδρυε λαοὺς

26 See also schol. *Il.* 2.193a2.

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οὐ γάρ πω σάφα οἶσθ’ οίος νός Ατρέωνος·
οὐ μέν πως πάντες βασιλεύσομεν ἐνθάδ’ Ἀχαιοί·
οὐκ ἄγαθῶν πολυκοιρανίη· εἰς κοίρανος ἔστω,
εἰς βασιλεύς, ὃ δόκε Κρόνου πάις ἁγκυλομήτεω.

“οὐ δ’ αὐ δήμου τ’ ἀνόρα ἵδοι βοῶντα τ’ ἐφευροι,
τὸν σκήπτρῳ ἐλάσασκεν ἰμοκλήσασκε τε μύθοι·
“δαιμόνι’ ἀτρέμας ὤσο καὶ ἀλλὰς μύθοις άκουε,
οἷς θέπτεροι εἰσί, σὺ δ’ ἀπτόλεμος καὶ ἀναλκίς
οὔτε ποτ’ ἐν πολέμῳ ἑναρίθμιος οὔτ’ ἐνί βουλῇ.”

Whatever king and noble man he met,
Standing close, he would restrain him with gentle words:
“It is not fitting to frighten you, sir, as if you were a coward,
but please sit down and make the rest of your men sit down too.
For you do not yet know clearly what the intention of Atreus’
son is;
in no way will the Achaeans all be kings here:
the rule of many is not good; let there be one ruler,
one king, to whom the son of Cronus of crooked counsel gave (it)”.

But whatever man from the simple ranks he saw and
caught shouting,
he would drive him with his staff and would threaten him saying:
“Sit quiet, man, and listen to the words of others
who are better than you; you are unwarlike and without strength,
and you are not to be taken into account in war or in council.”

Aristarchus’ solution makes sense and fits both types of audi-
ence: the lords are reminded that they cannot be peers with
Agamemnon and that he is the one who should give orders,
while the common soldiers are simply scolded and told to obey
their superiors. Odysseus’ words might not sound very demo-
cratic, but this new version is much more consistent with his
rhetoric and the heroic ethos. Aristarchus had a point here. 27

In this case, however, the Venetus A and the scholia provide
conflicting evidence on the critical signs, aside from the obeloi at
lines 193–197. As was discussed above, the scholia, all derived
from Aristonicus, report that at 2.188 and 192 there was an

27 Notwithstanding the criticism by Kirk, The Iliad I 135–136.
antisigma, while for 203–205 they mention either “dotted lines” (scol. II. 2.192a, τοὺς ἐξής παρεστιγμένους τρεῖς στίχους) or a stigme, i.e. a ‘dot’ (scol. II. 2.203a, ἡ στιγμὴ παράκειται). Thus, if we follow Aristonicus, there was an antisigma to mark the starting point of the passage in which there were problems of transposition (at 188) and another antisigma to signal the exact point where the transposed lines should be inserted (at 192). Correspondingly, the lines that needed to be moved were marked with stigmai (at 203–205). In contrast, the Venetus A (folio 28r) shows a dotted antisigma (Ͽ) at 188 and 192, and a dotted sigma (Ͼ) at 203–205, and no stigmai at all.

The Anecdotum Romanum, Anecdotum Venetum, Anecdotum Parisinum, and Isidore do not record the stigme alone, but list the antisigma (Ͽ) alone for lines whose order is transposed and that are unfitting for the context.28 This evidence in part confirms the scholia mentioning the antisigma at 2.188 and 192. The Venetus A’s ‘dotted’ antisigma (Ͽ) at 188 and 192 is probably due to a mistake. As was discussed above in reference to the dotted antisigma for tautologies as transmitted in the compendia, this sign may have been born out of a confusion of two separate signs, the antisigma and the stigmai.

The dotted sigma (Ͼ) at 2.203–205 in the Venetus A is also suspect. Aside from these three lines, it is not attested elsewhere in the Venetus A.29 Furthermore, the compendia never mention the sigma (alone or with stigmai) among the Aristarchean σημεῖα, and the scholia only once mention the sigma as a sign used by Aristophanes to mark tautologies in combination with the antisigma.30

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28 See n.12 above.
29 Cf. Bird, in Recapturing a Homeric Legacy 94.
30 Schol. Od. 5.247a Pontani: τέτρηνεν δ’ ἄρα πάντα – καὶ ἄρμονιῆς ἄφοσεν (248): Ἀριστοφάνης τὸ αὐτὸ ὠφεῖ περιέχειν ἁμφότερον. διό τι τῷ σίγμῳ τῷ δὲ ἀντίσιγμα ἐπιτίθησιν, ‘he pierced all [the pieces] … and fitted them with joints’: Aristophanes thought that both lines [Od. 5.247–248] had the same content; therefore he adds a sigma to one and an antisigma to the other.”
In conclusion, the Aristonicus scholia seem to find partial confirmation in the compendia (for the *antisigma* at lines 2.188 and 192), while the signs in the *Venetus A* seem questionable. Thus, the *sigma* (alone or with *stigmai*) should be excluded, and at lines 188 and 192 the *antisigma* is probably correct. The question to discuss is which sign was placed at lines 203–205: whether it was another *antisigma* (as the compendia suggest) or a *stigme* (as the scholia testify).

I would tentatively accept the latter solution, and not only because the Aristonicus scholia have an older and more respectable pedigree than the anonymous compendia. In fact, one possible hypothesis about the *σημεῖα* for transpositions is that Aristarchus used *antisigma* (Ϛ) and *stigme* (·) for tautologies and for transposed lines. The fact that these signs were used for two types of issues should not be regarded as a problem. After all, Aristarchus used the *diple* for a variety of purposes. Compared to the *diple*, the paired *antisigma* and *stigme* were much less ambiguous, since they had only two possible meanings, which could easily be clarified in the commentary. Moreover, this set of two signs was particularly appropriate for the issues it was supposed to indicate, because, in the case both of transposed lines and of tautologies, Aristarchus needed to highlight two different portions of the text: (1) in the case of tautologies, the two sets of lines (‘passage A’ and ‘passage B’) having the same content; (2) in the case of transpositions, the lines that should be transposed and the place where they should be inserted.

Using only one sign for both tautologies and transpositions, as all but one of the compendia seem to suggest, would be

31 A. Ludwich, *Aristarchs homerische Textkritik nach den Fragmenten des Didymos I* (Leipzig 1884) 209 (following Phuygers, quoted ad loc.), reached the same conclusion about the signs in the *Venetus A*.

32 On the value of Aristonicus scholia for reconstructing Aristarchus’ activity see Schironi, *The Best of the Grammarians* ch. 1.1, with further bibliography.

33 As seen above, the *Anecdota Harleianum* lists two signs (*antisigma* and *stigmai*) for tautologies.

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confusing. The fact that even Aristophanes used a set of two signs for tautologies (sigma and antisigma, in his case) confirms that, for this type of textual issue, the Alexandrians adopted a two-fold marking system. The same combination could also be employed for transpositions, as Aristonicus confirms. According to him, the original marking of Il. 2.188–205 would be: antisigma at 188 and 192 and stigmai at 203–205. The stigmai would mark the lines to be moved and the antisigma would mark the exact place where they should be inserted (at 192), as well as the beginning of the problematic passage (at 188). This reconstruction is in fact confirmed by another mention of stigmai in schol. Il. 10.397–9b:

<ἦ ἡδὲ χείρεσσιν – ἀδηκότες αἰνῷ: ... Ἀμμόνιος δὲ ὁ Ἀριστάρχειος πρῶτον μὲν στιγμαίς φησὶ τὸν Αἰστάρχον παρασημοιώσασθαι αὐτοῖς, εἶτα δὲ καὶ τελέος ἐξελεῖν, τάχα διὰ τὸ ἐπὶ δευτέρου προσώπου τὸ σφίσι τετάρθαι, καὶ ἄνωθεν μετενέχθαι.

“Or whether, [destroyed] at our hands – oppressed by terrible [toil]”: ... Ammonius, the pupil of Aristarchus, says that first Aristarchus marked them with stigmai, but then completely eliminated them, probably because σφίσι [398] was used for the second person and because they were transposed here from above [sc. 10.310–312].

Without discussing the specific issue at the core of this scholium,34 we see that Ammonius deals with Aristarchus’ change of mind: he first marked the lines with stigmai, and then completely removed them from his text. Here the stigme seems to indicate lines which were for some reason problematic; yet the scholium explicitly says that lines 397–399 were “transposed from above,” as these formulaic lines recur identically at 10.310–312. The function of the stigme is indeed marking the transposition of 2.203–205. Hence the testimony of schol. Il.

34 This is a very famous and debated scholium; I have discussed it elsewhere, “Aristarchus’ Work in Progress: What Did Aristonicus and Didymus Read of Aristarchus?” CQ 65 (2015) 617–621, with further bibliography.
10.397–9b further proves the reconstruction proposed above about the use of critical signs at 2.188–205.

Confusing sigla in Homeric manuscripts

The information of the compendia thus seems to be wrong, because they assume only one sign for both operations, tautologies (dotted antisigma) and transpositions (simple antisigma). Rather, their entries on the antisigma alone (Ϙ) for transposed lines and the dotted antisigma (Ϙ) for tautologies could be the result of scribal confusion for what was originally ‘antisigma + dot (stigme)’ for transposed lines and tautologies. This confusion is also reflected in the Venetus A, at least at Il. 2.188–205 with the dotted antisigma (Ϙ) and the dotted sigma (Ϲ), while at 8.535–540 the combination ‘antisigma + stigme’ is preserved correctly. Such a false duplication of signs may have been favored by the circumstance that sigma and antisigma can be easily confused. As for the stigme, it was a very tiny sign, a dot, and easy to miss. More importantly, Aristarchus also used the stigme in combination with the diple, in the diple periestigmene, the ‘dotted’ diple; it is not unlikely, then, that the new antisigma periestigmenon could easily have been ‘created’ by later scholars and scribes on the model of the diple periestigmene: just as Aristarchus used the diple and the ‘dotted’ diple, so too could he have used the antisigma and the ‘dotted’ antisigma. A further element of confusion, which probably generated the ‘dotted’ sigma in the Venetus A, is the fact that Aristophanes of Byzantium used the sigma (Ϲ) and the antisigma (Ϙ) to mark two consecutive lines of identical content. This set of two signs for tautologies is never attested in manuscripts but only in a scholium. Yet the scribe of the Venetus A, who used the set ‘dotted’ sigma and ‘dotted’ antisigma in the passage in Book 2, might have recalled Aristophanes’ signs when he added them.

Indeed, the Venetus A is not the only manuscript showing an

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35 See 618 and n.30 above.
erratic use of these signs. As McNamee observed,\textsuperscript{36} the use of \textit{antisigma} in papyri does not conform to the Aristarchean practice. She lists only six Homeric papyri with \textit{antisigma}: \textit{P.PisaLit.} 2, \textit{P.Oxy.} III 445, \textit{P.Oxy.} XV 1818, \textit{P.Tebt.} I 4 among the papyri with ‘Aristarchean sigla’\textsuperscript{37} and the Hawara Homer and the Morgan Homer among papyri with ‘utilitarian sigla’, of unclear meaning.\textsuperscript{38} These examples, in fact, offer a quite diverse picture, so it is necessary to review them individually. I will start with the manuscripts with ‘utilitarian sigla’ and then pass to those with ‘Aristarchean sigla’; I will review them in reverse chronological order, from the most recent to the most ancient.

In their detailed description of the manuscript, the editors of the Morgan Homer (Morgan Library G 202, third-fourth cent. CE) do not mention any \textit{antisigma} but only a \textit{chi} (\textsuperscript{39}✗), which is used to mark omission of lines;\textsuperscript{39} however, in the list of new readings offered by the manuscript they report the presence of the following combined signs: \textsuperscript{39}✗\textsuperscript{O}, which can be interpreted as a \textit{chi} followed by \textit{antisigma}, in the margin to mark omission of \textit{Il.} 11.535 (p.16 of the codex) and 11.560 (p.17).\textsuperscript{40} A direct check of the manuscript at the Morgan Library has shown that at p.16 the two signs appear on the left margin in the interlinear space between 11.534 and 536, to alert the reader that line 535 has been omitted (and later added in the upper margin between the page number, \textit{ιϛʹ} = 16, and the first line of the page, 11.513). The supposed \textit{antisigma}, however, is a very small half-circle (\textsuperscript{39} PDO), much shallower than a ‘real’ fully-rounded \textit{antisigma} (\textsuperscript{39}PDO). The set of signs on p.17 is more difficult to detect.

\textsuperscript{36} K. McNamee, \textit{Sigla and Select Marginalia in Greek Literary Papyri} (Brussels 1992) 14–15.
\textsuperscript{37} McNamee, \textit{Sigla and Select Marginalia} Table 1.
\textsuperscript{38} McNamee, \textit{Sigla and Select Marginalia} Table 2.B; cf. 15 with nn.32 and 33 (where however she does not mention the Morgan Homer).
\textsuperscript{40} See Wilamowitz-Moellendorff and Plaumann, \textit{SBBerl} 53 (1912) 1212 and 1213.
They are still placed in the interlinear space between 11.559 and 561 to mark the omission of 560 (then added in the upper margin, above the first line of the page, which is 11.552). Yet the papyrus is very dark; while the chi-shape (slanting on the right, just like the one on p.16) is quite clear, the antisigma-shape is difficult to discern because the area where it is supposed to be is particularly dark. What can be detected with the naked eye and the light available at the Morgan Library seems to suggest a more rounded sign, and so something more similar to a 'real' antisigma. Still, even though the signs in the Morgan Homer might have indeed originally been conceived as the union of a chi-sign (✗) and an antisigma (✱), their combined use to alert the reader of a missing line added in another place in the page has little to do with the Aristarchean use of antisigma. Yet the antisigma in the Morgan Homer (if it is indeed an antisigma) can recall the function of the Aristarchean antisigma at 2.192, where the sign was used to signal the exact place where one or more lines had to be inserted.

P.Hawara (Bodleian Library Gr.class. a. 1 (P)), on the other hand, is a luxury edition of Book 2 of the Iliad, dated to the second half of the second century CE, and with quite a few Aristarchean critical signs. According to Sayce antisigma and stigmai were present in this manuscript and used in a non-Aristarchean fashion to introduce textual variants and scholia in the margins. Study of the digital image of the papyrus, now available online, suggests that what Sayce considered stigmai

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41 As reported by K. McNamee, Annotations in Greek and Latin Texts from Egypt (New Haven 2007) 269: obelos at Il. 2.737, 794, 860–861, 875–876; diple at 2.481, 639, 701, 722, 727, 730, 741 (followed by a single dot), 742, 802, 807, 809, 827, 830, 838, 839, 856, 858, 863, 872; diple periestigmene at 2.484, 634, 658, 674–675, 697, 724, 746, 801.


43 At http://ipap.csad.ox.ac.uk/4DLink4/4DACTION/IPAPwebquery?vPub=Pack&vVol=&vNum=616

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are simply specks of ink or raised dots at the end of a line, with no obvious function—certainly none of them is clearly connected with marginal annotations. On the other hand, there are indeed *antisigma* placed to the left of variant readings which are added in the margin on the right of the lines they refer to (and concerning lines 397, 665, 682, 694, 707, 769, 865). Yet introducing marginal variants is not the function of the Aristarchean *antisigma*. In addition, the σημεῖον is placed next to the variant readings in the intercolumnium but is not repeated next to the line to which the variant reading belongs (as is clear from the cases where the line beginning is preserved: lines 682, 707, and 769). So even the way the *antisigma* is positioned in this manuscript is different from the Aristarchean practice, according to which critical signs are placed in the left margin of the line they refer to (incidentally, this is what happens in this papyrus for the other Aristarchean signs, the *obelos*, the *diple*, and the *diple periestigmenē*, which are all correctly placed to the left of the line they refer to). In fact, in the only place of Book 2 where Aristarchus had probably used the pair *antisigma* + *stigmai* (2.188–205, as we concluded above), and which is partly preserved by the papyrus (2.200–205; the rest of the episode is lost), the margins are missing, and so it is impossible to know whether *antisigma* or *stigmai* were present. *P.Havara* thus does not offer any evidence that *antisigma* and *stigmai* were recopied in this luxury edition, at least with the Aristarchean function and in their physical placement in the text.

Even the papyri with ‘Aristarchean signs’ are quite disappointing. The most recent is *P.Oxy. XV 1818*, a codex dating to the fifth-sixth centuries CE and with fragments of *Iliad* 22 and 23. At fol. 2r the scribe had copied lines 283–294 of Book 22 just after line 202, omitting 81 lines. The following pages, fol.

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45 Cf. McNamee, *Annotations* 269. In *Sigla and Select Marginalia* 14 she notes how often *antisigma* introduces variants in other non-Homeric papyri.
with the remainder of 22.217–242, and 3v with the remainder of 22.255–278, show that he recopied the lines which he had omitted; additionally he marked all the lines between 283 and 294 in fol. 2r with a small comma-shaped mark, one at the end of each line. Yet fol. 3r, which follows after 2v and 3v and contains 22.291–314 with no gaps, proves that the scribe simply rewrote the rest of *Iliad* 22, starting from line 203, all over again. Thus in fol. 2r lines 283–294 are simply canceled, not transposed,⁴⁷ and so the comma-shaped marks at the end of those lines do not have the meaning of an Aristarchean *antisigma*. This conclusion is further supported by the fact that the mark is placed at the end of the line, not before it, as always happens with Aristarchus’ sigla. In addition, the small comma-shaped mark does not look like an *antisigma*, as it is much smaller than the latter. In this case too, then, we are not dealing with *antisigma*, at least as defined and used by Aristarchus.

The only cases which show what looks like a ‘real’ *antisigma* in shape and position are *P.PisaLit.* 2 and *P.Oxy.* III 445. *P.PisaLit.* 2 (Geneva, Bibliothèque P. Gr. 249, first-second cent. CE) contains portions of *Odyssey* 2 (127–140, 152–166) and has only one critical sign: an *antisigma* at 2.156. Indeed we have a scholium by Aristonicus to that line (schol. *Od.* 2.156ε¹ Pontani): it discusses the Homeric usage of the plural ἐμελλόν in agreement with a neuter plural subject (the relative pronoun ἂ in this case)⁴⁸—so the Aristarchean note implies a *diple*, which is absent in the papyrus. The meaning of the *antisigma* is mysterious, even more so because this text is probably a writing exercise in which a non-professional hand has recopied some lines of Homer. Thus, whatever the *antisigma* might mean, it is

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⁴⁷ This was also the opinion of the first editors, Grenfell and Hunt, who stated that the mark at the end of lines 283–293 (sic—indeed line 294 is barely visible) implied “that the verses, which were rewritten in the proper place (cf. Fol. 3), were to be cancelled” (*P.Oxy.* XV [London 1922] p.223).

probably not used in the technical manner of an Aristarchean sign. 49

_P.Oxy._ III 445 (= _P.Lond.Lit._ 14, second-early third cent. CE), with portions of _Ilia_ 6, on the other hand, seems to have a better scholarly pedigree: it has marginal variants and several Aristarchean critical signs, which correspond to the same signs in the _Venetus A_, also discussed in the Aristonicus scholia. At _Il._ 6.174, together with a _diple_, which definitely goes back to Aristarchus, there is also what looks like an _antisigma_. 50 Aristonicus says only that there was a _diple_ to explain the adverb ἐννῆµορ, ‘for nine days’, as due to Homer’s fondness for the number nine (schol. _Il._ 6.174a, ἡ διπλῆ, ὅτι ἐπίφορός ἐστι πρὸς τὸν ἄνεα ἄρηθμον). The _antisigma_ in this papyrus has no support either in the Aristarchean sources or in the _Venetus A_ (folio 83v) and it probably does not originate with Aristarchus. No doubt, this is not a tautology; it is also hard to understand how this could be a line to transpose.

Much more interesting is the case of _P.Tebt._ I 4 which dates back to the second century BCE and is thus almost contemporary with Aristarchus. According to the first editors, 51 this papyrus included fragments of five columns covering _Il._ 2.95–210 and had many Aristarchean signs: _obeloi_ at 2.124, 133, and 197, a _diple periøstigmene_ at 156, an _asteriskos_ with an _obelos_ on the right of 141 (probably referring to 164), 52 and an

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52 Cf. _P.Tebt._ I p.16. This seems confirmed by schol. _Il._ 2.164a1 (Ariston.): σοῖς δ’ ἀγανοῖς: … ἀθετεῖται δὲ καὶ ἀστερίσκος παράκειται, ὡς καὶ οὗτος πρὸς Ἀθηνᾶς οἰκεῖος πρὸς Ὀδυσσεία λέγεται, καὶ ἤπειρος περιέχει νῦν· οὐ γὰρ ἡ Ἀθηνᾶ παρίσταται ἔκαστῳ, ἀλλ’ ὁ Ὀδυσσεύς, “with your gentle [words restrain every man]”: … the line is athetized and there is an asterisk.
antisigma at 204. When I inspected the papyrus in Berkeley in September 2015, I was able to see only the obeloi at lines 124 and 197 and indeed the antisigma at line 204, while the other signs are lost together with fragments of the original manuscript. However, if we follow the original edition, all the signs mentioned by the editors correspond to the same critical signs used by Aristarchus and they match the Aristonicus scholia reporting Aristarchus’ choices and comments on these lines. This suggests that this text might have indeed been an (abridged) copy of Aristarchus’ ekdosis. As for the antisigma at 2.204, it does look like a ‘real’ antisigma, even though this is not the sign we would expect following the Aristonicus scholium (and our reconstruction above), as there should be a stigme here (as at lines 203 and 205), while the antisigma should be at 188 and 192. Unfortunately, lines 188, 192, and 203 were not preserved even at the time of the first edition, so we cannot tell whether there were sigla and which ones they were; as for 205, it is partly preserved but its beginning with its margin is mostly lost; perhaps a speck of ink might indicate the presence of an antisigma, but this is far from secure. Hence, the evidence of

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53 “The poor state of the manuscript was already noted by Bonati, *ZPE* 176 (2011) 1.


55 Todd Hickey, who kindly rechecked the papyrus for me, does not think this is an antisigma; yet he agrees that the trace is definitely in the margin of the papyrus (that is, it does not belong to the beginning of line 205, which is almost entirely lost except for some bottom traces). A further check with a microscope image of this portion does not reveal much more, except to confirm the presence, in the margin, of a slightly curving horizontal stroke. It might be the upper arc of a round letter/sign which also seems to be open on the right; this is hardly compatible with an antisigma (but, if anything,
P. Tebt. I 4 is quite slim. The use of the antisigma in the papyrus corresponds to what the compendia say when they claim that the antisigma alone is used to indicate lines whose order was transposed and did not fit the context. Yet at 203–205 Aristonicus explicitly says that stigmai were used, while the antisigma was placed above, at 188 and 192. The erratic use of the antisigma (placed instead of the stigme at 204) in P. Tebt. I 4 is in striking contrast to the agreement that the rest of the signs in the same papyrus exhibit with Aristonicus scholia commenting on the same lines. This circumstance could perhaps be seen as additional proof that, from the very beginning, the use and function of antisigma (and the stigme) were not fixed, and that the antisigma was used in lieu of the stigme for transpositions very soon after Aristarchus. This probably facilitated the confusion in the compendia and in the Venetus A, which here shows an antisigma periestigmenon.

Conclusions

The antisigma and the stigme used by Aristarchus to signal sets of lines which were either tautological or needed to be transposed does not seem to have enjoyed great success in antiquity. One wonders whether this happened because these signs were quite complicated to use in tandem and also were created for textual problems that were less pressing than others in Homeric scholarship. Tautologies, in the end, are quite typical of oral poetry and so they might have been seen as unproblematic to many scholars; transpositions, on the other hand, might have been simply signaled with obeloi for the lines to be eliminated, while at the place where they had to be (re-)inserted a diple could have been placed. Both signs would have referred the reader to the commentary, where the transposition would have been discussed. Furthermore, these were probably not such common problems that they needed to be marked with

with a sigma). There might also be traces of ink underneath the tape on the left, next to this trace. To conclude, there is something in the margin of line 205, but it is hard to see what it might be.
dedicated signs, unlike athetesis (marked with obeloi) or generic exegetical issues (marked with diplai), which were at the core of Homeric scholarship throughout the Hellenistic and Imperial periods. In addition, whereas the antisigma was quite a specific sign that could be used unambiguously, the stigme was definitely not specific enough; stigmai were typical punctuation marks, which became increasingly common in scribal practice,\footnote{See Turner and Parsons, Greek Manuscripts 9–10.} hence using 'dots' as critical sigla would have been quite impractical once punctuation became widespread.

All these issues would explain why, unlike the other critical signs, antisigma and stigme did not survive very long and why, already early on, their use was inconsistent (P.Tebt. I 4). Later on, Aristarchus-inspired editions use the antisigma but not in the Aristarchean manner. They employ it to introduce variants in the intercolumnium, but in this case there is no sign placed in the left margin, next to the ‘affected’ text (P.Hawara). Otherwise, when the σημεῖον is recognizable as an antisigma in the left margin of the Homeric text, its meaning is obscure, since it refers to lines which are neither transposed nor tautological (P. Oxy. III 445, P.PisaLit. 2). In neither of these two cases is there any correspondence between the sign in the manuscripts and the Aristonicus scholia discussing those lines. In addition, in the case of P.PisaLit. 2, we are not even dealing with a ‘real’ Homeric edition but rather with a scribal exercise, where an Aristarchean critical sign would be out of place. The late P.Oxy. XV 1818, on the contrary, uses what most likely is not even an antisigma but a small comma-like sign and places it at the end, rather than in front, of lines to indicate that they must be deleted. Only the Morgan Homer seems to use a sign that might recall the original antisigma in that it alerts the reader that a line must be inserted at a specific point in the manuscript; yet in this manuscript it is paired with a chi-shaped sign, in a combination of σημεῖα which is foreign to the Aristarchean use. Finally, the scribes of the Venetus A might have tried to re-
produce the original signs used by Aristarchus. Perhaps they followed lists and explanations of signs available at their time, which, however, might have been unreliable, as suggested by the compendia that have reached us.

The manuscript evidence for these signs thus is rather disappointing. In fact, perhaps it is valuable exactly because it is disappointing. Unlike the situation with the other critical signs, which were popular enough to be used and reused by scribes in different times, the antisigma + stigmai system never really took off. Perhaps this was so because the system felt cumbersome (the signs had to be used in tandem) and confusing (one of them, the ‘dot’, was very common as well as tiny and hard to recognize). So scribes, who are the ones who transmitted Alexandrian scholarship, never bought into them.

To conclude, while many Aristarchean sigla became a staple in Homeric scholarship and then were used for other authors (even for the Bible by Origen), the use of antisigma + stigmai for transpositions and tautologies never enjoyed much success. In the end, the signs introduced by Aristarchus, the most famous Alexandrian grammarian, had to stand the test of the market: the approval of the consumers of Homer, the readers and scribes, who saved most of Aristarchus’ scholarship—but not all of it.\footnote{I would like to thank the anonymous referee for helpful suggestions as well as Todd Hickey and Michael Zellmann-Roher for their hospitality at the Center for the Tebtunis Papyri, Berkeley, and for providing me with digital images of \textit{P.Tebt} I 4 in September 2015; Derin McLeod also sent me additional microscope images of the same papyrus; Gabriel Nocchi Macedo and Marie-Hélène Marganne kindly provided me with photographs of \textit{P.Oxy.} XV 1818 from the CEDOPAL; the staff at the Morgan Library in New York City was also very helpful when I visited it in April 2017 to check the Morgan Homer.}

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