

## Greek Elegiac Verse Rhythm

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Even after extensive research has been carried out into the rhythmical characteristics of the dactylic hexameter, the dispute about the question whether stichic and elegiac hexameters differ rhythmically or whether they are interchangeable continues.<sup>1)</sup> Perhaps this is not too disturbing, since the controversy seems to be of the comfortable type in which *both* parties are right: while examination of a corpus of stichic and of elegiac hexameters may reveal significant differences between the two hexameter genres, nonetheless it seems that any individual hexameter, as far as its rhythmical characteristics are concerned, may appear in elegiac and in stichic verse indiscriminately.

From a conviction that an identification of such differences as are rhythmically significant should take its departure from an inquiry into the rhythm of the elegiac distich as a whole,<sup>2)</sup> an attempt will here be made to advance the discussion by confronting quantifications of a fairly comprehensive sample of Greek elegiac verse, dating from the 7th to the 1st century B.C., with an analysis of the most conspicuous rhythmical characteristics of the elegiac couplet.

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<sup>1)</sup> See e.g. N.A.Greenberg, "A Statistical Comparison of the Hexameter Verse in *Iliad* I, Theognis, and Solon.", *QUCC* N.S. XX (1985) 63-75, where against a supposed "general assumption that there is little difference between the hexameter line of Homer and the hexameter segment of the archaic elegiac couplet" (63) it is argued, on the basis of statistical explorations carried out deliberately (and, one might add, ill-advisedly) regardless of rhythmical considerations, that the "epic hexameter and the elegiac hexameter are not mutually replaceable. Each embodies tendencies and habits not found in the other." (69)

<sup>2)</sup> Of course, much valuable work has already been done, especially in the case of the early elegists and with a focus on questions of 'rhythmical stylistics' (concerning the relation between linguistic phrase and rhythmical phrase) in particular: see especially A.W.H.Adkins, *Poetic Craft in the Early Greek Elegists*, Chicago/London 1985; also M.L.West, *Studies in Greek Elegy and Iambus*, Berlin/New York 1974, 112-6; id., *Greek Metre*, Oxford 1982, 44-6; 157-9; Greenberg o.c. (note 1). On special subjects: H.Patzer, "Zum Sprachstil des neoterischen Hexameters", *MH* XII (1955) 77-95 (on phenomena such as "Attributsperrung" and syntactical rhyme in the pentameter especially); P.Giannini, "Espressioni formulari nell' elegia arcaica", *QUCC* XVI (1973) 7-78.

## I.

1. The elegiac distich can be described as a short couplet or strophe consisting of a dactylic hexameter and a 'dactylic pentameter', which is not in fact built *κατὰ μέτρον* but rather to be conceived as a repetition of the sequence  $-\cup\cup-\cup\cup-$ , i. e. of the metric colon that constitutes the dactylic hexameter up to the *caesura penthemimeres*:

$$\begin{array}{l} -\cup\cup, -\cup\cup, -\cup\cup, -\cup\cup, -\cup\cup, --\parallel \\ -\cup\cup-\cup\cup-, -\cup\cup-\cup\cup-\parallel\parallel. \end{array}$$

The pentameter relates to the hexameter as a clausular verse.<sup>3)</sup> Three factors contributing to this function may be discerned:

(a) the rhythm produced by the juxtaposition of the two constituent parts of the pentameter (in Dale's notation, dd'dd) thwarts the expectation of a *continuation* of the rhythmical movement by means of extension (dd...) raised by the preceding hexameter;

(b) the invariable occurrence of caesura between two adjacent marked verse elements ( $-\cup\cup-\cup\cup-|\cup\cup-\cup\cup-\parallel$ )<sup>4)</sup> lends emphasis

<sup>3)</sup> Accordingly, the distich in which hexameter and pentameter appear in reversed order such as it is employed by the fifth century poet Dionysius Chalcos should be regarded as a rhythmical monstrosity. (For a valuation of this rhythmical experiment see K. F. Smith, "Some Irregular Forms of the Elegiac Distich", *AJPh* XXII (1901) 183-4.)

<sup>4)</sup> As has been noted before, the invariable occurrence of the caesura in this significant verse position is as it were counterbalanced by its not being realized in an especially distinct manner either phonetically or syntactically: (1) in most of the authors studied, elision occurs more frequently at the pentameter caesura than it does in either of the caesura positions in the elegiac hexameter (which may at least partly be connected with the relative frequency of enjambement of the hexameter, in which case an elided phrase-initial word (group) is likely to be involved, e.g. ..., *δόλιον δ' |*, ...: *μοῦνον δ' |* (Theogn. 122, 130)); and while (2), within the present sample, the percentage of verses with a sub-optimal realization of the caesura (see *ad* Table III below) does not appear to be particularly low, (3) a coincidence of this rhythmically significant boundary with a syntactically significant boundary seems to be avoided: from Adkins' quantifications it may be inferred that punctuation occurs somewhat less frequently at the pentameter caesura of archaic elegy than at either pos. 2 b or pos. 3 of the pentameter (which in most cases are likely to involve enjambement of the hexameter), and that punctuation in this position is less frequent also than at the caesura positions of both stichic and elegiac hexameter—the penthemimeral caesura of the elegiac hexameter excepted. (Adkins *o. c.* (note 2) 12-3.)

On this subject see also M. Treu, "Von Pentameterdihäresen", *QUCC* VI (1968) 106-13.

to this juxtaposition by frustrating the expectation of a *variation* of the rhythmical movement as well: in contrast to the situation in the hexameter, where the sequence  $-\cup\cup-\cup\cup-$  is followed by a rising second colon ( $(\cup\cup-\cup\cup-\cup\cup--\parallel)$ ), in the pentameter the second colon has a falling movement like the first;

(c) the blunt close of the pentameter gives rise to the perception of a shortening as compared to the hexameter—one of the most effective of clausular devices.

It may be noted in addition that as a consequence of the particular position of the caesura the pentameter lacks the features characteristic of an organic rhythmical whole, for the caesura (1) occurs in the very middle of the verse, that is (2) exactly between the two constituent metrical groups, so that (3) there is no variation of the rhythmical movement: both cola begin with a falling movement and have a blunt close. These three, naturally linked, characteristics of the caesura constitute a situation conspicuously avoided in stichic verse,<sup>5)</sup> so that their concurrence seems to be essentially connected with the pentameter's being part of a distichic couplet.

2. Whereas in the elegiac hexameter a realization of the double-short element by a long syllable ("contraction") may occur in all five relevant metra, in the pentameter only the first two double-short elements may be realized in this manner:

$$\begin{array}{l} -\cup\cup-\cup\cup-\cup\cup-\cup\cup\cup\cup--\parallel \\ -\cup\cup-\cup\cup--\cup\cup-\cup\cup-\parallel. \end{array}$$

Apart from a general tendency towards rhythmical purity near the end of a rhythmical whole, the absence of contraction in the two last double-short elements of the pentameter should probably be accounted for by the fact that the peculiar nature of the rhythm of the pentameter, based upon the characteristics of the second colon as described in (a)–(c) above, is thus displayed most clearly: a long realization of the third double-short element would obscure both the

<sup>5)</sup> More precisely: if the caesura position does coincide with the boundary of a metron, the verse tends to be catalectic (as in the case of the trochaic tetrameter), so that in this case also the caesura does not occur in the exact middle of the verse, and there is variation of the rhythm at the end of the cola anyway. (See the author's *Rhythm and Metre. Towards a Systematic Description of Greek Stichic Verse.*, thesis Leiden, Assen 1986 (henceforth *R & M*), 336–7; 348–9.)

The occasional phenomenon of 'caesura media' in the iambic trimeter is promoted to the status of a regular caesura only in comedy, where the rhythmical order aimed at is on the whole of a somewhat different nature: see *R & M* 193–201.

iuxtaposition and the falling movement; if the fourth double-short element were realized by a long syllable, this would detract from the clarity of the blunt close.

It should be noted however that – given that in the pentameter 2 out of 4 double-short verse-positions may be realized by a long syllable against 5 out of 5 in the hexameter<sup>6)</sup> – the ratio of dactyls versus spondees<sup>7)</sup> is not proportionally higher (as a matter of fact, in many samples the ratio in the pentameter is actually even lower than that in the hexameter: compare Table IA, third column with Table IB, fourth column).

Furthermore it may be observed that the frequency of spondees in the hexameters of a particular sample of elegiac verse does not bear a constant or predictable relation to the frequency of spondees used in the pentameters of the sample concerned.

E.g., while Tyrtaeus' verse shows a high average of spondaic realizations in his hexameters but not in his pentameters, in Xenophanes the reverse applies. On the other hand, a low occurrence of spondees is found in both the hexameters and the pentameters of Archilochus, whereas in Leonidas a high average of spondees occurs in both types of verse.

In the Hellenistic poets the proportion of long realizations of the second double-short verse element of the pentameter shows a marked increase (in Callimachus a spondaic realization of the second metron of *both* hexameter *and* pentameter is remarkably frequent, in all three of the samples studied) – although in Callinus' pentameters there is a high percentage as well.<sup>8)</sup>

Insofar as this can be inferred from a very limited sample of distichs studied for the occasion (100 from Theogn., 100 from Solon, 100 from Antipater), there are no obvious preferences for a hexameter with a particular realization of the first two metra to be followed by one realization of the pentameter rather than by another: thus

<sup>6)</sup> Not counting the verse-final element which is basically a double-short element (*R & M* 29) but is never realized by two short syllables.

<sup>7)</sup> Although in the pentameter the terms 'dactyl' and 'spondee' do not apply in the strict sense since the verse is not built *κατὰ μέτρον*, this terminology will be adopted here for brevity's sake.

<sup>8)</sup> This in contrast to his hexameters, in which the percentage of spondees in the second metron is comparatively low. (It is true that the sample is very small.)

It may be noted that, in Callinus' verse, two consecutive distichs begin with five long syllables, both in hexameter and pentameter:

λαῶν γὰρ σύμπαντι πόθος κρατερόφρονος ἀνδρός  
 θνήσκοντός, ζῶων δ' ἄξιος ἡμιθέων  
 ὡσπερ γὰρ μιν πύργον ἐν ὀφθαλμοῖσιν ὄρωσιν  
 ἔρδει γὰρ πολλῶν ἄξια μῦθος ἑών. (Callin. 1.18–21).

This phenomenon also occurs in Tyrt. 12.39–42; Theogn. 453–6, 641–4, 935–8; Leonidas 5.1–4, 75.3–6, 77.3–6.

—υυ—(—υυ—υυ—υυ)—||  
 ———υυ—υυ—υυ—||| does not seem to be notably more frequent than  
 ———υυ(—υυ—υυ—υυ)—||  
 ———υυ—υυ—υυ—|||, nor does  
 ———υυ(—υυ—υυ—υυ)—||  
 —υυ—υυ—υυ—υυ—||| appear to be notably more frequent than  
 —υυ—(—υυ—υυ—υυ)—||  
 —υυ—υυ—υυ—υυ—|||.

3. In accordance with the nature of the elegiac distich as a couplet or strophe, the interplay between syntactical and rhythmical completeness allows of greater variation than can be realized in stichic verse.

Enjambement of the hexameter produces an integration of the two verses that constitute the couplet. As in stichic hexameters,<sup>9)</sup> the stronger types of enjambement involve punctuation at the bucolic dihaeresis comparatively often—a phenomenon which seems to be remarkably frequent in the epigrams of Alcaeus:

e. g. Alcaeus III

*οἶνος καὶ Κένταυρον, Ἐπίκρατες, οὐχὶ σὲ μούνον  
 ὄλεσεν, ἦδ' ἐρατὴν Καλλίου ἠλικίην.  
 ὄντως οἰνοχάρων ὁ μονόματος, ᾧ σὺ τάχιστα  
 τὴν αὐτὴν πέμψαις ἐξ Αἴδεω πρόποσιν.*

XV

*στυγνὸς ἐπ' Ἀρκτούρω ναύταις πλόος, ἐκ δὲ βορείης  
 λαίλαπος Ἀσπασίῳ πικρὸν ἔτευξε μόρον  
 οὐ στείχεις παρὰ τύμβον, ὁδοίπορε· σῶμα δὲ πόντος  
 ἔκρουψ' Αἰγαίῳ ῥαινόμενον πελάγει.  
 ἠιθέων δακρυτὸς ἅπας μόρος, ἐν δὲ θαλάσση  
 πλεῖστα πολυκλαύτου κήδεα ναυτιλίας.*

Enjambement of the strophe is rhythmically more significant;<sup>10)</sup> it has the effect of an integration of the distichs into the more compre-

<sup>9)</sup> *R & M* 69–70.

<sup>10)</sup> Accordingly, it might also be expected to occur less frequently. This supposition seems to be confirmed for pre-Hellenistic elegy at least by Adkins' figures concerning the incidence of punctuation in both verses that constitute the distich and in stichic hexameters (o. c. [note 2] 12): a relatively high percentage of punctuation occurs in poss. 2 and 3 of the pentameter (8.22% and 7.52% respectively), comparable with the situation in stichic hexameters (7.57% and 6.39% respectively); in elegiac hexameters, however, these percentages turn out to be much lower: 3.74% and 3.64% respectively. Adkins' figures for enjambement of

hensive unity of the poem. Maximum integration is produced in the case of enjambement of both hexameter and pentameter:

e. g. Archil. 13.3 ff.

τοίους γὰρ κατὰ κύμα πολυφλοίσβοιο θαλάσσης  
 ἔκλυσεν, οἶδαλέους δ' ἄμφ' ὀδύνης ἔχομεν  
 πνεύμονας. ἀλλὰ θεοὶ γὰρ ἀνηκέστοισι κακοῖσιν  
 ὧ φίλ' ἐπὶ κρατερὴν τλημοσύνην ἔθεσαν  
 φάρμακον. ἄλλοτε ἄλλος ἔχει τόδε· νῦν μὲν ἐς ἡμέας  
 ἐτράπεθ', αἱματόεν δ' ἔλκος ἀναστένομεν,

Antipater III

ἄ πάρος αἱματόεν πολέμου μέλος ἐν δαί' σάλπιγξ  
 καὶ γλυκὴν εἰράνας ἐκπροχέουσα νόμον  
 ἄγκειμαι, Φερένικε, τεὸν Τριτωνίδι κούρα  
 δῶρον, ἐριβρύχων παυσαμένα κελάδων.

As a description of the properties and possibilities peculiar to distichic composition the above may suffice. Taking this as a starting-point for our observation of the data presented in Tables I–VII below (see p. 162–178), an attempt will be made to formulate some tentative conclusions.

## II.

With regard to the question of the supposed interchangeability of elegiac and stichic hexameter we shall argue that, although observation of the present sample of Greek elegiac hexameters does not seem to yield a single specifically 'elegiac' property shared by all authors or samples studied, it does reveal certain rhythmical tendencies that seem to be connected with the hexameter's forming part of a distich.

The most obvious, as well as the most widely spread, characteristics to be discerned in elegiac, as opposed to stichic, hexameters are, arguably, the following.

1. With regard to the distribution of dactyls and spondees over the different metra it may be observed that

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the pentameter in the archaic elegists are: Tyrtaeus 8.1%, Archilochus 25%, Callinus 27.3%, Mimnermus 22.5%, Solon 8.18%, Theognis 5.5%, Xenophanes 11.8% (*o. c.* 210 n. 11).

Compare West, *o. c.* (note 2) 1974, 116: "High frequency [sc. of strong enjambement] may be regarded as a mark of virtuosity".

- (1) elegiac hexameters show a remarkable scarcity of spondees in the fifth metron (i. e., a particularly low incidence of 'spondaic' verses).

In archaic elegy the phenomenon is absent altogether – the *Theognidea* excepted, where 0.74% of the spondees occur in the fifth metron;<sup>11)</sup> compare the situation in stichic hexameters:<sup>12)</sup> Homer 3.82%, Hesiod 5.18%, Homeric Hymns 5.93%.

But in the 5th century poets and in the Hellenistic elegists also spondaic realizations of the fifth metron of the hexameter are either lacking (Critias, Dion. Ch.; Callim. epigr., Callim. *Loutra*, Antipater), or in any case far less frequent than in stichic hexameters: e. g. Callim. *Aitia* 3.2%, contrast 6.27% in his stichic hexameters; Theocritus 2%, contrast 5.61% in his epic (but 0.92% in his bucolic) poems – although in the case of his epigrams the sample is, of course, very small.

The only real exception are the 14 elegiac hexameters of Ion, in which two of the 21 spondees occur in the fifth metron (= 9.52%).<sup>13)</sup>

Apparently, then, the heavy close of a spondaic hexameter, whose occasional incidence is a feature of well-shaped stichic hexameter poetry, is avoided in elegiacs, probably because the sequence of four long syllables puts too great a strain upon the balanced contrast between the pendant second colon of the hexameter and the blunt second colon of the pentameter.

A second (related) phenomenon to be observed in elegiac hexameters is

- (2) a certain tendency to concentrate the spondees in the first two metra especially.<sup>14)</sup>

<sup>11)</sup> The occurrences are: 227 *ἀνθρώποισιν*||, 271 *ἀνθρώποις*||, 613 *λεσχάζοντες*||, 693 *ἀφραίνοντας*||, 715 *Ἄρπυιῶν*||, 875 *μωμήσαιτο*||, 995 *δηρισάντοιιν*||. Here again, therefore, the great majority of occurrences consist of tetrasyllabic words: compare *R & M* 39.

<sup>12)</sup> For the source of these data, see page 161 below.

<sup>13)</sup> Ion 26.9 *ἀνθρώποισιν*||, 27.5 *Ἀλκμήνη τε*||. Compare the highest percentage found in stichic hexameters: Aratus 10.83%.

<sup>14)</sup> I suspect that the tendency towards a concentration of the spondees in the first two metra of the elegiac hexameter accounts for the alleged "habit or tendency toward metrical alternation" developed by the elegists according to Greenberg, *o. c.* (note 1) 65. He intimates that "there is a clearcut tendency in the hexameters of the Theognidean corpus to avoid the metrical repetition in *DDxxx*, and, by the same token [?], in *SSxxx* (i. e., successive spondees) and a complementary tendency toward the metrical alternation in *DSxxx* and *SDxxx*." which, he admits, "strange fact" emerges "from the use of a four-celled tableau for cross-tabulation" (64).

The "similarly clear, if weaker, tendency toward metrical alternation in Foot 3 and Foot 4 in Theognis and Solon (*no* cases of *xxSSx* [sc. in Solon])" (65) may be more plausibly accounted for by a scarcity of spondees in the second colon





This is the case in Archil. (86.67%) and Callin. (80%) especially, and to a lesser degree also in Mimn. (70.27%) and Tyrnt. (67.61%): compare the situation in stichic hexameters, where for the pre-Hellenistic period the percentage of 67.9% of trochaic caesurae in Empedocles is remarkably high: contrast Homer 56.8%, Hes. *Th.* 57.6%, Hom. Hymns 56.62%.

In Hellenistic elegy a high percentage of trochaic caesurae is found in Callim. *Aitia* especially (86.71%), and also in his epigrams (78.03%): compare the situation in stichic hexameters, where (not counting the exceptionally high percentage (81.1%) in Nonnos (5th century A.D.)) the highest percentage is found in Theocritus' epic poems and in the hymns of Callimachus: 71.5% and 71.8% respectively.

However, the fact that this preference for a trochaic caesura, easy to understand from a rhythmical point of view, is not more general than it happens to be, seems to indicate that, in some authors (Theognis, Solon?) or in some contexts at least, an elegiac distich with a penthemimeral caesura in the hexameter was opted for in virtue of some quality peculiar to it – such as, presumably, its aptness to accommodate a balanced contrast (or 'pointedness') of expression.<sup>17)</sup>

It may be relevant to note that, in practically all the samples studied both of elegiac and of stichic hexameters, elision is more frequent at the penthemimeral than at the trochaic caesura.<sup>18)</sup> Although in poetry with a high degree of formulaarity the adaptability of formulae may be relevant, a rhythmical explanation of

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<sup>17)</sup> For the comparative frequency of penthemimeral caesura in particular contexts of stichic hexameters, see H.N. Porter, "The Early Greek Hexameter", *YCS* XII (1951) 30 (on the second part of Hesiod's *Erga*); also *R & M* 75–6.

In any case, it should be noted that the data for the relative frequency of trochaic and penthemimeral caesurae do not bear out Nagy's supposition to the effect that "the actual coexistence of epic hexameter with elegiac pentameter in the framework of an elegiac couplet favors the incursion of formulas with the shape of a Hemiepes at the start of hexameter verse. To put it another way, the frequency of penthemimeral caesura in hexameter may be due partially to the influence of the obligatory caesura in pentameter.", G. Nagy, *Comparative Studies in Greek and Indic Meter*, Cambridge, Mass. 1974, 100–1.

<sup>18)</sup> For the proportion of non-elided vs. elided words in the caesura positions of the elegiac hexameter, see Table VII A below. With the exception of both occurrences in Critias, one occurrence in Leonidas, and two in Meleager, the instances of elision involve a monosyllabic word (or a, mostly 'phrase-initial', word-group:  $\acute{o} \delta'$ ,  $\sigma\upsilon \delta'$ , and the like: compare the frequency of elision at pos. 1).

In our sample of stichic hexameters the proportion of non-elided vs. elided word-end at the caesura position is:

Hom. *Il.* penth. 20.56 troch. 33.79; Hes. *Erg.* penth. 15.35, troch. 28.85; Theocr. buc. penth. 34.86, troch. 72.25; Theocr. epic. penth. 34, troch. 187; Callim. penth. 79, troch. 103.33.

On the comparative frequency of elision at the caesura of the pentameter, see note 4 above.

this phenomenon might be found in the different mode of integration which is produced by both caesurae: possibly, phonetic distinctness is most welcome where there is a maximum degree of rhythmical integration of the two cola (i. e. in the case of a trochaic caesura), whereas in the case of the less integrated rhythm produced by a penthemimeral caesura, the phonetic continuity achieved by elision may be more pleasing.

For the effect referred to, one may compare a succession of three distichs with a penthemimeral caesura, where the simplicity of the rhythm seems to support a particular expressive positioning of words, with the more complex movement in three successive elegiacs with a trochaic caesura:

Theogn. 133-8

οὐδείς Κύρν' ἄτης | καὶ κέρδεος αἴτιος αὐτός,  
 ἀλλὰ θεοὶ τούτων | δώτορες ἀμφοτέρων  
 οὐδέ τις ἀνθρώπων | ἐργάζεται ἐν φρεσὶν εἰδὼς  
 ἐς τέλος εἴτ' ἀγαθὸν | γίνεται εἴτε κακόν.  
 πολλάκι γὰρ δοκέων | θήσειν κακὸν ἐσθλὸν ἔθηκεν,  
 καὶ τε δοκῶν θήσειν | ἐσθλὸν ἔθηκε κακόν.

Theogn. 467-72 (Euenus? West)

μηδένα τῶνδ' ἀέκοντα | μένειν κατέρυκε παρ' ἡμῖν,  
 μηδὲ θύραζε κέλευ' | οὐκ ἐθέλοντ' ἵεναι·  
 μηδ' εὐδοντ' ἐπέγειρε | Σιμωνίδη, ὄντιν' ἄν ἡμῶν  
 θωρηχθέντ' οἴνω | μαλθακὸς ὕπνος ἔλη,  
 μηδὲ τὸν ἀγρυπνέοντα | κέλευ' ἀέκοντα καθεύδειν·  
 πᾶν γὰρ ἀναγκαῖον | χρῆμ' ἀνιηρόν ἔφω.

A similar explanation cannot be adduced for the situation in the fifth century poets Critias and Ion (the only authors in the sample studied a majority of whose hexameters actually show a penthemimeral caesura);<sup>19)</sup> in these authors a somewhat divergent conception of elegiac rhythm in general seems to apply, for which see *sub* III below.

3. The fact that the hexameter in an elegiac distich is followed by a pentameter, and is thus part of a larger rhythmical whole, does not detract from its being rhythmically complete in itself; this appears

<sup>19)</sup> So the common opinion to the effect that between the seventh and the end of the fifth century the proportion of penthemimeral caesurae shows a marked increase (J.M. Edmonds, *Greek Elegy and Iambus*, Cambridge 1931, 11; West, *o. c.* (note 2) 1974, 112) seems to be justified only when the (nine) hexameters of Dionysius Chalcus are excepted and, more importantly, on the understanding that this tendency does not continue into the Hellenistic period.

not only from the prosodic indices of verse-end such as hiatus and *brevi in longo*, but also from the fact that, in many of the elegists, word-end at pos.8, which produces a clausular return to falling movement (—υυ—υυ—|υυ|υ—υυ;—υυ—||: ‘bucolic dihaeresis’) occurs as often as in stichic hexameters. In fact,

(4) in some of the elegists bucolic dihaeresis is notably more frequent than it is in stichic hexameters.

Again, this is especially true for Archilochus (66.67%, compare for instance 61.7% in the *Iliad*, 58.9% in Hesiod) and for Callimachus (epigr. 88.64%, *Aitia* 74.13%, *Loutra* 72.46%) and Alcaeus (77.61%).<sup>20</sup>

A low incidence of word-end at pos.8 is found in e.g. Mimnermus (40.54%) and in Xenophanes (only 29.03%); for Critias and Ion, see below.

A more general difference between elegiac and stichic hexameters concerns the restriction, not peculiar to this verse position but usually considered as a characteristic property of bucolic dihaeresis,<sup>21</sup>) with regard to the preceding verse element:

(5) with only an occasional exception, the restriction that word-end at pos.8 should preferably occur after a pure, double-short realization of the preceding metron applies more strongly in elegiac than in stichic hexameters.

In most authors of both archaic and Hellenistic elegy not a single instance of bucolic dihaeresis following a long syllable is found; in Tyrtaeus, Theognis, Leonidas and Meleager the percentage is also quite small.<sup>22</sup>) Xenophanes (and the fifth century poets) constitute the only real exception; in Theocritus’ epigrams the situation is similar to that in his epic hexameters.

So the avoidance in pos.8 of the verse-final associations attached to word-end following a metron realized by two (long) syllables increases when the hexameter is part of a distich, apparently because it would thwart the perception of the comparative length of the second colon of the hexameter, and thus detract from the effect of shortening characteristic of the (second colon of the) pentameter.

<sup>20</sup>) Compare the highest percentage in stichic hexameters: 76.2% in Theocritus (*R & M* 86); the data derived from the present sample (Theocr. buc. 79.3%, epic. 47.49%, epigr. 60.87%) show that the epitheton ‘bucolic’ is not, after all, without justification (*contra R & M* 415, n.97).

<sup>21</sup>) *R & M* 84.

<sup>22</sup>) Compare the situation in our sample of stichic hexameters: word-end after a long syllable in pos.8: Hom. *Il.* 8.03%, involving 29.69% of the spondees in the fourth metron; Hes. *Erg.* 4.83%, involving 16.26% of the spondees. For Theocr. buc., Theocr. epic., and Callim. the corresponding figures for word-end after a long syllable in pos.8 are: 5.55%, 3.09%, and 0.63% respectively, involving 4.35%, 11.43% and 3.85% of the spondees in the fourth metron respectively.

4. In both stichic and distichic hexameters, word-end at pos. 4 is comparatively infrequent; of the three possibilities for word-end in this position (ⓐ|ⓐ, ⓑ|, ⓓ|) the last one is realized less frequently than the others in practically all the samples studied (see Table V below). This phenomenon seems to be accounted for by the formal identity of the sequence —ⓐⓐ—ⓓ| with the end of the hexameter following the bucolic dihaeresis.<sup>23)</sup> Now

(6) in archaic elegy the restriction on the incidence of word-end after a spondaic realization of the second metron seems to apply somewhat less strongly.

In Archil. the tendency seems to be absent altogether (although, admittedly, one might judge the sample to be too small to be informative about such a detail), since of the two occurrences of word-end at pos. 4, one is after a long syllable — which means that 25% of the spondees in this metron, against only 9.09% of the dactyls, are followed by word-end. In Tyrnt., Mimn. and Solon also 12% or more of the spondees in the second metron are followed by word-end.

In Theogn. (and Xenoph.), however, the situation is rather similar to that in the stichic hexameters of Hesiod's *Erga*.<sup>24)</sup>

So, if it is significant at all, the comparative laxity of archaic elegy with respect to this tendency might indicate that, in the earliest period of elegiac verse writing, the sequence —ⓐⓐ—ⓓ| was felt to be less objectionable where there is no pendant verse-end immediately preceding.

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<sup>23)</sup> See R. S. P. Beekes, "On the Structure of the Greek Hexameter. O'Neill Interpreted.", *Glotta* L (1972) 5; *R & M* 96. It may be noted that word-end *between* the two shorts in pos. 4, which creates a sequence identical with the clausula of the hexameter with *brevis in longo* (—ⓐⓐ—ⓐ|), occurs, in the majority of both the elegiac and the stichic samples, more frequently than either word-end after a long syllable in pos. 4 or word-end after the two shorts of a dactylic realization, and even, in several authors, more frequently than word-end at pos. 4 irrespective of the realization of the second metron.

This situation seems to indicate that the pendant nature of the word-end in this position is disfavoured less strongly when there is not at the same time metron-dihaeresis, so that the rhythmical movement produced is still a rising one (anticipating the movement of the second colon).

<sup>24)</sup> The data from our sample of stichic hexameters are: incidence of word-end after a long syllable in pos. 4 in Hom. *Il.* 2.12%, involving 5.67% of the spondees in the second metron; Hes. *Erg.* 4.35% after a long syllable, i. e. after 8.85% of the spondees; the corresponding figures for Theocr. buc., epic., and Callimachus' stichic hexameters are: word-end after a long syllable in pos. 4 in 1.65%, 1.93% and 1.05% of the verses respectively, involving 3.03%, 4.76% and 2.23% of the spondees in the second metron respectively.

The occurrence of the corresponding phenomenon in the pentameter unfortunately cannot be adduced as a test for this explanation, since in the pentameter word-end at pos. 4 b, leaving a monosyllabic word at the end of the first colon, is rare anyway.

The only instances of word-end at pos. 4 in Tyrtaeus and in Callimachus epigrams involve a long realization of the preceding double-short element; the only occurrence in Xenophanes, two out of three instances in Meleager, and one out of two instances in Leonidas, are preceded by a short syllable. It may be relevant, however, that 7 out of 8 occurrences of word-end at pos. 4 of the pentameter in Theognis involve a double-short realization of the preceding element.<sup>25)</sup>

However, in the case of at least some of the samples studied, there seems to be a positive avoidance of word-end at pos. 4 a of the pentameter.

In Archilochus, Callimachus, Dionysius Chalcidius, and Callimachus *Loutra* word-end at this verse position is absent altogether; a very low incidence is found in Callimachus epigrams, *Aitia*, Leonidas, Alcaeus and Antipater: 1.51%, 0.7%, 1.2%, 1.49%, and 2.62% (involving 5.71%, 1.69%, 4.62%, 5% and 6% of the double-short realizations in pos. 4 respectively). A comparatively low incidence of word-end between the two shorts in pos. 4 is found in Mimnermus and Theognis; the 8.11% and 9.16% of word-end at pos. 4 a in their pentameters involve 12.5% and 19.87% of the double-short realizations respectively (compare the situation in their hexameters: word-end at 4 a 10.81% and 12.65%, involving 18.18% and 24.64% of the dactylic realizations respectively).

It seems to be justified, then, to surmise that the correspondence with the clausula of the hexameter contributes to the tendency to avoid word-end at pos. 4 a of the pentameter (where, of course, there is a hexameter, and thus a pendant verse-end, immediately preceding).

### III.

The varying degrees in which these tendencies apply in the different authors studied seem to reflect, in most cases, different degrees of rhythmical sensitivity. Thus viewed, Archilochus and Callimachus (in his epigrams and *Aitia* especially) show a particular awareness of the rhythmical balance between the two verses that constitute the elegiac distich, while Xenophanes<sup>26)</sup> and, more remarkably, though

<sup>25)</sup> That is, 87.5%, involving 2.21% of the double-short, against 0.27% of the long realizations of the preceding element.

<sup>26)</sup> In the case of Xenophanes, who is deservedly notorious for the awkwardness of his versification (see e.g. Adkins *o. c.* (note 2), General Index *s. v.* Xenophanes, clumsiness in), this rhythmical negligence also appears from a high incid-

to a lesser degree, Theocritus seem to be particularly careless in this respect.

The significant differences between the three samples of Callimachus' verse to be observed in the Tables below, which do not converge to an obviously consistent picture, require more detailed investigation in the domain of rhythmical stylistics especially.

The versification of Theocritus, whose epigrams also show for instance a noticeable scarcity of elision, demands further investigation as well, which should take into account the marked differences between his epic and his bucolic hexameters.

In the case of the fifth century poets Critias and Ion, however, the absence of the tendencies described above seems to reveal not so much a rhythmical negligence but rather a different and simpler conception of the rhythm of elegiac verse.<sup>27)</sup> In their hexameters, the comparative infrequency of bucolic dihaeresis indicated above coincides with a high incidence of word-end at pos.7, and in the case of Critias also with a comparatively high incidence at pos.9. Instead of the clausular return to falling movement, then, these authors seem to prefer a repetition of the double-short rising movement<sup>28)</sup> produced by the penthemimeral caesura – which we saw they likewise favour very markedly. The comparative frequency of word-end at pos.8 of the pentameter, which creates a rising double-short movement at the end of the pentameter as well, produces an effect of 'staccato' at the end of the distich:

—○○—○○—|○○—i○○—i○○—||  
—○○—○○—|—○○—i○○—|||.

The notable infrequency of word-end at pos.3 in both the hexameters and the pentameters of Critias and Ion seems to indicate that for them double-short rising movement is indeed specifically characteristic of the second colon; in virtue of this kinship between the final cola of both types of verse, the effect of three identical cola produced by the frequency of penthemimeral caesura in their verse is likely to be diminished.

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ence of both hexameters and pentameters without a proper caesura (Table III below).

<sup>27)</sup> Even though the samples are only very small, the congruence between the data in both authors seems to be significant. In Dion. Ch. there is also a comparatively high incidence of word-end at pos.8 of the pentameter, but his (few) distichs do not conform to this picture otherwise (compare note 19 above).

<sup>28)</sup> Which, in the case of a spondaic realization of the metron concerned, may apply only at the metric level without losing either its double-short or its rising effect.

The effect may be illustrated by

Critias 6.3–4

*μηδ' ἀποδωρεῖσθαι | προπόσεις ; ὄνομαστί λέγοντα,  
μηδ' ἐπὶ δεξιτερὰν | χεῖρα κύκλω ; θιάσου*

Ion 27.1–2

*χαιρέτω ἡμέτερος | βασιλεὺς ; σωτήρ τε πατήρ τε·  
ἡμῖν δὲ κρητῆρ' | οἰνοχόοι ; θέραπες.*

Finally, with regard to the pentameter the following may be noted. In accordance with its nature as a clausular verse, rhythmically dependent upon the preceding hexameter, the pentameter does not have a clausular movement of its own.

In some of the authors studied, there is a preference for the incidence of word-end at pos.7 of the pentameter, which reinforces the falling rhythm of both the first and the second colon, and seems to emphasize the absence of variation of the rhythmical movement characteristic of the pentameter as well as the bluntness of its close (...|—υυ—|| in contrast to the pendant bucolic clausula of the hexameter: ...|—υυ—||). Word-end in this position is especially frequent in Mimnermus and Solon, and, to a lesser degree, in Callinus and in Callimachus' epigrams. In both Mimnermus and Solon, there is a relatively high percentage of word-end at pos. 3 of the pentameter as well — which, when concurrent with word-end at 7, produces an antithetic structure of the pentameter (—υυ—|υυ—|—υυ—|—υυ—||): e. g.

Mimn. 1.7–8

*αἰεὶ μιν φρένας ἀμφὶ κακαὶ τείρουσι μέριμναι,  
οὐδ' ἀυγὰς ; προσορῶν | τέρπεται ; ἡλείου,*

2.13–4

*ἄλλος δ' αὖ παιδῶν ἐπιδεύεται, ὧν τε μάλιστα  
μείρων ; κατὰ γῆς | ἔρχεται ; εἰς Αἴδην·*

Solon 4.17–20

*τοῦτ' ἤδη πάση πόλει ἔρχεται ἔλκος ἄφυκτον,  
ἐς δὲ κακὴν ; ταχέως | ἦλυθε ; δουλοσύνην,  
ἢ στάσιν ἔμφυλον πόλεμόν θ' εὕδοντ' ἐπεγείρει,  
ὄς πολλῶν ; ἐρατὴν | ὄλεσεν ; ἠλικίην,*

although Solon especially seems to have a predilection for the even simpler structuring achieved by word-end at pos.2 and at pos.7 concurrently (—υυ—|—υυ—|—υυ—|—υυ—||): e. g.

## Solon 13.9–14

πλοῦτον δ' ὄν μὲν δῶσι θεοί, παραγίγνεται ἀνδρὶ  
 ἔμπεδος ἰ ἐκ νεάτου | πυθμένος ἰ ἐς κορυφήν·  
 ὄν δ' ἄνδρες τιμῶσιν ὑφ' ὕβριος, οὐ κατὰ κόσμον  
 ἔρχεται, ἰ ἀλλ' ἀδίκους | ἔργμασι ἰ πειθόμενος  
 οὐκ ἐθέλων ἔπεται, ταχέως δ' ἀναμίσγεται ἄτη·  
 ἀρχῆς δ' ἰ ἐξ ὀλίγης | γίγνεται ἰ ὥστε πυρός, .

On this showing, the frequent incidence of word-end at pos.7 a seems to constitute a less simple and more integrated, and thus more sophisticated structuring of the second colon of the pentameter (—υυ—υυ—|—υι—υυ—||), which might account for its increasing frequency in several of the Hellenistic poets (Callim. *Aitia*, *Loutra*, Antipater and Meleager especially); word-end in this position is frequent also in Theognis.

## E. g. Theogn. 5–10

Φοῖβε ἄναξ, ὄτε μὲν σε θεὰ τέκε πότνια Λητώ,  
 φοίνικος ῥαδινῆς | χερσὶν ἰ ἐφαψαμένη,  
 ἀθανάτων κάλλιστον, ἐπὶ τροχοειδέι λίμνῃ,  
 πᾶσα μὲν ἐπλήσθη | Δῆλος ἰ ἀπειρεσίῃ  
 ὁδοῖς ἀμβροσίης, ἐγέλασσε δὲ γαῖα πελώρη,  
 γήθησεν δὲ βαθύς | πόντος ἰ ἀλὸς πολιῆς.

Callim. *Loutra* 1–4

ὄσσαι λωτροχόοι τᾶς Παλλάδος ἔξιτε πᾶσαι,  
 ἔξιτε τᾶν ἵππων | ἄρτι ἰ φρυασσομενᾶν  
 τᾶν ἱερᾶν ἐσάκουσα, καὶ ἄ θεὸς εὐτυκος ἔρπεν·  
 σοῦσθέ νυν, ὦ ξανθαὶ | σοῦσθε ἰ Πελασγιάδες.

## IV.

To summarize, then, the elegiac distich is a complex rhythmical structure, consisting as it does of a hexameter which in itself constitutes an organic rhythmical whole (with variation of the rhythmical movement at the caesura producing an integration of the constituent metrical groups and with a clausular return to the movement of the beginning) and a pentameter, which, while it is not, owing to the absence of rhythmical variation of its cola, in itself a rhythmical whole, functions as a clausula by its interruption of the dactylic (i. e., extending double-short) movement and by its shortening as compared



to the hexameter, and thus gives rise to the perception of distichic composition.

In those elegists who show a certain sensitivity to these properties of distichic versification in general, a tendency can be observed to maximize the rhythmical difference between the two constituent types of verse, by realizing the hexameter in the most characteristically 'hexametrical' way that is possible, that is, by a particularly high proportion of trochaic caesurae and by keeping the second colon of the hexameter maximally pure in all relevant respects. Many of the poets, however, diverge from this picture: some of them apparently by a certain rhythmical carelessness, others owing to a different conception of elegiac rhythm.<sup>29)</sup>

### Note on the Quantifications

The material covered by the quantifications presented below includes complete distichs (i. e., those distichs regarded as complete by the editor concerned) only.

The editions used are the following:

Archil., Theogn.: M. L. West, *Iambi et elegi graeci*, Vol. I, Oxford 1971. Tyrt., Callin., Mimn., Solon, Xenoph., Critias, Dion. Ch., Ion: id., Vol. II, Oxford 1972.

Theocr., Callim. epigr., Leonidas, Alcaeus, Antipater, Meleager: A. S. F. Gow & D. L. Page, *The Greek Anthology. Hellenistic Epigrams.*, Vol. I, Cambridge 1965.

Callim. *Aitia*: R. Pfeiffer, *Callimachus.*, Vol. I, Oxford 1949.

Callim. *Loutra*: id., Vol. II, Oxford 1953.

The quantifications of stichic hexameters referred to are, unless otherwise indicated, those presented in *R & M* (see note 5), Chapter II. In some cases reference is made to a sample of stichic hexameters counted for the occasion; this sample comprises:

Homer, *Iliad* XI (edd., D. B. Munro & T. W. Allen, Oxford 1920): 847 verses;

Hesiod, *Erga* (ed. M. L. West, Oxford 1978): 828 verses;

Theocritus, bucolica (ed. A. S. F. Gow, Vol. I, Cambridge 1952, *Id.* I-V): 546 verses;

Theocritus, epica (id., *Id.* XII and XXII): 259 verses;

Callimachus *Hymn.* I-III (ed. R. Pfeiffer, Vol. II, Oxford 1953): 474 verses.

For an account of the conception of 'word-end' used in this article, see *R & M* 162-5.

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*Table IA: Mean Frequency of Dactyls and Spondees in the Elegiac Hexameter*

	dactyls per verse	spondees per verse*	ratio da:sp*	sample size
Tyrt.	3.46	1.54	2.26	71
Archil.	4.13	0.87	4.77	15
Callin.	3.7	1.3	2.85	10
Mimn.	3.86	1.14	3.4	37
Solon	3.8	1.2	3.16	104
Theogn.	3.62	1.38	2.63	688
Xenoph.	3.65	1.35	2.69	31
Critias	3.52	1.48	2.38	23
Dion. Ch.	4.56	0.44	10.25	9
Ion	3.5	1.5	2.33	14
Theocr.	3.91	1.09	3.6	46
Callim. epigr.	4.12	0.88	4.69	132
<i>Aitia</i>	4.13	0.87	4.72	143
<i>Lontra</i>	3.86	1.14	3.37	69
Leonidas	3.35	1.65	2.02	249
Alcaeus	3.69	1.31	2.81	67
Antipater	3.9	1.1	3.53	229
Meleager	3.67	1.33	2.77	393

\* Excluding the last metron.

*Table IB: Mean Frequency of Dactyls and Spondees in the Pentameter*

	dactyls per verse	spondees per verse	ratio da:sp*	ratio da:sp**
Tyrt.	0.97	1.03	0.95	2.89
Archil.	1.87	0.13	14	29
Callin.	0.9	1.1	0.82	2.64
Mimn.	1.19	0.81	1.47	3.93
Solon	0.86	1.14	0.75	2.5
Theogn.	0.96	1.04	0.92	2.83
Xenoph.	0.65	1.35	0.48	1.95
Critias	0.91	1.09	0.84	2.84
Dion. Ch.	1.33	0.67	2	5
Ion	0.5	1.5	0.33	1.67
Theocr.	1.07	0.93	1.14	3.28
Callim. epigr.	0.93	1.07	0.87	2.74
<i>Aitia</i>	1.08	0.92	1.18	3.37
<i>Lontra</i>	1.07	0.93	1.16	3.31
Leonidas	0.74	1.26	0.59	2.18
Alcaeus	0.9	1.1	0.81	2.62
Antipater	1.14	0.86	1.32	3.65
Meleager	1.02	0.98	1.04	3.07

\* In the first colon.

\*\* In the verse as a whole.

*Table II A:* Distribution of Spondees over the Several Metra of the Elegiac Hexameter

	1st	2nd	3rd	4th	5th
Tyrt.	34.86%	37.61%	11.01%	16.51%	-
Archil.	38.46%	30.77%	7.69%	23.08%	-
Callin.	38.46%	23.08%	7.69%	30.77%	-
Mimn.	42.86%	35.71%	9.52%	11.9%	-
Solon	43.2%	40%	6.4%	10.4%	-
Theogn.	33.58%	35.37%	13.62%	16.68%	0.74%
Xenoph.	38.09%	28.57%	9.52%	23.81%	-
Critias	26.47%	26.47%	20.59%	26.47%	-
Dion. Ch.	25%	50%	-	25%	-
Ion	23.81%	33.33%	14.29%	19.05%	9.52%
Theocr.	38%	34%	10%	16%	2%
Callim. epigr.	31.03%	53.45%	6.9%	8.62%	-
<i>Aitia</i>	34.4%	48%	3.2%	11.2%	3.2%
<i>Loutra</i>	24.05%	45.57%	20.25%	10.12%	-
Leonidas	30.34%	37.38%	14.32%	15.05%	2.91%
Alcaeus	34.09%	40.91%	12.5%	11.36%	1.14%
Antipater	28.46%	41.11%	13.04%	17.39%	-
Meleager	30.71%	37.04%	14.97%	16.89%	0.38%

*Table II A. 1:* Percentage of Spondees Occurring in the first two Metra of the Elegiac and of the Stichic Hexameter

	1st & 2nd	1st & 2nd	1st & 2nd
Tyrt.	72.47%	Hom.	61.39%
Archil.	69.23%	Hes.	60.57%
Callin.	61.54%	Hom. Hymns	59.01%
Mimn.	78.57%		
Solon	83.2%		
Theogn.	68.95%	Parm.	53.53%
Xenoph.	66.66%	Emp.	66.53%
Critias	52.94%	Archestr.	50.92%
Dion. Ch.	75%		
Ion	57.14%		
Theocr.	72%	Arat.	59.42%
Callim. epigr.	84.48%	Apoll.	63.97%
<i>Aitia</i>	82.4%	Callim.	68.27%
<i>Loutra</i>	69.62%	Theocr. buc.	70.46%
Leonidas	67.72%	epic.	65.79%
Alcaeus	75%		
Antipater	69.57%	Nonnus	72.52%
Meleager	67.75%		
	average 70.89%		average 62.7%

Table II B:

Distribution of Spondees in the Pentameter

	1st	2nd
Tyrt.	45.21%	54.79%
Archil.	50%	50%
Callin.	36.36%	63.64%
Mimn.	56.67%	43.33%
Solon	47.06%	52.94%
Theogn.	48.33%	51.67%
Xenoph.	52.38%	47.62%
Critias	48%	52%
Dion. Ch.	50%	50%
Ion	47.62%	52.38%
Theocr.	32.56%	67.44%
Callim. epigr.	31.21%	68.79%
<i>Aitia</i>	35.88%	64.12%
<i>Loutra</i>	29.69%	70.31%
Leonidas	41.21%	58.79%
Alcaeus	36.49%	63.51%
Antipater	34.52%	65.48%
Meleager	38.08%	61.92%

Table III: Caesura A. HEXAMETER B. PENTAMETER

	P	T	- caesura*	+ caesura	- caesura*
Tyrt.	32.39%	67.61%	-	100%	-
Archil.	13.33%	86.67%	-	100%	-
Callin.	20%	80%	-	100%	-
Mimn.	29.73%	70.27%	-	100%	-
Solon	42.31%	57.69%	-	98.08%	1.92%
Theogn.	41.28%	57.56%	1.16%	97.53%	2.47%
Xenoph.	48.39%	38.71%	12.9%	93.55%	6.45%
Critias	56.52%	34.78%	8.7%	100%	-
Dion. Ch.	44.44%	55.56%	-	100%	-
Ion	64.29%	35.71%	-	100%	-
Theocr.	47.83%	52.17%	-	100%	-
Callim. epigr.	21.97%	78.03%	-	97.73%	2.27%
<i>Aitia</i>	13.29%	86.71%	-	97.9%	2.1%
<i>Loutra</i>	40.58%	57.97%	1.45%	100%	-
Leonidas	44.18%	55.82%	-	97.19%	2.81%
Alcaeus	35.82%	64.18%	-	100%	-
Antipater	32.75%	66.81%	0.44%	100%	-
Meleager	38.68%	61.07%	0.25%	98.22%	1.78%

\* Verses without a caesura include both verses without any word-boundary at the caesura position(s), such as

Xenoph. 1.15 *σπείσαντάς τε και εὔξαμένους τὰ δίκαια δύνασθαι*,

and verses with a 'sub-optimal realization' of the caesura, such as that by a boundary before an enclitic word, or after an article or preposition; e.g.

Leonidas 25.8 *κοσμεῖτω και τὸν ἰ νυμφίδιον θάλαμον*.

N. B.: In the case of the pentameter all instances belong to the latter type.

*Table IV: Bucolic Dihaeresis in the Elegiac Hexameter*

	word-end at pos. 8	ⲉⲗⲓ	ⲉⲗⲓ	% of spondees in 4th metron
Tyrt.	52.11%	97.3%	2.7%	5.55%
Archil.	66.67%	100%	-	-
Callin.	50%	100%	-	-
Mimn.	40.54%	100%	-	-
Solon	62.5%	100%	-	-
Theogn.	58.43%	96.02%	3.98%	10.13%
Xenoph.	29.03%	77.78%	22.22%	20%
Critias	30.34%	85.71%	14.29%	11.11%
Dion. Ch.	66.67%	83.33%	16.67%	100%
Ion	42.86%	83.33%	16.67%	25%
Theocr.	60.87%	96.43%	3.57%	12.5%
Callim. epigr.	88.64%	100%	-	-
<i>Aitia</i>	74.13%	100%	-	-
<i>Loutra</i>	72.46%	100%	-	-
Leonidas	63.45%	99.37%	0.63%	1.61%
Alcaeus	77.61%	100%	-	-
Antipater	65.5%	100%	-	-
Meleager	57.76%	99.12%	0.88%	2.27%

*Table V: Word-End at Pos. 4 of the Elegiac Hexameter*

	word-end at 4(b)	∪   % of dactyls in 2nd metron	⊥   % of spondees in 2nd metron
Tyrt.	14.08%	7.04%	16.67%
Archil.	13.33%	6.67%	9.09%
Callin.	-	-	-
Mimn.	18.92%	13.51%	22.73%
Solon	13.46%	7.69%	14.81%
Theogn.	11.19%	7.12%	13.88%
Xenoph.	16.13%	12.9%	21.05%
Critias	8.7%	-	-
Dion. Ch.	11.11%	11.11%	14.29%
Ion	-	-	-
Theocr.	4.35%	4.35%	6.9%
Callim. epigr.	6.06%	4.55%	8.57%
<i>Aitia</i>	8.39%	6.29%	10.84%
<i>Loutra</i>	5.8%	5.8%	12.12%
Leonidas	5.22%	2.81%	7.37%
Alcaeus	2.98%	2.98%	6.45%
Antipater	5.24%	4.37%	8%
Meleager	9.67%	7.63%	15%

Greek Elegiac Verse Rhythm

Table VI: The Incidence of Word-End: General Survey. A: Hexameter

	Tyrt.	Archil.	Callin.	Mimn.	Solon	Theogn.	Xenoph.	Critias	Dion. Ch.	Ion
pos. 1	14.08%	-	-	8.11%	6.73%	7.27%	-	4.35%	-	-
pos. 2 a	5.63%	6.67%	10%	16.22%	12.5%	16.42%	9.68%	17.39%	11.11%	35.71%
pos. 2 b	26.76%	40%	20%	27.03%	37.5%	34.45%	41.93%	17.39%	55.56%	35.71%
pos. 3	40.85%	53.33%	50%	48.65%	45.19%	48.55%	32.26%	30.43%	44.44%	28.57%
pos. 4 a	12.68%	6.67%	-	10.81%	14.42%	12.65%	25.81%	17.39%	11.11%	7.14%
pos. 4 b	14.08%	13.33%	-	18.92%	13.46%	11.19%	16.13%	8.7%	11.11%	-
pos. 5	32.39%	13.33%	20%	29.73%	42.31%	41.28%	48.39%	56.52%	44.44%	64.29%
pos. 6 a	67.61%	86.67%	80%	70.27%	57.69%	58.43%	38.71%	34.78%	55.56%	35.71%
pos. 6 b	2.82%	-	-	10.81%	6.73%	4.65%	6.45%	-	11.11%	7.14%
pos. 7	33.8%	13.33%	40%	40.54%	43.27%	42.88%	45.16%	78.26%	11.11%	57.14%
pos. 8 a	1.41%	-	-	2.7%	-	1.02%	6.45%	-	-	-
pos. 8 b	52.11%	66.67%	50%	40.54%	62.5%	58.43%	29.03%	30.34%	66.67%	42.86%
pos. 9	15.49%	6.67%	-	16.22%	14.42%	14.24%	25.81%	30.34%	11.11%	-
pos. 10 a	47.89%	26.67%	50%	37.84%	40.38%	43.31%	48.39%	34.78%	22.22%	57.14%
pos. 10 b	23.94%	33.33%	30%	40.54%	29.81%	31.25%	19.35%	17.39%	22.22%	21.43%
pos. 11	-	-	-	2.7%	-	0.44%	-	-	-	-
pos. 12	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

(Table VI A, cont.)

	Theocr.	Callim. epigr.	Callim. Aitia	Callim. Loutra	Leonidas	Alcaeus	Antipater	Meleager
pos. 1	2.17%	8.33%	4.2%	7.25%	4.42%	5.97%	5.24%	7.12%
pos. 2 a	23.91%	19.7%	21.68%	30.43%	14.86%	8.95%	20.96%	19.59%
pos. 2 b	45.65%	34.85%	39.16%	27.54%	36.14%	43.28%	32.31%	33.33%
pos. 3	26.09%	54.54%	49.65%	40.58%	41.77%	47.76%	50.65%	53.94%
pos. 4 a	23.91%	4.54%	9.09%	2.9%	6.02%	2.98%	4.37%	11.96%
pos. 4 b	4.35%	6.06%	8.39%	5.8%	5.22%	2.98%	5.24%	9.67%
pos. 5	47.83%	21.97%	13.99%	40.58%	44.58%	35.82%	32.75%	38.68%
pos. 6 a	52.17%	78.03%	86.71%	57.97%	56.63%	67.16%	66.81%	63.61%
pos. 6 b	4.35%	3.03%	3.5%	8.7%	3.21%	1.49%	7.42%	7.63%
pos. 7	43.48%	31.06%	33.57%	30.43%	22.09%	35.82%	25.76%	49.36%
pos. 8 a	4.35%	-	-	-	-	-	-	1.02%
pos. 8 b	60.87%	88.64%	74.13%	72.46%	63.45%	77.61%	65.5%	57.76%
pos. 9	13.04%	9.09%	4.2%	8.7%	9.24%	4.48%	12.23%	15.78%
pos. 10 a	39.13%	34.85%	46.15%	47.83%	38.15%	38.81%	39.3%	42.49%
pos. 10 b	21.74%	34.85%	25.87%	33.33%	28.92%	40.3%	34.06%	30.53%
pos. 11	-	1.51%	-	-	-	-	0.87%	1.78%
pos. 12	100%	100%	100%	100%	100%	100%	100%	100%



Table VI: The Incidence of Word-End: General Survey. B: Pentameter

	Tyrt.	Archil.	Callin.	Minm.	Solon	Theogn.	Xenoph.	Critias	Dion.Ch.	Ion
pos. 1	8.45%	-	20%	2.7%	0.96%	9.59%	3.23%	13.04%	11.11%	-
pos. 2 a	15.49%	20%	20%	27.03%	20.19%	16.28%	16.13%	8.7%	11.11%	7.14%
pos. 2 b	28.17%	46.67%	40%	21.62%	32.69%	38.37%	35.48%	43.48%	-	42.86%
pos. 3	46.48%	26.67%	40%	51.35%	55.77%	44.77%	22.58%	21.74%	55.55%	28.57%
pos. 4 a	12.68%	-	-	8.11%	9.61%	9.16%	9.68%	13.04%	-	7.14%
pos. 4 b	1.41%	-	-	-	-	1.16%	3.23%	-	-	-
pos. 5	100%	100%	100%	100%	98.08%	97.53%	93.55%	100%	100%	100%
pos. 6	5.63%	-	10%	2.7%	7.69%	6.69%	6.45%	4.35%	-	-
pos. 7 a	26.76%	26.67%	20%	24.32%	30.77%	36.05%	25.81%	21.74%	-	35.71%
pos. 7 b	40.84%	26.67%	50%	59.46%	45.19%	33.58%	35.48%	26.09%	33.33%	14.29%
pos. 8	28.17%	26.67%	30%	8.11%	22.11%	29.07%	35.48%	43.48%	44.44%	42.86%
pos. 9 a	30.99%	20%	30%	29.73%	25.96%	32.12%	22.58%	17.39%	33.33%	14.29%
pos. 9 b	-	-	-	-	1.92%	0.73%	-	-	-	-
pos. 10	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

(Table VI B, cont.)

	Theocr.	Callim. epigr.	Callim. Aitia	Callim. <i>Loetra</i>	Leonidas	Alcaeus	Antipater	Meleager
pos. 1	2.17%	7.58%	4.2%	4.35%	3.61%	-	3.49%	3.82%
pos. 2 a	26.09%	25.76%	29.37%	20.29%	18.07%	22.39%	18.78%	24.68%
pos. 2 b	30.43%	43.94%	31.47%	42.03%	44.58%	47.76%	37.12%	37.66%
pos. 3	45.65%	40.91%	36.36%	36.23%	38.55%	35.82%	38.43%	49.11%
pos. 4 a	8.7%	1.51%	0.7%	-	1.2%	1.49%	2.62%	8.14%
pos. 4 b	-	0.76%	-	-	0.8%	-	-	0.76%
pos. 5	100%	97.73%	97.9%	100%	97.19%	100%	100%	98.22%
pos. 6	2.17%	10.61%	3.5%	14.49%	7.63%	2.98%	4.37%	7.63%
pos. 7 a	32.61%	32.58%	44.06%	40.58%	33.33%	29.85%	36.24%	36.13%
pos. 7 b	28.26%	43.18%	37.76%	31.88%	27.71%	38.81%	28.82%	30.28%
pos. 8	23.91%	16.67%	10.49%	17.39%	29.32%	29.85%	23.14%	29.52%
pos. 9 a	28.26%	24.24%	30.77%	20.29%	10.84%	19.4%	24.02%	26.72%
pos. 9 b	2.17%	-	-	-	-	-	-	0.51%
pos. 10	100%	100%	100%	100%	100%	100%	100%	100%

*Table VII: The Incidence of Word-End: Total Numbers\*.  
A: Hexameter*

	Tyrnt.			Archil.			Callin.			Mimn.		
	tot.	-	+	tot.	-	+	tot.	-	+	tot.	-	+
pos. 1	10	0	10	0	0	0	0	0	0	3	0	3
			<i>0</i>			-			-			<i>0</i>
pos. 2 a	4	3	1	1	0	1	1	1	0	6	6	0
			<i>3</i>			<i>0</i>			-			-
pos. 2 b	19	13	6	6	4	2	2	2	0	10	7	3
			<i>2.17</i>			<i>2</i>			-			<i>2.33</i>
pos. 3	29	24	5	8	6	2	5	5	0	18	18	0
			<i>4.8</i>			<i>3</i>			-			-
pos. 4 a	9	8	1	1	1	0	0	0	0	4	4	0
			<i>8</i>			-			-			-
pos. 4 b	10	10	0	2	2	0	0	0	0	7	7	0
			-			-			-			-
pos. 5	23	23	0	2	2	0	2	2	0	11	11	0
			-			-			-			-
pos. 6 a	48	48	0	13	13	0	8	8	0	26	26	0
			-			-			-			-
pos. 6 b	2	0	2	0	0	0	0	0	0	4	1	3
			<i>0</i>			-			-			<i>0.33</i>
pos. 7	24	24	0	2	2	0	4	4	0	15	13	2
			-			-			-			<i>6.5</i>
pos. 8 a	1	1	0	0	0	0	0	0	0	1	0	1
			-			-			-			<i>0</i>
pos. 8 b	37	37	0	10	10	0	5	5	0	15	15	0
			-			-			-			-
pos. 9	11	7	4	1	1	0	0	0	0	6	6	0
			<i>2.33</i>			-			-			-
pos. 10 a	34	31	3	4	4	0	5	5	0	14	14	0
			<i>10.33</i>			-			-			-
pos. 10 b	17	15	2	5	4	1	3	3	0	15	15	0
			<i>7.5</i>			<i>4</i>			-			-
pos. 11	0	0	0	0	0	0	0	0	0	1	1	0
			-			-			-			-
pos. 12	71	71	0	15	15	0	10	10	0	37	37	0
			-			-			-			-
tot.	349	315	34	70	64	6	45	45	0	193	181	12
			<i>9.26</i>			<i>10.67</i>			-			<i>15.08</i>
average <sup>1</sup>	(4.91)			(4.67)			(4.5)			(5.22)		

\* - = Without elision.

+ = Elided word-boundary.

The numbers in italics indicate the ratio of non-elided vs. elided word-

(Table VII A, cont.)

	Solon			Theogn.			Xenoph.			Critias			Dion. Ch.		
	tot.	-	+	tot.	-	+	tot.	-	+	tot.	-	+	tot.	-	+
1	7	0	7	50	9	41	0	0	0	1	0	1	0	0	0
		0				0.22			-		0				-
2a	13	12	1	113	98	15	3	3	0	4	4	0	1	1	0
		12				6.53			-		-				-
2b	39	20	19	237	176	61	13	8	5	4	2	2	5	5	0
			1.05			2.88			1.6		1				-
3	47	41	6	334	286	48	10	9	1	7	7	0	4	4	0
			6.83			5.96			9		-				-
4a	15	15	0	87	81	6	8	7	1	4	4	0	1	1	0
			-			13.5			7		-				-
4b	14	13	1	77	69	8	5	5	0	2	1	1	1	1	0
			13			8.62			-		1				-
5	44	43	1	284	275	9	15	13	2	13	11	2	4	4	0
			43			30.56			6.5			5.5			-
6a	60	60	0	402	398	4	12	12	0	8	6	2	5	5	0
			-			99.5			-		3				-
6b	7	6	1	32	16	16	2	2	0	0	0	0	1	1	0
			6			1			-		-				-
7	45	43	2	295	273	22	14	14	0	18	15	3	1	0	1
			21.5			12.41			-		5			0	
8a	0	0	0	7	6	1	2	2	0	0	0	0	0	0	0
			-			6			-		-				-
8b	65	65	0	402	394	8	9	9	0	7	6	1	6	6	0
			-			49.25			-		6				-
9	15	12	3	98	54	44	8	8	0	7	5	2	1	1	0
			4			1.23			-			2.5			-
10a	42	34	8	298	287	11	15	15	0	8	7	1	2	2	0
			4.25			26.09			-		7				-
10b	31	29	2	215	204	11	6	6	0	4	4	0	2	2	0
			14.5			18.54			-		-				-
11	0	0	0	3	3	0	0	0	0	0	0	0	0	0	0
			-			-			-		-				-
12	104	104	0	688	688	0	31	31	0	23	23	0	9	9	0
			-			-			-		-				-
tot.	548	497	51	3622	3317	305	153	144	9	110	95	15	43	42	1
			9.74			10.87			16			6.33			42
av.	(5.27)			(5.26)			(4.93)			(4.78)			(4.78)		

(Table VII A, cont.)

	Ion			Theocr.			Callim. epigr.			Callim. Aitia			Callim. Loutra		
	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-
1	0	0	0	1	1	0	11	1	10	6	2	4	5	1	4
			-			-			0.1			0.5			0.25
2 a	5	5	0	11	11	0	26	25	1	31	27	4	21	15	6
			-			-			25			6.75			2.5
2 b	5	3	2	21	18	3	46	44	2	56	50	6	19	16	3
			1.5			6			22			8.33			5.33
3	4	2	2	12	12	0	72	69	3	71	63	8	28	22	6
			1			-			23			7.87			3.67
4 a	1	1	0	11	10	1	6	4	2	13	7	6	2	1	1
			-			10			2			1.17			1
4 b	0	0	0	2	2	0	8	6	2	12	9	3	4	4	0
			-			-			3			3			-
5	9	9	0	22	22	0	29	27	2	20	20	0	28	28	0
			-			-			13.5			-			-
6 a	5	5	0	24	24	0	103	103	0	124	122	2	40	40	0
			-			-			-			61			-
-															
6 b	1	1	0	2	2	0	4	2	2	5	2	3	6	3	3
			-			-			1			0.67			1
7	8	8	0	20	19	1	41	39	2	48	43	5	21	20	1
			-			19			19.5			8.6			20
8 a	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0
			-			0			-			-			-
8 b	6	6	0	28	27	1	117	117	0	106	103	3	50	50	0
			-			27			-			34.33			-
9	0	0	0	6	3	3	12	4	8	6	1	5	6	0	6
			-			1			0.5			0.2			0
10 a	8	8	0	18	17	1	46	44	2	66	58	8	33	32	1
			-			17			22			7.25			32
10 b	3	3	0	10	10	0	46	42	4	37	35	2	23	23	0
			-			-			10.5			17.5			-
-															
11	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0
			-			-			-			-			-
12	14	14	0	46	46	0	132	132	0	143	143	0	69	69	0
			-			-			-			-			-
tot.	69	65	4	236	224	12	701	661	40	744	685	59	355	324	31
			16.25			18.67			16.52			11.61			10.45
av.	(4.93)			(5.13)			(5.31)			(5.2)			(5.14)		

(Table VII A, cont.)

	Leonidas			Alcaeus			Antipater			Meleager		
	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-
1	11	0	11	4	1	3	12	3	9	28	8	20
			0			0.33			0.33			0.4
2a	37	32	5	6	5	1	48	46	2	77	58	19
			6.4			5			23			3.05
2b	90	72	18	29	21	8	74	57	17	131	104	27
			4			2.62			3.35			3.85
3	104	93	11	32	31	1	116	106	10	212	190	22
			8.45			31			10.6			8.64
4a	15	15	0	2	2	0	10	8	2	47	43	4
			-			-			4			10.75
4b	13	13	0	2	2	0	12	12	0	38	33	5
			-			-			-			6.6
5	111	106	5	24	24	0	75	73	2	152	148	4
			21.2			-			36.5			37
6a	141	137	4	45	44	1	153	153	0	250	242	8
			34.25			44			-			30.25
6b	8	6	2	1	0	1	17	7	10	30	17	13
			3			0			0.7			1.31
7	55	50	5	24	23	1	59	57	2	194	180	14
			10			23			28.5			12.86
8a	0	0	0	0	0	0	0	0	0	4	2	2
			-			-			-			1
8b	158	158	0	52	52	0	150	150	0	227	220	7
			-			-			-			31.43
9	23	14	9	3	1	2	28	17	11	62	38	24
			1.56			0.5			1.54			1.58
10a	95	89	6	26	26	0	90	85	5	167	157	10
			14.83			-			17			15.7
10b	72	71	1	27	26	1	78	77	1	120	117	3
			71			26			77			39
11	0	0	0	0	0	0	2	2	0	7	7	0
			-			-			-			-
12	249	249	0	67	67	0	229	229	0	393	393	0
			-			-			-			-
tot.	1182	1105	77	344	325	19	1153	1082	71	2139	1957	182
			14.35			17.1			15.24			10.75
av.	(4.75)			(5.13)			(5.03)			(5.44)		

## Greek Elegiac Verse Rhythm

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*Table VII: The Incidence of Word-End: Total Numbers.  
B: Pentameter*

	Tyrt.			Archil.			Callin.			Mimn.		
	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-
pos. 1	6	1	5	0	0	0	2	0	2	1	1	0
			0.2			-			0			-
pos. 2 a	11	10	1	3	2	1	2	2	0	10	10	0
			10			2			-			-
pos. 2 b	20	14	6	7	6	1	4	4	0	8	2	6
			2.33			6			-			0.33
pos. 3	33	25	8	4	4	0	4	3	1	19	16	3
			3.12			-			3			5.33
pos. 4 a	9	9	0	0	0	0	0	0	0	3	3	0
			-			-			-			-
pos. 4 b	1	1	0	0	0	0	0	0	0	0	0	0
			-			-			-			-
pos. 5	71	63	8	15	13	2	10	7	3	37	37	0
			7.87			6.5			2.33			-
pos. 6	4	0	4	0	0	0	1	1	0	1	0	1
			0			-			-			0
pos. 7 a	19	18	1	4	3	1	2	2	0	9	8	1
			18			3			-			8
pos. 7 b	29	28	1	4	4	0	5	5	0	22	22	0
			28			-			-			-
pos. 8	20	16	4	4	4	0	3	2	1	3	3	0
			4			-			2			-
pos. 9 a	22	20	2	3	3	0	3	3	0	11	11	0
			10			-			-			-
pos. 9 b	0	0	0	0	0	0	0	0	0	0	0	0
			-			-			-			-
pos 10	71	71	0	15	15	0	10	10	0	37	37	0
			-			-			-			-
total	316	276	40	59	54	5	46	39	7	161	150	11
			6.9			10.8			5.57			13.64
average	(4.45)			(3.93)			(4.6)			(4.35)		

(Table VII B, cont.)

	Solon			Theogn.			Xenoph.			Critias			Dion. Ch.		
	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-
1	1	0	1	66	10	56	1	0	1	3	0	3	1	0	1
		0				0.18			0		0			0	
2a	21	18	3	112	100	12	5	4	1	2	2	0	1	1	0
		6				8.33			4		-				-
2b	34	27	7	264	207	57	11	8	3	10	6	4	0	0	0
		3.86				3.63			2.67		1.5				-
3	58	49	9	308	260	48	7	5	2	5	4	1	5	5	0
		5.44				5.42			2.5		4				-
4a	10	10	0	63	58	5	3	3	0	3	3	0	0	0	0
		-				11.6			-		-				-
4b	0	0	0	8	7	1	1	1	0	0	0	0	0	0	0
		-				7			-		-				-
5	102	95	7	671	619	52	29	27	2	23	21	2	9	9	0
		13.57				11.77			13.5		10.5				-
6	8	3	5	46	15	31	2	1	1	1	0	1	0	0	0
		0.6				0.48			1		0				-
7a	32	28	4	248	231	17	8	7	1	5	3	2	0	0	0
		7				13.59			7		1.5				-
7b	47	47	0	231	219	12	11	11	0	6	5	1	3	3	0
		-				18.25			-		5				-
8	23	19	4	200	169	31	11	10	1	10	9	1	4	4	0
		4.75				5.45			10		9				-
9a	27	26	1	221	219	2	7	7	0	4	4	0	3	3	0
		26				109.5			-		-				-
9b	2	2	0	5	5	0	0	0	0	0	0	0	0	0	0
		-				-			-		-				-
10	104	104	0	688	688	0	31	31	0	23	23	0	9	9	0
		-				-			-		-				-
tot.	469	428	41	3131	2807	324	127	115	12	95	80	15	35	34	1
		10.44				8.66			9.58		5.33			34	
av.	(4.51)			(4.55)			(4.1)			(4.13)			(3.89)		



## Greek Elegiac Verse Rhythm

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(Table VII B, cont.)

	Ion			Theocr.			Callim. epigr.			Callim. <i>Aitia</i>			Callim. <i>Loutra</i>		
	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-
1	0	0	0	1	1	0	10	5	5	6	1	5	3	0	3
		-			-			1			0.2			0	
2a	1	1	0	12	10	2	34	31	3	42	39	3	14	11	3
		-			5			10.33			13			3.67	
2b	6	6	0	14	13	1	58	54	4	45	42	3	29	28	1
		-			13			13.5			14			28	
3	4	4	0	21	21	0	54	45	9	52	48	4	25	24	1
		-			-			5			12			24	
4a	1	1	0	4	4	0	2	2	0	1	0	1	0	0	0
		-			-			-			0			-	
4b	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0
		-			-			0			-			-	
5	14	9	5	46	44	2	129	117	12	140	130	10	69	61	8
		1.8			22			9.75			13			7.62	
6	0	0	0	1	1	0	14	6	8	5	4	1	10	4	6
		-			-			0.75			4			0.67	
7a	5	5	0	15	12	3	43	41	2	63	58	5	28	26	2
		-			4			20.5			11.6			13	
7b	2	2	0	13	13	0	57	57	0	54	53	1	22	22	0
		-			-			-			53			-	
8	6	6	0	11	11	0	22	20	2	15	15	0	12	10	2
		-			-			10			-			5	
9a	2	2	0	13	12	1	32	32	0	44	44	0	14	14	0
		-			12			-			-			-	
9b	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0
		-			-			-			-			-	
10	14	14	0	46	46	0	132	132	0	143	143	0	69	69	0
		-			-			-			-			-	
tot.	55	50	5	198	189	9	588	542	46	610	577	33	295	269	26
		10			21			11.78			17.48			10.35	
av.	(3.93)			(4.3)			(4.45)			(4.27)			(4.27)		

(Table VII B, cont.)

	Leonidas			Alcaeus			Antipater			Meleager		
	tot.	+	-	tot.	+	-	tot.	+	-	tot.	+	-
1	9	4	5	0	0	0	8	4	4	15	5	10
			0.8			-			1			0.5
2a	45	40	5	15	13	2	43	39	4	97	78	19
			8			6.5			9.75			4.1
2b	111	98	13	32	30	2	85	77	8	148	135	13
			7.54			15			9.62			10.38
3	96	83	13	24	23	1	88	87	1	193	178	15
			6.38			23			87			11.87
4a	3	3	0	1	1	0	6	5	1	32	30	2
			-			-			5			15
4b	2	2	0	0	0	0	0	0	0	3	2	1
			-			-			-			2
5	242	215	27	67	64	3	229	222	7	386	359	27
			7.96			21.33			31.71			13.3
6	19	5	14	2	1	1	10	5	5	30	17	13
			0.36			1			1			1.31
7a	83	78	5	20	16	4	83	80	3	142	136	6
			15.6			4			26.67			22.67
7b	69	68	1	26	25	1	66	64	2	119	111	8
			68			25			32			13.87
8	73	72	1	20	19	1	53	53	0	116	114	2
			72			19			-			57
9a	27	27	0	13	12	1	55	55	0	105	105	0
			-			12			-			-
9b	0	0	0	0	0	0	0	0	0	2	2	0
			-			-			-			-
10	249	249	0	67	67	0	229	229	0	393	393	0
			-			-			-			-
tot.	1028	944	84	287	271	16	955	920	35	1781	1665	116
			11.24			16.94			26.29			14.35
av.	(4.13)			(4.28)			(4.17)			(4.53)		