

ON THE STUDY OF ARCHAIC AND CLASSICAL GREEK POETIC AND MUSICAL RHYTHM¹

Since the end of the nineteenth century and throughout the last century, the scholars who have voiced severe reservations about the possibility of studying the rhythm of syllabic sequences in Ancient Greek poetic texts from a musical point of view have been numerous, and often influential². Even today, studies which focus on poetic and musical rhythm usually cause a minor resonance if compared with many of those which mainly deal with metre³. A tendency towards over-interpretation and a lack of rigour on the part of many nineteenth-century and some twentieth-century rhythmic theorists has probably influenced the pendulum to swing in this direction.

However, when one assesses the resources available to us for the study of Greek poetic and musical rhythm in depth, the situation is no more desperate than that of other facets of Classical Philology. At the first stage, of course, we have the metrical data which have been extracted and will keep on being extracted from ancient poetical texts by scholars of all times. These are the very steps which we must use to make progress on the field of rhythm. Nevertheless, there are other sources which can help us to provide these data with a clearer rhythmical sense. To begin with, we can boast a relatively abundant and, in some cases, remarkably old body of doctrinal works⁴. Aside from the theoretical bulk of works from the Hellenistic and Roman periods, we have various Platonic and Aristotelian passages dealing with rhythm and, more importantly, we possess a large part of Aristoxenus' works on music, dating as far back as the fourth century BC.

On the validity of the Aristoxenus' works as a tool for studying earlier poetic-musical realities, it is worth noting that Aristoxenian assumptions correspond greatly to the different Platonic and Aristotelian passages addressing the subject. Let us take, for instance, some lines from Plato's *Republic*, in which he sets out some of the basic aspects of Damon's musical theory:

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² See, for example, Wilamowitz 1921, 1-91; Maas (1923) 1962, 3-4 and the *Final Remarks*; etc.

³ A list of all the scholars who have made important progresses on the field of metrics would be truly endless. Some of the most renowned comprehensive works are Hermann 1816; Wilamowitz 1921; Koster (1936) 1966; Maas (1923) 1962; Dain 1965; Gentili 1966; Korzeniewski 1968; West 1982; and Gentili-Lomiento 2003. Although we find some rhythmical discussions in most of these books, all of them mainly deal with metrics. See the comparatively minor resonance caused by the reflections on rhythmic to be found, for example, in Pearson 1990 or in West 1992.

⁴ See the chronological analysis by Budelmann 2001. See also the first chapter of Gentili-Lomiento 2003.

οἶμαι δέ με ἀκηκοέναι οὐ σαφῶς ἐνόπλιόν τέ τινα ὀνομάζοντος αὐτοῦ καὶ δάκτυλον καὶ ἠρῶν γε, οὐκ οἶδα ὅπως διακοσμοῦντος καὶ ἴσον ἄνω καὶ κάτω τιθέντος, εἰς βραχὺ τε καὶ μακρὸν γιγνόμενον, καὶ, ὡς ἐγὼ οἶμαι, ἴαμβον καὶ τιν' ἄλλον τροχαῖον ὠνόμαζε, μήκη δὲ καὶ βραχύτητας προσῆπτε⁵.

The concepts ἄνω and κάτω are characteristic of Aristoxenian rhythmic theory⁶, as is also the idea that certain rhythmic realities possess an ἴσος internal ratio⁷. Just as we find in this Platonic text, the root δάκτυλ- and the ἴσος internal ratio are associated in the work of Aristoxenus⁸. The ἴαμβος, according to the Platonic passage in question, is formed from two unequal durations: μήκη δὲ καὶ βραχύτητας. The Aristoxenian γένος ἰαμβικός also displays a non ἴσος internal ratio - 1/2, specifically⁹.

Furthermore, in his *Rhetoric*, Aristotle uses principles and words which appear wholly Aristoxenian to refer to the nature of different rhythms:

τῶν δὲ ῥυθμῶν ὁ μὲν ἠρῶς σεμνὸς ἀλλὰ λεκτικῆς ἀρμονίας δεόμενος, ὁ δ' ἴαμβος αὐτὴ ἐστὶν ἢ λέξις ἢ τῶν πολλῶν· δύο μάλιστα πάντων τῶν μέτρων ἰαμβεῖα φθέγγονται λέγοντες. δεῖ δὲ σεμνότητα γενέσθαι καὶ ἐκστήσαι. ὁ δὲ τροχαῖος κορδακικώτερος· δηλοῖ δὲ τὰ τετράμετρα· ἔστι γὰρ ῥυθμὸς τροχαῖος τὰ τετράμετρα. λείπεται δὲ παιάν, ᾧ ἐχρῶντο μὲν ἀπὸ Θρασυμάχου ἀρξάμενοι, οὐκ εἶχον δὲ λέγειν τίς ἦν. ἔστι δὲ τρίτος ὁ παιάν, καὶ ἐχόμενος τῶν εἰρημένων· τρία γὰρ πρὸς δύο ἐστίν, ἐκείνων δὲ ὁ μὲν ἓν πρὸς ἓν, ὁ δὲ δύο πρὸς ἓν. ἔχεται δὲ τῶν λόγων τούτων ὁ ἡμιόλιος· οὗτος δ' ἐστὶν ὁ παιάν¹⁰.

The λόγος concept, with the meaning of 'internal ratio of the rhythmic units', is basic to the theory of Aristoxenus¹¹. It is also worth highlighting that the root ἴαμβ- appears, in this particular text of Aristotle, associated with the 1/2 ratio, just as we find in the work of Aristoxenus¹². Moreover, the word ἠρῶς, interpreted within a metrical-rhythmic context, is synonymous with 'heroic dactylic hexameter'¹³. Aristotle relates this to the internal ratio of 1/1. As the above-mentioned sets out, the

⁵ Pl. *R.* III 400b-c.

⁶ Aristox. *El. rhythm.* 17, 20, etc. Pearson 1990.

⁷ Aristox. *El. rhythm.* 20, 24, etc.

⁸ Aristox. *El. rhythm.* 30, 32, etc.

⁹ Aristox. *El. rhythm.* 30, 31, etc.

¹⁰ Arist. *Rh.* 1408b-09a.

¹¹ Aristox. *El. rhythm.* 20, 24, etc.

¹² See note 9.

¹³ *LSJ*⁹.

rhythmic genre which possesses this λόγος is called δακτυλικόν by Aristoxenus¹⁴. Finally, the philosopher informs us that the παιάν is a rhythm with an internal hemi-olic rhythm, that is to say, 3/2. The work of Aristoxenus also considers that the παιωνικόν genre is that which has a λόγος ἡμίολιος¹⁵.

We should also turn our attention to a passage from the pseudo-Aristotelian *Musical Problems*:

...καθάπερ ἐν τοῖς μέτροις οἱ πόδες ἔχουσι πρὸς αὐτοὺς λόγον ἴσον πρὸς ἴσον ἢ δύο πρὸς ἓν ἢ καὶ τινα ἄλλον...¹⁶

Once again, we can observe the presence of the Aristoxenian concept of internal ratio: the λόγος. Pseudo-Aristotle makes a specific reference to two of these internal relationships: 2/1 and 1/1. With regard to the latter, the word ἴσος is used once more. As I have already mentioned, both ratios are described by Aristoxenus, who also names ἴσος as the latter. Unlike the previous quoted passages, the passage under scrutiny explicitly includes the concept of πούς. The ‘foot’ is, without doubt, one of the fundamental pillars in the theoretical construction of Aristoxenus¹⁷.

The possibility of using Aristoxenian propositions for the study of rhythmic from earlier periods becomes even more acceptable when we verify that many of his principles - some of which are also contained within the works of Plato and Aristotle, as we have seen - are easily applicable to Archaic and Classical poetic-musical texts in the wide majority of cases. For example, the Aristoxenian foot, its division in ἄνω and κάτω and each one of its basic internal ratios - 1/1, 1/2 and 2/3 - may be suited, to a greater or lesser extent, to the syllabic reality of dramatic anapaests and dactylic rhythms in general, of lyrical and recited iambs and trochees, of the cretic meters of comedy, etc. Similarly, the ἄλογος ratio (‘irrational, uncountable’) as described by Aristoxenus¹⁸ and the affirmation made by this very author that feet with divergent syllabic structures could possess equal durations¹⁹, would adhere well to many of the metric anapest phenomena.

The remarks contained in the previous paragraphs are valid for many of the later musical and metric theorists to varying degrees. Nonetheless, it is worth pointing out

¹⁴ See notes 7 and 8.

¹⁵ Aristox. *El. rhyth.* 30 and 33.

¹⁶ Ps.-Arist. *Pr. mus.* XIX 39b Jan (1895) 1995.

¹⁷ Aristox. *El. rhyth.* 16, 17, etc.

¹⁸ Aristox. *El. rhyth.* 20, 21, etc.

¹⁹ See Aristox. *El. Harm.* 2.33-34 Meibom 1652: ... καὶ τῶν μεγεθῶν μενόντων ἀνόμοιοι γίνονται οἱ πόδες· καὶ τὸ αὐτὸ μέγεθος πόδα τε δύναται καὶ συζυγίαν· δῆλον δ’ ὅτι καὶ αἱ τῶν διαιρέσεων τε καὶ σχημάτων διαφοραὶ περὶ μένον τι μέγεθος γίνονται. See also Aristox. *El. rhyth.* 27: Διαίρει δὲ διαφέρουσι ἀλλήλων, ὅταν τὸ αὐτὸ μέγεθος εἰς ἄνισα μέρη διαιρεθῆ, ἢτοι κατὰ ἀμφοτέρω, κατὰ τὸν ἀριθμὸν καὶ κατὰ τὰ μεγέθη, ἢ κατὰ θᾶτερα.

that, with regard to Greek song and poetry, the oldest testimonies should offer greater opportunities for getting closer to the reality of the Archaic and Classical period than other testimonies²⁰. Within the context of poetic-musical transmission, which was, in its origins, eminently oral and with an incipient and barely used musical script, the passing of the years makes any information referring to a previous period increasingly unreliable. Therefore, Aristoxenus' work - together with the scarce Platonic and Aristotelian passages - should be of greater value to us if compared with the work of other later theorists: one must take into account, for example, that the death of Aristophanes and the birth of Aristoxenus are almost contemporary with one another, whilst, on the other hand, no less than four hundred years separate Aristoxenus and Hephaestion, as far as we know. Notwithstanding, when it comes to making research progress in the field of rhythmic, one must treat any information extracted from the collective body of ancient theoretical works with caution, and use this information as one more element of judgement, and not as determining point of reference. In fact, one must not forget that the works of Alcman and Archilochus are separated from the writings of Aristoxenus by a span of several centuries.

The researcher may, in the same way, extract information from the musical testimonies - instrumental and vocal - of Antiquity which contain rhythmic notation. In certain cases, we are in a position to write a fairly reliable script of their rhythm²¹. It is true that the oldest of these documents were copied in the third century BC²² and, therefore, we cannot, a priori, be completely sure that either of these reflects the exact musical reality of the Archaic and Classical period. However, in various aspects and to a varying degree, many of these rhythmic documents display remarkable coincidences with the syllabic structure of the classical texts and with the rhythmic and metric doctrine prior to and following the third century BC. For example, the famous musical passage from Euripides' *Orestes*²³, insofar as it is possible to guess its rhythm via the notation contained therein, is rather well suited both to the dochmiac and general rhythmic-syllabic norms which one can extract both from ancient theory and the body of ancient poetic texts. In the textually clear passages, the short syllables appear without any special mark to indicate the duration. Comparatively, the long syllables appear either with the symbol for 'díchronos' or divided into two

²⁰ I do not want to omit paying homage to the famous expression coined by Giorgio Pasquali of «recentiores non deteriores». This principle, which is of great use in textual criticism, is not applicable in the same measure to the field of the transmission of ancient musical reality over the centuries, for reasons which will be made clear in the following part of the text.

²¹ The different values of the signs of ancient rhythmic notation are detailed by the *Anon. Bellerm.* in paragraphs 1, 3, 83, 102 Najock 1972. The information contained in this document is coherent with the rest of the ancient doctrine and with the testimonies of rhythmically notated music.

²² See n. 3 Pöhlmann-West 2001.

²³ It deals with verses 338-44 of *Orestes* by Euripides. See n. 3 Pöhlmann-West 2001.

short musical notes, with the following exceptions: on the one hand, none of the long ending syllables of the dochmii appears with the rhythmic symbol for 'díchronos'; on the other, these markings are also not found in the majority of long syllables in or by the side of a position which, in the basic dochmiac structure, should be occupied by a short syllable²⁴. Therefore, in the aforementioned document, a fair number of *longa* last for double the duration of the short syllables and, as we all know, ancient doctrine and the poetic texts both back up this ratio on a multitude of occasions, both on a general level as in the specific case of the dochmii²⁵. Moreover, the fact that the long syllables which occupy a usually short position appear unmarked as 'díchronoi' in this document, seems to reflect rhythmically the anceps phenomenon which is present in the dramatic dochmii, in a way which is difficult to weigh up here.

Another good example, are the two Delphic hymns which are numbered 20 and 21 by Pöhlmann and West²⁶. These hymns are composed, in the main part, by cretic-paeonic feet, which, thanks to the multitude of subdivisions displayed, are analyzable as groups equivalent to five short syllables. One can find parallels to these types of feet both in the theoretical works - including some of the oldest - and the Classical poetic texts²⁷.

It is also worth referring here to the instrumental passages of Bellermann's Anonymous, which contain a good number of coincidences with the oldest known rhythmic theory and with the metric structure of many Archaic and Classical poetic




²⁴ See lines 1, 2 and 6 of Pöhlmann-West 2001. It is worth noting, however, that on line 6 there is a long syllable divided into two short notes, which is situated next to an anceps position occupied by a long syllable. On line 5, in a textually unclear passage, one could suppose, by basing oneself on the Euripidean text, that the long marked syllable was situated just before an anceps position occupied by a long syllable. In this sense, however, it is no less important to point out that lines 5 and 6, with regards to some aspects of notation, show clear divergences from the rest of the document.

²⁵ In order to reinforce the evidence offered by the dramatic Classical texts themselves (especially the usual 'substitution' of the *longa* for groups of two short syllables), one can find ancient theoretical analyses on this type of verse in Schol. *e* to verse 101 of Aeschylus' *Septem* (p. 63 Smith 1976), in Schol. *a* to verse 128 of the same work, in Aristid. Quint. *De mus.* I. XVIII Winnington-Ingram 1963, etc.

²⁶ Pöhlmann-West 2001.

²⁷ Arist. *Rh.* III 8. 1409a, Aristox. *El. rhyth.* 33 Pearson 1990, *Anon. Beller. m.* 15-16 Najock 1972, D. H. *Comp.* 204-06 Usener-Radermacher (1899) 1997, etc. With regard to the existence of a rhythm of five basic time-units in Classical works - something which is doubted by some scholars -, see, apart from the Aristotelian testimony which we have just cited and the remarks made by West 1982 and 1992, the following passages in which, within the same rhythmic section, the first and second *longum* of the cretic foot appear resolved: Aesch. *Suppl.* 421-22, Ar. *Av.* 246 and 1065 (*cod.*), *Georg.* 111. In the case of B. 17 Snell-Maehler (1970) 1992, the cretic nature of the passage is not clear.

texts. For example, number 33 of the Pöhlmann and West edition²⁸ is based on the succession of two values found in the relationship of 1/2 between them. This type of rhythm, as we have seen further above, was already known by Aristotle²⁹ - and probably by Plato also³⁰ - and does not strike me as an unsuitable rhythmic correlation for a multitude of passages included in the trochaic and iambic metric sequences of the Archaic and Classical texts.


In the same way, the passage from Bellermann's Anonymous labelled with the number 32 by Pöhlmann and West is especially interesting. The epigraph illustrates to us that we are dealing with is a passage based on groups of six time-units. With the exception of the final note, one can easily divide the musical fragment into groups of six, and even into groups of three time-units. The rhythmic groups of six time-units which we can extract from this passage would be equivalent in modern notation to ,  and .³¹ If we identify the quaver with the short syllable and the crotchet with the long syllable, then we obtain the following metric groups: ' - - , - ' ' ' and ' - - . As is well known, the Aeolic and Aeolic-choriambic odes of the ancient texts display a large number of long passages which are easily divisible, on a metric level, in these very groups or in groups of six first time-units which are similar to these³². Some of the odes are almost entirely measurable via this type of pattern.

Another factor that enables the rhythmic study of the Archaic and Classical poetic-musical works is the quantitative nature of the Greek language. Just as poets and composers of dynamically-accented languages tend to adapt to the accentual values of each word in their texts, the Greek linguistic opposition between long and short vowels must have placed certain limitations on the musician-poet when it came to

²⁸ Pöhlmann-West 2001.

²⁹ Arist. *Rh.* 1408b-09a.

³⁰ Pl. *R.* III 400b-c.

³¹ This last group, which occupies the final position of the short musical work, becomes  in the edition of Westphal 1867 and Pöhlmann-West 2001, by way of an addition to the text offered by the papyrus. However, in dealing with the absolute ending, it seems simpler to assume that the original author did not feel the need to 'fill' the last six first time-unit group once the passage had already been finished. Therefore, the supplement added by the aforementioned editors no longer seems truly necessary.

³² Of the three metric groups, the first and third would be basic elements of the aforementioned odes, whilst the second group would be far less common. See, for example, B. 2, 4 (vv. 1-2, 4 and 7-10 of the strophe), 6, 18 and fr. 8 (vv. 1-4 of the strophe) Snell-Maehler (1970) 1992, *Pind. Ol.* I (vv. 1 and 3-8 of the strophe, vv. 2-3 and 5-7 of the epode), *Ol.* IV (vv. 3-5 and 11 of the strophe, vv. 1-3, 5 and 8-9 of the epode), *Pyth.* II (vv.1-2, 5 and 8 of the strophe and entirety of the epode), *Pyth.* V (epode), *Pyth.* VI, *Pyth.* VII (vv. 1 and 4 of the strophe and the entirety of the epode), *Pyth.* VIII, *Pyth.* X (vv. 1-2 and 5 of the strophe and entirety of the epode), *Pyth.* XI (vv. 2-6 of the strophe and vv. 1-4 of the epode), *Nem.* II (vv. 1-2 and 4 of the strophe), *Nem.* III (vv. 3-8 of the strophe and vv. 2-3 of the epode) Snell-Maehler 1975-1980, etc.

seeking possibilities for lengthening and shortening syllables, or at least in the majority of cases. The ancient theorists used to relate long syllables to notes lasting twice the duration of short syllables³³. Moreover, as is well known, the internal and external resposion between two short syllables and one long syllable, and also between one long and one short syllable are common in Archaic and Classical texts. On the other hand, the external resposions between one long syllable and elements of three first time-units are extremely rare³⁴. The external resposions between one long syllable and groups of four or five first time-units are highly uncommon, and often textually dubious, phenomena³⁵.

Regarding this question, it may be illustrative to consider the well-known passage by Dionysius of Halicarnassus, in which the author remarks on the fact that the musician-poets could end up converting a long syllable into a short syllable and a short into a long syllable³⁶. The reading of the text makes it quite clear that, for Dionysius of Halicarnassus, this was not normal procedure. It rather illustrates the extremes to which vocal music could go. Moreover, it is worth bearing in mind that during the period of Dionysius of Halicarnassus, the musicians/poets probably took more liberties than authors of the Classical period in terms of the long/short linguistic opposition. Therefore, Dionysius of Halicarnassus' erudite observation reinforces, *e contrario*, that which the comparison with other systems, ancient doctrine and Archaic and Classical poetic texts had already suggested in the positive: that, in quantitative poetry and song, the most normal procedure should have been to avoid a collapse of the long/short distinction - as in our song and poetry, whereby the stressed and unstressed syllabic distinction does not enter generally into collapse.

Similarly, it is important to highlight that in the old musical documents with rhythmic notation that we have, the norm is for long syllables to be found in notes of double or triple duration with regard to those notes occupied by short syllables³⁷. What is more, in relation to the basic time-units of reference, the especially long values are normally occupied by syllables containing a long vowel or diphthong³⁸. Within these longer durations, one can also find a relatively high number of sylla-

³³ Psell. *Isag.* 1, 8, 9 and 14 Pearson 1990, Heph. *Ench.* (see, especially, chapter III), etc.

³⁴ See the text and critical apparatus of Aesch. *Cho.* 785~796, *Sept.* 170~178, B. 5 vv. 13-14 of the strophe Snell-Maehler (1970) 1992, *Soph. Ant.* 975~986, *El.* 1088~1096, *Eur. Hipp.* 822~841, *Suppl.* 804~817, *El.* 705~719, 1185~1201, *HF* 787~804, *Or.* 1363~1547, *IA* 253~265, *Rh.* 455~821, *Ar. Lys.* 788-89~812-13, *Thesm.* 961~964~967.

³⁵ See the text and critical apparatus of Aesch. *Suppl.* 810~819, *Cho.* 470~475, 588~597, *Bacch.* 17. 15 of the strophe Snell-Maehler (1970) 1992, *Eur. Alc.* 877~894, *Med.* 977~984, *Tro.* 1310~1325, *Ar. Pax* 1135~1167. See also Aesch. *Eum.* 924~946.

³⁶ D. H. *Comp.* 64 Usener-Radermacher (1899) 1997.

³⁷ See nn. 3, 4, 5, 6, etc. Pöhlmann-West 2001.

³⁸ See n. 11 line 2 n. 17 lines 16-17 and 19 n. 18 line 23 n. 23 lines 6 (two cases), 8-9 and 11, etc. Pöhlmann-West 2001.

bles containing one short vowel whilst being closed by a continued consonant (ex. gr. $\mu\acute{o}\sigma\text{-}\chi\omega\nu$)³⁹. Comparatively, only one possible case exists of a syllable being formed by a short vowel and closed by a non-continued consonant, which, at the same time, occupies a particularly long note in relation to the basic time-unit of reference. Curiously, it is in a proper name belonging to a later document: the initial syllable of Ἰξείων in number 39 of the Pöhlmann and West edition⁴⁰. In all probability, it is necessary to divide this word syllabically as ***Ik**-seí-oon*. The long syllable 'Ik-', aside from containing a vowel which, quite plausibly, should be understood as being short, is applied to a note interpreted by Pöhlmann and West as being of quadruple duration in relation to the basic time-unit of reference. Nonetheless, it is important to reiterate that proper names tend to enjoy specific metric freedom - both in Archaic and Classical texts and preserved musical documents⁴¹ - and that the document in question corresponds to the first or second centuries AD. In the ancient musical texts, therefore, the distribution of different syllables in different notes appears to respect the limitations of the quantitative nature of Greek language and poetry.

Finally, the comparison with other musical cultures which are far better documented may, in some cases, shed some additional light on the subject. It is licit for us to use any available comparative data, providing that these comparisons are made in an auxiliary manner, i.e. in conjunction with other types of evidence.

With the help of all of these elements - metrical data, ancient doctrine, preserved musical texts, quantitative opposition and the comparison with other better-known musical realities - , it is easier for us to confront the rhythmical analysis of Archaic and Classical poetic-musical texts. At the first stage, we must seek to take into consideration the compositions and genres in an individualised way, as far as this is possible. The collective of specific analyses provides a series of data of varying degrees of precision which might lead, on one hand, to the formulation of a first set of rhythmical conclusions - whether general or specific - , and, on the other hand, to the formulation of rhythmical hypotheses. Those hypotheses which can be reasona-

³⁹ See n. 27 lines 14 (?), 23 and 25 n. 38 lines 6 (two cases) and 7 (two cases?), n. 42 line 10 n. 58 lines 3 (?) and 7 Pöhlmann-West 2001. In the papyrus corresponding to n. 17 line 18 of the cited edition, the short open syllable $\delta\nu$ of the name Ὀδυσῆα appears situated in a note which is interpreted by Pöhlmann and West as being of triple duration in relation to the basic time-unit of reference. It is essential to remember that proper names in general tended to enjoy a great deal of metric freedom. Furthermore, one must not forget that in the *Iliad* and the *Odyssey*, the syllable in question appears very often as a long syllable with the spelling Ὀδυσσῆα. In fact, the aforementioned editors opt for writing Ὀδυσ<σ>ῆα in the transcription of the papyrus.

⁴⁰ See n. 39 line 4 Pöhlmann-West 2001.

⁴¹ Apart from the already well-known metric freedom enjoyed by proper names in ancient Greek poetry in general, it is paramount to underline that in certain ancient preserved musical documents, one can observe a specific tendency to lengthen some of the syllables of this type of words (see nn. 27, 50, 17 and 39 Pöhlmann-West 2001).

bly confirmed, both for metrical data extracted from ancient poetic-musical texts and for all or some of the other four basic points of reference, could serve as a starting point for the formulation of new hypotheses, and so on.

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