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CONSILIUM ET RATIO? PAPYRUS A OF BACCHYLIDES AND ALEXANDRIAN METRICAL SCHOLARSHIP*

Vidimus poetam periodos numerum trium metrorum superantes eisdem locis metrorum vocibus finitis dividere solere, quibus etiam periodorum discrimen fieri posset, et demonstravit Maas dissertatione diligentissima (Philol. 63, 297) colistas Alexandrinos ita versus seiunxisse, ut quam saepissime finis verbi in fine versus esset; quo factum est ut redderent quae vellet poeta subintellegi discrimina. quae divisio versuum non modo magna cum diligentia sed etiam cum consilio et ratione a grammaticis antiquis confecta optime papyris nostris servata est . . . errores pauci facile corriguntur . . . eo autem ratio grammaticorum antiquorum differt a nostra, quod non semper ad numeros syllabarum, sed interdum ad caesuras versus diviserunt; itaque in carm. 1 str. 1 modo post syllabam septimam modo post octavam seiungitur, in carm. 5 versus 13, 35, 115 non eodem modo dividuntur atque versus respondentes, . . . neque habemus cur haec vituperemus.

(Bruno Snell, *Bacchylidis Carmina cum Fragmentis*, Praefatio 31*
[= Snell–Maehler, 1992, XXXI])

I. SNELL'S HYPOTHESIS

The paragraph of his introduction which Snell devotes to the colometry of the Bacchylides papyri first appeared in 1934, and survives unchanged in the 1970 (repr. 1992) edition revised by Maehler. Much influenced by the article of Maas which he

* I am very grateful to Dr M. L. West for reading this paper previous to publication, in particular for drawing my attention to *P. Hibeh 24* and *25* and to the fuller text of the paean of Macedonicus, and for most valuable comments. For any remaining errors and perversities I am entirely responsible.

The following works are referred to by abbreviations:

Barrett, W. S., *Euripides. Hippolytos* (Oxford, 1964) [*Hippolytos*].
Dale, A. M., *The Lyric Metres of Greek Drama* (Cambridge, 1968²) [*LM*²].
Irigoin, J., *Recherches sur les mètres de la lyrique chorale grecque. La structure du vers* (Paris, 1953) [*Recherches*].
——, *Les scholies métriques de Pindare* (Paris, 1958) [*Scholies*].
Jebb, R. C., *Bacchylides. The Poems and Fragments* (Cambridge, 1905) [Jebb].
Kenyon, F. G., *The Poems of Bacchylides* (Oxford, 1897) [Kenyon].
Lloyd-Jones, H. and Parsons, P., *Supplementum Hellenisticum* (Berlin and New York, 1983) [*SH*].
Maas, P., 'Kolometrie in den Daktyloepitriten des Bakchylides', *Philologus* 63 (1904), 297–301 (= *Kleine Schriften*, Munich, 1973, 8–18) ['Kolometrie'].
Maehler, H., *Die Lieder des Bakchylides.*
1. *Die Siegesleider. I Edition des Textes, II Kommentar* (Leiden, 1982) [*Siegeslieder I* and *II*]
2. *Die Dithyramben und Fragmente* (Leiden, 1997) [*Dithyramben*].
Page, D. L., *Poetae Melici Graeci* (Oxford, 1962) [*PMG*].
Parker, L. P. E., *The Songs of Aristophanes* (Oxford, 1997) [*Songs*].
Pöhlmann, E., 'Die Notenschrift in der Überlieferung der griechischen Bühnenmusik', *Würzburger Jahrb. f. d. Altertumswissen.* 2 (1976), 53–73 (= *Beiträge zur antiken und neueren Musikgeschichte* (Frankfurt am Main, 1988) 57–93) ['Notenschrift'].
Powell, J. U., *Collectanea Alexandrina* (Oxford, 1925) [*CA*].
Turner, E. J., revised and enlarged by Parsons, P. J., *Greek Manuscripts of the Ancient World, BICS* Suppl. 46, 1987 [*GMAW*].
West, M. L., *Greek Metre* (Oxford, 1982) [*GM*].
——, *Ancient Greek Music* (Oxford, 1992) [*AGM*].
Wilamowitz-Moellendorff, U. von, *Griechische Verskunst* (Berlin, 1921, repr. Bad Homburg vor der Höhe, 1962) [*GV*].

cites, Snell offers a challenging mixture of fact and interpretation with important implications for the way in which we evaluate Alexandrian metrical scholarship. Because of its length, its relatively early date,[1] and the fact that several of the poems that it preserves are long as well as triadic, papyrus A in particular provides valuable evidence of the skills of Alexandrian editors. If they were as great as Snell suggests, should we devote more effort to trying to salvage the remains of Alexandrian colometry from medieval MSS? Should we be more hesitant to change it when it can be salvaged, even when it is incompatible with modern metric? Again, if, as he suggests, Alexandrian scholars worked to some extent on different principles from ourselves, should we try to ascertain more precisely what those principles were? That word-end in Bacchylides tends to recur at certain points in the verse and to be avoided at others was pointed out by Maas in the article cited by Snell.[2] In the same year, D. Serruys reported a similar observation for Pindar.[3] It is also a matter of fact that colon-division in the papyrus more often than not coincides with word-end. The degree of care, understanding and judgement with which the division was made is, however, much more controversial, and, in any case, a matter of degree. It can be said at once that dividing according to word-end is not evidence of understanding. Rather the reverse. Snell ends with the hypothesis that some of the inconsistencies in colon-division found in the papyrus are deliberate, because Alexandrian scholars sometimes chose to abandon consistent division in all repetitions of a particular verse in order to follow word-end. Accordingly, he allows to stand in his text a few of the inconsistencies eliminated by previous editors. The hypothesis has neither received much attention, nor gained much favour,[4] but Maehler accepts it, and reproduces Snell's colometry in his editions.

In reappraising Snell's treatment of the Alexandrian colometry, the first priority must be to investigate the final hypothesis. As a first step, it should be noted that scribes, *all* scribes, are prone to certain types of mistake in copying colometry. When required to change lines in the middle of a word, it is very easy to run on to the end of the word by mistake. It is also possible to stop short and change lines at the end of the previous word. Scribes can be seen making these mistakes and, sometimes, correcting them.[5] At a higher level of inattention, it is possible to run on for a whole word, or even to forget completely to change lines, and write two whole cola on the same line. Theoretically, one could avoid all these mistakes by copying strictly colon by colon, but that is slow, and all scribes, especially professional ones, can be expected to try to carry more than one colon in their heads at a time. But any scribe who does that risks

[1] Not, however, as early as was at first supposed. Increasing papyrological skills and the emergence of more comparable material have led to repeated revisions. F. G. Kenyon, the first editor, dated papyrus A (tentatively) to the mid-first century B.C. (Kenyon, xviii–xix). Grenfell and Hunt (*The Oxyrhynchus Papyri* 1 [London, 1898], 53, n. 1) assigned it 'to the first or second century A.D.'. E. G. Turner (Turner–Parsons, *GMAW* 22) places it 'not earlier than the second third or the middle of ii A.D.'. H. Maehler (*Siegeslieder*, 37–8) would bring it down to the beginning of the third century A.D. Facsimile: *The Poems of Bacchylides. Facsimile of Papyrus DCXXXIII in the British Museum* (Oxford, 1897).

[2] Maas, 'Kolometrie'.

[3] D. Serruys, 'Les groupes verbaux', *CRAI* (1903), 138–42. Unfortunately, Serruys drew the unwarranted conclusion that his discovery discredited Boeckh's verse-divisions. See further, Irigoin, *Recherches*, 15.

[4] In particular, it is rejected by the Budé editor of Bacchylides, J. Irigoin. Cf. J. Irigoin, 'Prolégomènes à une édition de Bacchylide', *REG* 75 (1962), 61–3.

[5] I have explored this subject in more detail and with illustration in *Songs*, 99–101. I also write from experience.

making mistakes in colon-division, especially by drifting to word-end, either forwards or backwards. On the other hand, a scribe who produces a consistent division regardless of word-end *must* be copying correctly.

It was not Snell's contention that scribe A made *no* mistakes. Indeed, one such mistake can be seen to have been noticed by the corrector, A^3 (see below, on XIII, str. 6–8). I list below all the inconsistencies of colon-division in the papyrus, marking with * those that Snell corrected in his text (and therefore, presumably, regarded as accidental and of scribal origin). It will be seen that Snell corrected far more inconsistencies than he retained. For each example, I give first of all the scansion of the cola involved undivided, showing the incidence of word-end, marked by |, with the number of occurrences above.

	3 2	4 2 2 4? 1 1? 2
*1. I, str. 1–2	⏑⏑ | – | – – | ⏑ | ⏑ | – | ⏑ ⏑ | – | – | – – ⏑ –

Although this poem probably extended to eight triads, only the sixth strophe and the last two triads are tolerably well preserved. The beginnings of the first, third, and sixth antistrophae have also survived, and the first verse of the poem has been supplied by conjecture from *P. Oxy.* 2262, scholia on Callimachus' *Aetia* (see Pfeiffer 2.103). Thus, the incidence of word-end shown above is based on nine more or less complete verses, but the papyrus colometry is ascertainable for only eight.

(a) ⏑ ⏑ – – – ⏑ ⏑
– ⏑ ⏑ – – – ⏑ –

116–17, 124–5 (str. and ant. 6), 139–40, 147–8 (str. and ant. 7), 162–3, 170–1 (str. and ant. 8). Division goes with word-end in 162–3, against in the other five verses.

(b) ⏑ ⏑ – – – ⏑ ⏑ –
⏑ ⏑ – – – ⏑ –

55–6 (ant. 3), 78–9 (ant. 4). Division appears to go with word-end in both verses. The scribe, it would seem, ran on to word-end accidentally. The beginning of the first antistrophe survives in very fragmentary form:

–] νάσοιό τ' ἐὐ-
⏑ ⏑]αν, ἔνθ[– ⏑ –

Maas's proposal to scan ἐὐ- (⏑ –) restores the metre and produces division after the eighth syllable, but the *colistes* most probably thought that he was dividing after the seventh syllable, consistently with the rest of the poem.

The two examples of division (b) could well have been produced by drift to word-end, whereas the consistent recurrence of division (a) in six verses, five times against word-end, cannot be accidental. It is, therefore, strange that Snell, given his principles, chose to correct the whole poem into conformity with division (b). It is even more strange that he corrected here at all, since he cites this verse in his introduction as an

example of variable division. Both divisions are, of course, unmetrical by modern standards.[6]

2 1 1 2 1 1 2 4 3
2.* I, ep. 6–7 – ⏑ | ⏑ – | ⏑ ⏑ | – | – | – | ⏑ | – – – ⏑ | – – – | ⏑ – – ||

The verse survives in very fragmentary form from the first epode and in more or less complete form from the fifth, seventh and eighth epodes. So we have four specimens.

(a) – ⏑ ⏑ – ⏑ ⏑ – –
– ⏑ – – – ⏑ – – – ⏑ – –

22–3 (ep. 1), 160–1 (ep. 7), 183–4 (ep. 8).

(b) – ⏑ ⏑ – ⏑ ⏑ – –
– ⏑ – – – ⏑ –
– – ⏑ – –

114–15 (ep. 5). The extra colon-division in (b) does not coincide with full word-end (*σὺν* | *Κρητῶν*). The division may preserve an early colometry which has otherwise disappeared, it may have been introduced accidentally, though it is not an ordinary type of mistake, or it may have strayed in from an alternative colometry. It does, at any rate, coincide with a possible metrical division.

3. V, str. 13–15
5 1 4 2 2 4 5 3 5 1 3 3 1 6 1 2 4 4 8
– – | ⏑ | ⏑ | – | ⏑ | ⏑ – | – | – | ⏑ | ⏑ | – | ⏑ | ⏑ | – | (⏓) | – | ⏑ | – | – – | ⏑ – ||

(a) – – ⏑ ⏑ – ⏑ ⏑ – –
– ⏑ ⏑ – ⏑ ⏑ – (–)
– ⏑ – – – ⏑ –

This division appears in nine repetitions of the verse. It coincides with word-end in five repetitions (93, 108, 148, 173, 188), goes against it in four (28, 53, 68, 133).

(b) – – ⏑ ⏑ – ⏑ ⏑ –
– – ⏑ ⏑ – ⏑ ⏑ – ⏑
– ⏑ – – – ⏑ –

This division is peculiar to the first strophe (13), where it coincides with word-end. One could not have a clearer case of accidental stopping short. What confirms this is that in the next two occurrences of the verse (2 and 53) word-end falls in the same position (with strong rhetorical pause at 53), yet A passes over it and adopts division (a).

[6] Irigoin, like Snell, corrects to division (b) throughout, but that, even if it looks less bizarre to us, cannot have been what A was copying (see above, p. 25). If the editor's aim is to reproduce the Alexandrian archetype, then he should, like Jebb, restore division (a).

4. V, ep. 5–6

```
   1 3 1 1  2  2  3 1 1  3  1 4      3
– ⏑|⏑|–|⏑|⏑ –| –| –|⏑|–| –| –|⏑|–  ⏓ –|⏑ –
```

There are five repetitions.

(a)

```
– ⏑ ⏑ – ⏑ ⏑ –  –
   – ⏑ –  –  – ⏑ – ⏓ – ⏑ –
```

A adopts this division in the first three epodes. It coincides with word-end in the first and third (35 and 115), goes against it in the second (75), where word-end falls neither before nor after the anceps.

(b)

```
– ⏑ ⏑ – ⏑ ⏑ –
   –  – ⏑ –  –  – ⏑ –  ⏓  – ⏑ –
```

This division appears in the fourth and fifth epodes (155 and 195), and coincides with word-end both times. This looks like accidental stopping short.

5.* IX, ep. 5–6

```
 1 1  3     3?  1? 2   1    1
–|⏑|⏑ –|⏑ ⏑ –| –| –|⏑ –|–  –|⏑ –
```

There are four repetitions, of which the last two are very fragmentary.

(a)

```
– ⏑ ⏑ – ⏑ ⏑ –
   –  – ⏑ –  –  – ⏑ –
```

This division appears in the first, second, and fourth epodes (23–4, 49–50, 75–6). It coincides with word-end certainly at 23–4 and probably at 75–6. It goes against at 49–50.

(b)

```
– ⏑ ⏑ – ⏑ ⏑ –  –
   – ⏑ –  –  – ⏑ –
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This division in the (very fragmentary) last epode (101–2) is indicated by the fact that the second colon begins with αἰνέοι (– ⏑ –). Thus, the long anceps which begins the second colon in the other corresponding verses would seem to have been transferred to the end of the preceding colon. Since αἰνέοι was most probably preceded by word-end, this looks like a mistake of running-on. Snell's correction of the colometry here is surprising, though not as strange as in I, str. 1–2 above.

6.* X, str. 9–10

```
    3     4          2 2   4   2 1   2 1      4    1   2 2
– ⏑ –| – –|⏑ –  –  –|⏑|– ⏒|– ⏑|–| –|⏑|–  –  –|⏑ –| ⏒– |⏑|– –
```

There are four specimens. Verse-end after the twelfth position is possible, but is not confirmed by hiatus.

(a)
– ⏑ – – – ⏑ ⏑ – – ⏑ ⏑ –
– ⏑ – – ⏑ ⏑ – – ⏑ ⏑ ⏒ – ⏑ ⏑ –

This is the division of the first strophe and antistrophe and the second antistrophe (9–10, 19–20, 47–8).

(b)
– ⏑ ⏑ – – ⏑ ⏑ – – ⏑ ⏑ – – ⏑ ⏑ –
– ⏑ ⏑ – – ⏑ ⏑ – ⏒ – ⏑ ⏑ –

In the second strophe (37–8), a word of cretic form (*τεύξεται*) has been transferred from the beginning of the second colon to the end of the first. This is a case of accidentally running on by a whole word, made particularly easy here by strong rhetorical pause after *τεύξεται* (given a scribe with even limited and sporadic comprehension of what he was copying).

7.* XIII, str. 6–8

3 1 7 7? 4 1 2 5 4 3
– ⏑ | – | – – | ⏑ – | – – | ⏑ | ⏑ | – ⏑ ⏑ – | – | ⏒ – | ⏑ | – –

There are nine repetitions. The first triad and most of the second strophe are almost completely missing. So is the middle of the sixth strophe.

(a)
– ⏑ ⏑ – – ⏑ ⏑ –
– – ⏑ ⏑ – ⏑ ⏑ ⏑ –
⏒ – ⏑ ⏑ – –

This is the division in seven repetitions of the verse, and it tallies with word-end in six occurrences for both the first and second colon-ends.

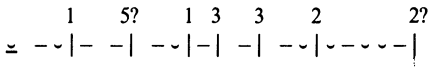
(b)
– ⏑ ⏑ – – ⏑ ⏑ –
– – ⏑ ⏑ – ⏑ ⏑ ⏑
– – – ⏑ ⏑ – –

At 52, in the first surviving stanza, A stops short at word-end (*σώματος|*). The colon-division is corrected by A^3, who adds *ἐ-*, presumably from the beginning of the following colon (which is lost).

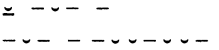
(c)
– ⏑ ⏑ – – ⏑ ⏑ – [– ⏑ ⏑ – ⏑ ⏑ ⏑] –
⏑ – ⏑ ⏑ – –

Two cola have been run together at 84–5, but here textual corruption is involved. the lacuna is of seven syllables, but the space in the papyrus is adequate only for some half-dozen letters.

8.* XIII, ep. 3–4

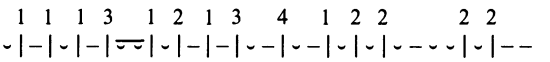


There are six repetitions, in five of which the sequence is divided thus:



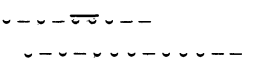
The two cola seem to have been written on the same line once, at 159–60.

9.* XVII, str. 6–7



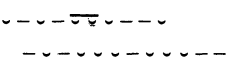
There are four repetitions.

(a)



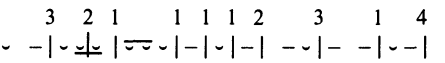
This division is found three times (6, 29, 72), always coinciding with word-end.

(b)



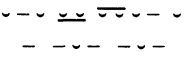
In this one repetition (95), division (a) would have required the scribe to change lines in mid-word (δά-κρυ). Instead, he drifted on to word-end, and divided δάκρυ-χέον.

10.* XVII, str. 14–15



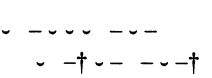
There are four repetitions.

(a)



This division appears three times, once with word-end (80) and twice against it (14, 103).

(b)



This division appears once, coinciding with word-end, at 37. This seems to be a case of stopping short.

Finally, for parts of XVII we have a second witness, *P. Oxy.* 8.1091 (*Π* O), and it is worth noting the divergences of colometry between the two texts. The scribe of O was, it would seem, even more careless in this matter than the scribe of A. Twice in a matter of thirty-five lines he overruns the end of a colon, once by a whole word, once by part of a word:

(i) 51–2: O places μῆτιν (– ⏑) at the end of the first colon, instead of at the beginning of the second.
(ii) 59–60: instead of dividing Ποσει-δᾶνι between two cola, O runs on to the end of the word before changing lines.

The quite striking differences in colometry between the two papyri (Snell's C and D) which preserve tiny fragments of XXIV are unfortunately beyond interpretation (see Snell, 50* [LI] and Maehler, *Dithyramben*, 274).

The preceding material shows that Snell indeed corrected most of the inconsistencies of colometry in the papyrus (nine out of eleven). But his reasons for choosing which divisions to correct remain unclear. The divergences can be classified under four headings:

(a) *Running on*: 1. (2 cola out of 8), 5. (1 colon out of 4), 6. (1 colon out of 4), 9. (1 colon out of 4).
(b) *Stopping short*: 3. (1 colon out of 10), 4. (2 cola out of 5), 7. (1 colon out of 9), 10. (1 colon out of 4).
(c) *Two cola run together*: 7. (once out of 9), 8. (once out of 6).
(d) *Extra colon-division*: 2. (once out of 4).

Of these, only the last is at all problematic, and that one is irrelevant to Snell's hypothesis. The first three categories are all easily-made copying mistakes.[7] If it were true that the Alexandrian *colistes* attributed at certain points a significance to word-end that overrode metrical articulation, we should expect to find verses where the papyrus colon-division moved to and fro with word-end in several repetitions. But that does not happen. To take a particularly clear example (and one which Snell regarded as deliberate, as he did not correct it), V, str. 13–15 is repeated ten times, four times with word-end after the eighth position, five times after the ninth. The scribe of A does not, however, make colon-division follow word-end four times after the eighth position, but only once (see above, p. 26). In fact, Snell (following Maas) erred by failing to consider how scribes make mistakes in colon-division, and his hypothesis is untenable. Neither his eminence as a scholar, nor his exemplary presentation of the evidence in his edition of Bacchylides, nor his important contributions elsewhere to metrical scholarship make any difference.

[7] Why, it may be asked, did A never correct his colon-divisions, as medieval scribes can sometimes be seen to have done? One can only answer that, despite his elegant script, A was not particularly accurate: he made numerous mistakes of all kinds, and corrected very few (see especially Jebb, 127–32). There may even be a correlation between elegance and inaccuracy. Corrections spoil the look of a manuscript, none more conspicuously than corrections of colometry.

II. ALEXANDRIAN KNOWLEDGE OF METRE AND MUSIC

κῶλα δέ με δέξαι λέγειν οὐχ οἷς Ἀριστοφάνης ἢ τῶν ἄλλων τις μετρικῶν διεκόσμησε τὰς ᾠδάς.

(Dion. Hal., *De comp. verb.* XXII [Usher, p. 177]. Cf. XXVI [p. 238])

In these two passages, Dionysius of Halicarnassus associates the practice of laying out Greek lyric verse in cola with Aristophanes of Byzantium. He does not say that Aristophanes invented the practice, still less that he personally carried out, or even supervised, the division of the entire corpus of Greek lyric. It may be that he merely lent his authority to the general adoption of a pre-existing system. The essential fact is that Dionysius believed the colometry of Greek lyric to have been the work of scholars of the Alexandrian period, and so far such evidence as there is tends to confirm him. The oldest surviving lyric text, *P. Berol.* 9875 of Timotheus' *Persae* from the second half of the fourth century B.C., and the slightly more recent, but still pre-Aristophanic, Berlin scolia (*P. Berol.* 13270) and *P. Hibeh* 24 and 25 of Euripides are not divided into cola.[8] It has been suggested that the Lille papyrus of Stesichorus' *Thebaid* (*P. Lille 76 a b c*), which *is* divided into cola, should be dated to the second half of the third century, but even that may still place it within the period of Aristophanes' activity.[9]

In order to estimate the metrical competence of Alexandrian scholars, a natural first step is to examine the metrical practice of poets of their own generation and of the generations immediately before them. The literary poets of the third and second centuries seem to have evolved a kind of substitute for genuine lyric by picking a wide variety of verses or cola from archaic lyric and using them κατὰ στίχον or, sometimes, in short stanzas of epodic type.[10] They do not seem to have tried to imitate even the three-verse Lesbian stanzas or the simple aeolo-choriambic stanzas of Anacreon which attracted the scholarly Roman poets of the late republic and early empire.[11] There is no evidence of interest in or understanding of the complex stanzas of Dorian or Attic lyric in the literary milieu of Alexandrian scholarship. Indeed, one might trace back to Alexandria that preoccupation with individual cola with little regard for context or strophic structure which culminates in the metrical scholarship of Hephaestion.

Outside the scholarly milieu of Alexandria, the production of genuine lyric for performance had continued since the end of the fifth century, as the traditions of Greek life required. But the most striking characteristic of such fourth-century and later lyric as we have is the loss of structure. By structure, I mean the patterns of blunt and pendent, of corresponding word-end, of repetition and near-repetition, of raised and defeated expectation which are distinguishable even by us in the lyric of the golden

[8] For facsimiles of Timotheus and the Berlin scolia, see W. Schubart, *Papyri Graecae Berolinenses* (Berlin, 1911), plates 1 and 3. For the Euripidean fragments, see B. P. Grenfell and A. S. Hunt, *The Hibeh Papyri*, Part I (London, 1906). The editors date the papyri to 280–240 (111–13). They regard 25 as not the work of a professional scribe, possibly a school exercise.

[9] On the date of *P. Lille* 76 a b c, see in particular P. J. Parsons, 'The Lille Stesichorus', *ZPE* 26 (1977), 7–36; M. L. West, 'Stesichorus at Lille', *ZPE* 29 (1978), 1–4; Turner–Parsons, *GMAW* 124–5.

[10] On Hellenistic 'book lyric', see West, *GM*, 149–52 and also the valuable *Conspectus metrorum rariorum* in *SH*, xxv–xxvi.

[11] *SH* 541, five stanzas of sapphics by 'Melinno of Lesbos', was thought by Wilamowitz to be Hellenistic (*Timotheos die Perser* [Leipzig, 1903], 71, n. 1), but is attributed by Lloyd-Jones and Parsons to the Hadrianic period (Cf. West, *GM*, 167, n. 13). On Corinna, who, whatever her date, did not belong to Alexandrian literary circles, see below, p. 32 (with n. 14).

age of Attic drama.[12] The positive rejection of structure, no doubt for expressive reasons, may be seen to begin in the later, astrophic monodies of Euripides, but it is carried much further in Timotheus' *Persae*. There, a seemingly incoherent jumble of cola passes into a curiously boring alternation of pherecratean and glyconic (203–34), interrupted by a single catalectic iambic dimeter (214).[13] The *Fragmentum Grenfellianum* (*CA*, 177–80) seems to be a monody in post-Euripidean style for virtuoso performance. The metre is dochmiac, interspersed with cretics and iambs (mostly with resolution) and anapaestic metra. Cretics, iambs, and even anapaests are all found in dochmiac contexts in the classical period, but here they are used with much greater freedom and frequency. The papyrus has been dated to the second century B.C., but the poem may well be older. This is the latest known occurrence of dochmiacs.

Apart from these virtuoso compositions, such lyric poems as survive from the fourth, third and second centuries are generally monometric. Ionic survives at least to the end of the fourth century (the paean of Isyllus of Epidaurus, *CA*, 133, and the hymn to the Kouros, *CA*, 160–2), but the metra now take a variety of forms not attested in classical ionics, including – – ⏑ ⏑ ('ionic *a majore*'), – – –, ⏑ ⏑ – ⏑, and – ⏑ – –. These last two together make up the traditional anacreontic colon. The Hellenistic innovation is to use the two halves of the colon as independent metra in other ionic contexts.

Simple dactylo-epitrite remained in use from the classical period into the lifetime of Aristophanes of Byzantium, the latest datable poem we have in the metre being the Chalcideans' paean to Flamininus (*CA*, 173) of 196 B.C.

The simplest type of aeolic stanza consists of two or more acatalectic cola (most often glyconics or telesilleans) with a catalectic colon of the same type (pherecratean or reizianum) as clausula. The pattern goes back to Anacreon, and reappears in its simple form in Aristophanes (*Peace* 1329ff., *Birds* 1731ff. = 1737ff.), and variations on it are ubiquitous in Attic lyric. Stanzas of this type make up Aristonous' paean to Apollo (*CA*, 162–4) of the late fourth century. The later third century is the latest date proposed for Corinna, who also uses the form.[14] The severely corrupt Epidaurian hymn to the Mother of the Gods (*PMG* 935), which West has reconstructed in stanzas of three telesilleans with clausular reizianum, is most plausibly dated to the third century.[15] Glyconics (with polyschematists) make their last surviving appearance in the Delphic paean of Limenius (*CA*, 149–59) of 127 B.C., where they make up a system of sixteen cola, with pherecratean clausula. The stanza-form has gone, but at least the catalectic relationship of pherecratean to glyconic seems still to have been understood.

One post-classical composition in choriambic metre, the paean to Dionysus by

[12] See further Parker, *Songs*, 21–7.

[13] The impression of a jumble may be to some degree increased by the layout in uniformly short cola adopted by Wilamowitz (n. 11), 18–28, and reproduced, with modifications, by Page (*PMG* 791). For example, 188–9 appear in *PMG* as tro 2dact/ – ⏑ ⏑ – ⏑ –. But running the cola together produces – ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ –. This is comprehensible as an aeolo-choriambic verse in which base (– ⏑) is followed by a prolonged version of the reversed dodrans (– × – ⏑ ⏑ –), ending in the normal aeolo-choriambic cadence: – ⏑ ⏑ – ⏑ –. Wilamowitz's version opens with a lecythion, which requires a presumptive verse-end, with *brevis in longo*.

[14] On the date of Aristonous, see West, *GM* 139, n. 7. On that of Corinna, see, in particular, D. L. Page, *Corinna* (London, 1963), 63–86; M. L. West, 'Corinna', *CQ* 20 (1970), 277–87; M. Davies, 'Corinna's date revisited', *SIFC* 81 (1988), 186–94; M. L. West, 'Dating Corinna', *CQ* 40 (1990), 553–7.

[15] M. L. West, 'Melica', *CQ* 20 (1970), 212–15.

Philodamus of Scarphaea (*CA*, 165–71) of the late fourth century, stands alone as a pastiche of the classical style:

– ◡ ◡ – ◡ – ◡ –
– ◡ ◡ – ◡ – ◡ –
– ◡ ◡ – ◡ – ◡ –
– ◡ ◡ – ◡ – –
– – – ◡ ◡ – – ◡ ◡ – –
– – – ◡ ◡ – ◡ – –
– ◡ – ◡ – ◡ – ◡ – – –
– – – ◡ ◡ – ◡ – –
– – – ◡ ◡ – ◡ – –
– ◡ – ◡ ◡ – –

This has an uncanny resemblance to the type of stanza that Aristophanes had been composing a century earlier. Philodamus starts with an iambo-choriambic version of the typical aeolo-choriambic stanza: three dimeters with their own catalectic form (aristophanean) as clausula. The fifth colon, the invocation *εὐοῖ ὦ 'Ιόβακχ' ὦ ἰὲ Παιάν*, is rhythmically distinctive. It has generally been described as ionic, but could well be asclepiadic, in the manner of Sophocles. The following glyconic tempts the hearer to expect another quatrain, but instead the pendent clausular colon follows at once, and proves to be not the usual pherecratean, but a phalaecian hendecasyllable. Philodamus then makes, as it were, a new start with another glyconic, and this time completes the familiar sequence with yet another glyconic and clausular pherecratean. In fact, he has reproduced, less one glyconic, the opening of Sophocles' 'Colonus Song' (*O.C.* 668ff. = 681ff.):

εὐίππου, ξένε, τᾶσδε χώ-
ρας ἵκου τὰ κράτιστα γᾶς ἔπαυλα,
τὸν ἀργῆτα Κολωνόν, ἔνθ'
ἁ λίγεια μινύρεται
θαμίζουσα μάλιστ' ἀη-
δὼν χλωραῖς ὑπὸ βάσσαις . . .

Pattern-making of this kind is common to both Attic tragedy and comedy, but the closest affinities of Philodamus' stanza are with *Knights* 551ff. = 581ff. One is tempted to wonder whether the metrical pattern of the stanza has not actually been reproduced from some lost chorus of Attic drama, probably comedy.

There are a few dactylic tetrameters in Timotheus' *Persae* (*PMG* 791.132–3, 139, 190, 196). Otherwise, lyric dactyls are not found surviving in literary poetry much after the fifth century, but the familiarity of the dactylic hexameter may have helped sub-literary composers of ritual poetry to produce dactyls of a sort. The Erythraean paean (*PMG* 934 = *CA*, 136) dates in its earliest form from the early fourth century, and is composed in short and simple corresponding stanzas:

– – ◡ ◡ – ◡ ◡ – ◡ ◡ da tetram
– – ◡ ◡ – ◡ ◡ – – da tetram cat

(ritual cry)
– ◡ ◡ – ◡ ◡ – ◡ ◡ – ◡ ◡ da tetram
– – – ◡ ◡ – – da trim
– – ◡ – – – ◡ – ia dim
– ◡ ◡ – ◡ ◡ – || da trim cat
(ritual cry)

In its simple way, this is still recognizably a classical stanza, but versions of the poem inscribed at later periods contain additions that destroy correspondence (see *CA*, 137–8). The paean of Macedonicus (*CA*, 138–9, with *Supplementum Epigraphicum Graecum* XXIII [1968], 126) is a composition akin to the Erythraean paean, inscribed in the imperial period. In the fuller version of 1–6, a pair of dactylic sequences of seven + two + four metra may be discernible, but the following fragmentary lines evade analysis. The Epidaurian paean (*PMG* 937) is composed in a variety of dactylic lengths with no clearly perceptible pattern.

The evolution of the Erythraean paean illustrates a highly significant difference between ancient and modern transmission of song. In the modern world, the tune preserves the precise rhythm of the words, but not the words themselves. The tune allows one the option of singing

Good King Wenceslas looked out
In his striped pyjamas . . .

—or anything else that 'fits'. The words of a song can be translated into another language, as long as the rhythm of the original words is preserved well enough to fit the tune. With the paean, the words are more or less preserved; the metre is still dactylic; but the rhythmic structure gets completely lost.

The first Delphic hymn of 127 B.C. and most of the second (*CA*, 141–59) are composed in cretics. Both are astrophic and admit all possible versions of the cretic metron: – ◡ –, – ◡ ⏑, ⏑ ◡ –, ⏑ ◡ ⏑, the last of which is extremely rare in fifth-century verse. They also admit the collocation – ◡ ⏑ ⏑ ◡ –, which is not found in the classical period. The beginning of the first paean will serve as a specimen:

– ◡⏑ – ◡ ◡⏑ – ◡ – ◡⏑◡⏑ ◡⏑◡ –
◡⏑◡ – ◡ –
◡⏑◡ ◡⏑ – ◡ ◡⏑ – ◡ – – ◡ – – ◡ – ◡⏑◡ –
◡⏑◡ ◡⏑ – ◡ – – ◡ –
– ◡ ◡⏑ – ◡ ◡⏑ ◡⏑◡ – – ◡ – ◡ ◡⏑ – ◡ –
– ◡ ◡⏑ – ◡ –
– ◡ ◡⏑ – ◡ – – ◡ ◡⏑ – ◡ – ||

Contrast Aristophanes, *Ach.* 665ff.–692ff.:

– ◡ – – ◡ ◡⏑ – ◡ ◡⏑ – ◡ ◡⏑ – ◡ ◡⏑ – ◡ – ||
– ◡ – – ◡ – – ◡ – – ◡ ◡⏑ – ◡ ◡⏑ – ◡ ◡⏑ – ◡ ◡⏑ – ◡ – – ◡ – ||
– ◡ ◡⏑ – ◡ ◡⏑ – ◡ ◡⏑ – ◡ – ||

– ⏑ ⏝ – ⏑ ⏝ – ⏑ ⏝ – ⏑ – ||
– ⏑ – – ⏑ – – ⏑ ⏝ – ⏑ ⏝ – ⏑ ⏝ – ⏑ ⏝ – ⏑ ⏝ – ⏑ – – ⏑ – ||

Aristophanes' stanza is clearly divided into verses. He admits only – ⏑ – and – ⏑ ⏝, and the distribution of resolved and unresolved metra follows a clearly recognizable pattern. Unresolved metra both open and close the long first, second and final verses. They close the third and fourth. The repetition of the same pattern in the third and fourth verses builds up tension. The final verse includes as its central section the longest run of resolved metra in the stanza, producing a build-up to the unresolved clausula. The Delphic hymn, in contrast, is very short of clear demarcation into verses by hiatus and/or *brevis in longo*. For the last nine metra of the passage quoted the poet settles into alternating – ⏑ – and – ⏑ ⏝, but this alternation does not relate to any apparent overall design in the poem, and elsewhere the distribution of the different types of metron seems random. The contrast can perhaps be made even clearer by setting out the stanzas using alphabetical symbols for the different types of metron: – ⏑ – = a, – ⏑ ⏝ = b, ⏝ ⏑ – = c, ⏝ ⏑ ⏝ = d. *Ach.* 665ff. = 692ff. then becomes:

a b b b b a
a a a b b b a a
b b b a
b b b a
a a b b b b b a a

The extract from the Delphic hymn becomes:

b b a d c
c a
d b a a a c
d a a
b b c a b a
b a
b a b a

The classical structure, with its shapeliness and economy, has gone.

Had he ever thought about the matter, the composer of 127 B.C. might well have argued that his rhythms were more flexible, more expressive, more modern than those of Aristophanes. Art must move on. He might have been in some sense right. We are not in a position to make value judgements here. The one significant fact for us is that the rhythmical style of the second century was completely different from that of the fifth.

We know nothing of the musical interests or attainments of Aristophanes of Byzantium. He may, like Hermann, have had none. But such interests, if he had them, might not have been of any help in appreciating the rhythms of classical song. It has, however, been suggested[16] that Alexandrian scholars may have been helped in making

[16] With appropriate caution by Irigoin, *Scholies*, 34 and with immoderate conviction by T. Fleming and E. C. Kopff, 'Colometry in Greek lyric verses in tragic texts', *SIFC* 10 (1992), 758–70 (cf. 'The survival of Greek dramatic music from the fifth century to the Roman period', in B. Gentili and F. Perusino (edd.), *La Colometria antica dei Testi poetici greci* [Pisa and Rome, 1999], 16–29). On the other side, see Pöhlmann, 'Notenschrift', 68–70. Pöhlmann envisages an early split in the tradition between performers' texts (Bühnenexemplare) with musical notation

their divisions of earlier poetry by vestiges of musical notation in the texts they used. Before accepting the likelihood of anything of the kind, one should give full weight to certain general considerations. Firstly, a comprehensive, detailed, and widely understood musical notation is the exception, not the rule. Highly sophisticated music can be composed and performed without the aid of notation. In classical Greek song, the rhythm was essentially built into the words,[17] and, indeed, some of our surviving fragments of ancient scores (the Delphic hymns, *P. Vind.* G 29825) lack rhythmical notation. That fact weakens the modern Western conception of a specific 'tune' and points towards something more like improvisation within a set of rules. While the words of Euripides were protected in a way that those of the Erythraean paean were not, we should not assume that fourth-century and later performers passed down 'Euripides' music' note for note, or, as time went on, even approximately. It is much more likely that each χοροδιδάσκαλος used a combination of memory from earlier performers and performances and his own traditional skills to recreate the music on the basis of the rhythm supplied by the words, while introducing such modernization as current fashion and his own taste might suggest. We have the word of Aristoxenus[18] that neither musical notation nor metrical symbols were adequate to convey the reality of melody and rhythm to an unskilled person.

Secondly, the number of papyrus texts and inscriptions with musical notation from the classical and Hellenistic periods remains comparatively tiny. The evidence for the date of introduction of notation for vocal music, for its diffusion, and for its use has been thoroughly discussed by Pöhlmann and West,[19] and I have nothing to add, except that the later date for introduction (the end of the fourth century) favoured by West carries more conviction. So far only two fragments of fifth-century texts have come down to us with musical notation, both from late plays of Euripides: *Or.* 338–44 (*P. Vind.* G 2315, Rainer inv. 8029), written *c.* 200 B.C.[20] and *I.A.* 784–92 (*P. Leid.* inv. 510), written about the middle of the third century.[21] This offers no grounds for assuming

and plain texts which provided the basis for the Alexandrian editions. In support of this, he points out that texts with musical notation generally lack the marks of Alexandrian editing technique, notably division into cola. But his further remark that most musical fragments come from single sheets, not rolls, and that two combine two different pieces (cf. M. L. West, *Oxyrhynchus papyri* LXV [1998], 81) gives no support to the idea of performers' copies of whole plays. The Bühnenexemplare remain hypothetical.

[17] See A. M. Dale, 'Words, music and dance', *Collected Papers* (Cambridge, 1969), 161; M. L. West, *AGM*, 130.

[18] *Harm.* 2.39: 'So far is notation from being the perfection of Harmonic science that it is not even a part of it, any more than the marking of any particular metre is a part of metrical science. As in the latter case one might very well mark the scheme of the iambic metre without understanding its essence, so it is with melody also; if a man notes down the Phrygian scale it does not follow that he must know the essence of the Phrygian scale.' Trans. H. S. Macran, *The Harmonics of Aristoxenus* (Oxford, 1902), 194.

[19] Pöhlmann, 'Notenschrift' and West, *AGM*, 269–73. For evidence of vocal notation earlier than the end of the fifth century, Pöhlmann relies on vase-paintings depicting singers with book-rolls. But (as he himself admits, 62) there is nothing in the paintings to prove that the roles are musical scores, rather than simply libretti.

[20] See E. G. Turner, 'Two unrecognized Ptolemaic papyri', *JHS* 76 (1956), 95–8.

[21] See D. Jourdan-Hemmerdinger, *CRAI* 1973, 292–302. This text is not divided into cola; neither, however, is it divided into metrical verses in the modern sense, as Jourdan-Hemmerdinger believes. The fragment does, indeed, begin promisingly, since the first line (= *I.A.* 785–6) consists of a priapean dicolon (glyc + pher), followed by verse-end (shown by hiatus after ἔλθοι). But the second line (οἷαν . . . μυθεῦσαι) ends in the middle of a dragged glyconic (– – – | ⏑ ⏑ – – – –). Textual uncertainty supervenes in the third line, but if the editor's reconstitution is correct that too ends in mid-colon.

that scores for lyric from the rest of the century survived in any quantity, or even existed. Nor is there even strong reason to assume that the two papyri of Euripides preserve the poet's own music. One possible hypothesis is that the poet, when old and famous, chose to try to record the particularities of his personal settings by providing his texts with scores. Another is that, after the poet's death, a performer in the plays who had learnt the text from the poet (or from his son in the case of *I.A.*) was persuaded to write down what he could remember.[22] But scores may well have been produced as an aid to the performance of popular pieces or extracts at any time in the century and a half following Euripides' death by musicians who considered themselves to have special expertise.

The authenticity of the *Orestes* fragment has sometimes been thought to be confirmed by the fact that Dionysius of Halicarnassus quotes *Or.* 140–3 to illustrate his contention that in song the melody often goes against the natural pitch-accent of the words. This argument rests on the assumption that Dionysius had acquired a score, or at least heard a performance, of what he had special reason to regard as Euripides' music. But that is not a necessary conclusion.[23] His concern in the passage is to stress the distinction between ordinary speech and speech set to music. He goes on to maintain that 'music and rhythm' distort not only the natural pitch of the language, but the quantities of syllables, 'so that by shortening and lengthening them they often turn them into their opposites'.[24] Few would be happy to accept that statement as applying to the authentic music of Euripides, yet that is the corollary to accepting that Dionysius knew an authentic Euripidean score. Dionysius is writing about music in general, *all* music, as he knew it, and he is seeking to illustrate his thesis that music subordinates words to melody, not melody to words (*τάς τε λέξεις τοῖς μέλεσιν ὑποτάττειν ἀξιοῖ καὶ οὐ τὰ μέλη ταῖς λέξεσιν*). He does not choose the passage from *Or.* because he believes it to be authentic, but because it illustrates his point particularly well. Strange though it may seem to us, there is nothing to suggest that the question of authenticity ever crossed his mind.[25] The coincidence of the survival of a

[22] On the possible transmission of the *text* of a play through the memory of an actor, see H. Jenkins, *Hamlet*, The Arden Edition (London, 1982), Introduction, 18–36. Quarto 1 of *Hamlet* is not, however, a good advertisement for the reliability of 'memorial' transmission. West (*AGM*, 270) is ready to believe that Euripides' music was transmitted accurately by memory for 'half a century or more' before being committed to writing. I find this very hard to credit. We know that performers took liberties with the text, which was written. How likely is it that they would have preserved meticulously music, which was not? Doubtless, there were some simple 'tunes' that everybody knew, as for scolia like the Harmodius-Song which shared the same stanza-form. But Euripidean choruses are a very different matter.

[23] *De comp. verb.* 11 (Usher, II, 78–82). See J. F. Mountford in J. U. Powell and E. A. Barber (edd.), *New Chapters in the History of Greek Literature* 2 (Oxford, 1929), 149 and Dale, *LM*^{2}, 205. Dionysius speaks of *τῶν Εὐριπίδου μελῶν ἃ πεποίηκεν τὴν Ἠλέκτραν λέγουσαν* 'the lyric which Euripides makes Electra deliver . . .' The lyric is, of course, Euripides'. Dionysius does not seem to think of the musical performance as potentially variable. Dale provides an excellent summary of the reasons why Dionysius cannot be regarded as a reliable authority on music of the classical age. For a sensibly sceptical view of the *Orestes* fragment, see Euripides, *Orestes*, ed. C. W. Willink (Oxford, 1986), liv–lv. Cf. W. D. Anderson, *Music and Musicians in Ancient Greece* (Ithaca, NY and London, 1994), 124.

[24] The attempt by S. Usher (*Dionysius of Halicarnassus. The Critical Essays* 2 [Cambridge, MA, and London, 1985], 82, n. 1) to see this as referring 'to the metrical devices of correption, synizesis and perhaps syncopation' will not do. Dionysius is writing specifically about the effect of *music*, not of metre. Moreover, of the phenomena listed by Usher, only correption changes the apparent quantity of syllables. Synizesis turns two syllables into one. Syncopation quite possibly added extra length to a long note, but it cannot have turned a short into a long.

[25] In a period fascinated by reconstructions of the past, we have to remind ourselves that

fragment of score from *Or.* and Dionysius' mention of that play proves nothing but that *Or.* was a popular play in antiquity, which we know from other sources.

There is, in fact, no persuasive evidence for the survival of authentic scores even from the very end of the fifth century, and no evidence whatever for the existence at any time of scores from any earlier period. Nor have we any reason to think that scores, had they existed and survived, would have been of use in resolving problems of colometry. We should perhaps think of musical notation in the Alexandrian period as analogous to ballet notation now: a barely adequate method of recording, of interest only to a minority of professionals.

In conclusion, the classical stanza, with its careful and economical, yet infinitely variable structure, seems to have gone out of fashion a century before Aristophanes of Byzantium was born, although a convincing pastiche could still be produced *c.* 330 B.C. by someone who chose to do it. The lyric of the post-classical and Hellenistic ages was characterized by the collapse of structure, while the scholarly poets of Alexandria cultivated an extreme structural simplicity. There is no evidence that the vast majority of texts from the classical period were transmitted with authentic musical notation, or that such notation, had it existed, would have contributed anything to metrical understanding.

III. ALEXANDRIAN COLOMETRY

With prudence, it is possible to recover something of the Alexandrian colometry of Attic drama from medieval MSS, especially those of the tenth and eleventh centuries: M of Aeschylus, L of Sophocles, M of Euripides, R and V of Aristophanes. Criteria for distinguishing ancient colometry are:

1. Agreement with such papyrus fragments as are available.
2. Consistent division of corresponding passages, while allowing for the possibility of failure to recognize correspondence, especially between stanzas ἐν διεχείᾳ (non-consecutive).
3. Evidence of intention, manifest in a degree of care and coherence.[26]

This last criterion is somewhat imprecise. It does not, however, mean that a division which corresponds to modern metrical ideas is more likely to be authentic than one

awareness of change over time does not come naturally, and even where it exists is often patchy. The artists of early-Renaissance Italy depicted biblical characters in what for them was modern dress. Shakespeare knew that the Romans did not have firearms, but not that they did not have striking clocks.

[26] For studies of MS colometry, see Irigoin, *Scholies*, 17–34; Barrett, *Hippolytos*, 84–90; G. Zuntz, *An Inquiry into the Transmission of the Plays of Euripides* (Cambridge, 1965), 31–5; *Drei Kapitel zur griechischen Metrik, Oest. Akad. der Wiss., Phil.-Hist. Kl., Sitzungsb. 443* (Vienna, 1984), 50–8; D. J. Mastronarde and J. M. Bremer, *The Textual Tradition of Euripides' Phoinissai* (Berkeley and Los Angeles, 1982), 151–64; K. J. Dover, *The Greeks and their Legacy* (Oxford, 1988), 247–54; J. Diggle, *The Textual Tradition of Euripides' Orestes* (Oxford, 1991), 132–51; *Euripidea* (Oxford, 1994), 379–82; Parker, *Songs*, 98–106. Mastronarde and Bremer provide a useful corrective to some of the more incautious general statements on this subject (especially to Zuntz, 1965). It will be noted that I do not include 'mid-word division' (Diggle, *Euripidea*, 380) among my criteria for distinguishing Alexndrian colometry, as I do not regard it as decisive *per se*. Its presence in a *corresponding* division would come under my third heading, as evidence of care and coherence.

that does not. A complicating factor might seem to be the possibility of redivision in later antiquity. There is evidence in the metrical scholia of Aristophanes and possibly also in the text itself for some activity of that kind, but we have no reason to suppose that any *major systematic* redivisions of ancient texts were carried out after the Alexandrian period.[27]

One of the most intriguing features of traditional colometries is the treatment of dactylic hexameters in lyric contexts. The columns of a papyrus roll could, of course, accommodate a dactylic hexameter, and it is hard to believe that any Alexandrian scholar could have been unable to recognize one. Yet standard practice seems to have been to split them into two cola. Nor is this done consistently in a single standard way, as one would expect of a metrician intent on revealing the structure of the verse, but in a variety of ways, sometimes between metra, sometimes within a metron, but generally following word-end.

Ag. 104ff. = 122ff. provides an interesting example of Alexandrian practice in dealing with hexameters and with other dactylic lengths. The stanza combines various dactylic lengths with a few iambic metra. There is a high degree of correspondence of word-end between strophe and antistrophe. The most sensitive modern division, that of Fraenkel, runs as follows (with corresponding word-end marked):

1 – ⏑⏑ – ⏑ ⏑ – ⏑ ⏑ – | ⏑ ⏑ | – ⏑ ⏑ | – – |
2 – ⏑ ⏑ – | ⏑ ⏑ – | ⏑ ⏑ – | ⏑ ⏑ – – |
3 – – | – – | – – | – ⏑ ⏑ – – |
4 ⏑ – ⏑ –
– | ⏑ ⏑ – | ⏑ ⏑ | – ⏑ ⏑ – – |
5 – ⏑ ⏑ | – – |
6 – – | – ⏑ ⏑ – ⏑ ⏑ – ⏑⏑ | – ⏑ ⏑ – – |
7 – ⏑ ⏑ – – |
8 – – – ⏑ ⏑ – | ⏑ ⏑ – ⏑ ⏑ – | ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ | – – |
9 ⏑ – ⏑ | –
– ⏑ ⏑ – ⏑ ⏑ | – ⏑ ⏑ – – |
10 – – – | ⏑ ⏑ – – |
11 – ⏑ ⏑ – | ⏑ ⏑ – | ⏑ ⏑ – ⏑ ⏑ | – ⏑ ⏑ – – |
12 ⏑ – ⏑ | – ⏑ – ⏑ – |
13 – ⏑ ⏑ | – ⏑ ⏑ | – ⏑ | ⏑ – | – – –

One can hardly doubt that Aeschylus intended his audience to recognize that the first song of his great trilogy on the aftermath of the Trojan War opens with the verse of epic, the dactylic hexameter. This opening hexameter has bucolic diaeresis, and throughout the stanza Aeschylus echoes the cadence – ⏑ ⏑ – –, using it as an independent colon at 5 and 7, detaching it from the end of the pentameter at 3, and from the iambic-based tetrameters at 4 and 9, as well as from the hexameters at 6 and 11. The two pentameters at 2 and 3 are differentiated as sharply as possible one from another, the first highly dactylic and divided by word-end within the metra, the second heavily spondaic and divided *κατὰ μέτρον* (except for the final – ⏑ ⏑ – –).

In M, the stanza becomes:

[27] For the possibility of some alternative ancient colometries in Euripides, see Mastronarde and Bremer (n. 26), 164, n. 1, and for Aristophanes, Parker, *Songs* 96–106, but evidence for any *major systematic* redivision is lacking.

1a – ⏑⏑| – ⏑ ⏑ – ⏑ ⏑ –|⏑ ⏑|
1b – ⏑ ⏑| – –|
2a – ⏑ ⏑ –|⏑ ⏑ –|
2b ⏑ ⏑ –|⏑ ⏑ – –|
3a – –| – –|
3b – –| – ⏑ ⏑ – –|
4a ⏑ – ⏑ – –|
4b ⏑ ⏑ –|⏑ ⏑| – ⏑ ⏑ – –|
5 – ⏑ ⏑|– –|
6a – –| – ⏑ ⏑ – ⏑ ⏑ – ⏑⏑|
6b+7 – ⏑ ⏑ – –| – ⏑ ⏑ – –|
8a – – – ⏑ ⏑ –|
8b ⏑ ⏑ – ⏑ ⏑ –|⏑ ⏑ – ⏑
8c ⏑ – ⏑ ⏑| – –|
9a ⏑ – ⏑|– – ⏑ ⏑ –
9b ⏑ ⏑|– ⏑ ⏑ – –|
10 – – –|⏑ ⏑ – –|
11a – ⏑ ⏑ –|⏑ ⏑ –|
11b ⏑ ⏑ – ⏑ ⏑|– ⏑ ⏑ – –|
12 ⏑ – ⏑|– ⏑ – ⏑ –|
13 – ⏑ ⏑| – ⏑ ⏑| – ⏑|⏑ –|– – –|

The strong tendency for word-end to correspond has enabled the *colistes* almost completely to avoid splitting a word between lines. The only exceptions are at 8b/c, and 9a/b, where he bases his division on word-end in the strophe, and splits a word in the antistrophe. The result at 8b/c is that for the only time in the stanza he has divided a dactylic metron between shorts (– ⏑ | ⏑).

Basing his division on the antistrophe would have produced:

⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ –
⏑ ⏑ – ⏑ ⏑ – –

That, to a modern eye, seems more consistent with the way in which the rest of the stanza is divided, but the Alexandrian *colistes* did not apparently think in that way. Throughout, there is a strong tendency to follow word-end with no apparent regard for metrical structure. Two of the hexameters (1 and 6) lack corresponding caesurae, and they are divided at the bucolic diaeresis, where word-end does correspond. 11 too has corresponding word-end at bucolic diaeresis, but there is also corresponding penthemimeral caesura, and it is the caesura-point, within a metron, that the *colistes* has chosen for his division. 4 and 9 are identical metrically: an iambic metron is linked by synartesis to a dactylic tetrameter. But the pattern of corresponding word-end is different in the two verses, so they are divided differently. 4 becomes:

⏑ – ⏑ – –
⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ – –

and 9 becomes:

⏑ – ⏑ – – ⏑ ⏑ –
⏑ ⏑ – ⏑ ⏑ – –

The artistry revealed by Fraenkel's colometry is concealed and even the dactylic rhythm is lost.

The elegiacs at *Andr.* 103–16 are divided in M with evident care and consistency (of a kind). Every verse here, hexameter and 'pentameter', is divided into two. The 'pentameters' are all divided at the obvious point, the median diaeresis:

– ⏑ ⏑ – ⏑⏑ – |
– ⏑ ⏑ – ⏑ ⏑ – |

The treatment of the hexameter is more peculiar. Verses which have word-end after the third metron (103, 105, 107) are divided at that point, precisely in half:

– ⏑ ⏑ – ⏑⏑ – ⏑ ⏑ |
– ⏑ ⏑ – ⏑ ⏑ – – |

The caesura is ignored. The remaining lines, however, are divided at the caesura:

– ⏑⏑ – ⏑⏑ – |
⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ – –

We cannot be sure of the layout of the text on which the *colistes* worked. In *P. Berol.* 13270, the elegiacs are laid out in verses, but in *P. Heidelb.* 176, also of the third century B.C., and the much later *P. Haun.* 4 (first century A.D.) hexameters are written out continuously, marked off only by dicola.[28] It is hard to believe that any scholar of the Hellenistic age (or even much later antiquity) could have failed to recognize elegiac couplets, but there is no reason to reject the authenticity of the division, however disconcerting we may find it. The method is essentially the same as that used on *Ag.* 104ff. = 122ff. (see above, pp. 39–41): there, as here, στίχοι are regularly split into two following word-end and hexameters are divided either between metra or at the penthemimeral caesura.

In some other types of metre, dividing according to word-end produces results which, if less bizarre than in dactyls, are still suggestive of metrical misinterpretation. For example, the modern colometry of *O.C.* 668ff. = 681ff. (as it appears in the *Oxford Classical Text* of Lloyd-Jones and Wilson) produces the following (with alphabetical symbols for the different types of colon):

1	– – – ⏑ – ⏑ –	glyc		A	
2	– ⏒ – ⏑ – ⏑ – ⏑ – –		+ phal		+ B
3	⏑ – – ⏑ – ⏑ –	glyc		A	
4	– ⏑ – ⏑ – ⏑ –		+ glyc		+ A
5	⏑ – – ⏑ – ⏑ –		+ glyc		+ A
6	– – – ⏑ – –		+ pher		+ C
7	⏑ – – ⏑ – ⏑ –	glyc		A	

[28] See Turner–Parsons, *GMAW*, 12.

8	– – – ⏑ – ⏑ –		+ glyc	+ A
9	– ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑	da tetr	D	
10	⏑ – ⏑ – ⏑ – –	ia dim cat	E	
11	– – – ⏑ ⏑ – ⏑ –	glyc	A	
12	– ⏑ – ⏑ ⏑ – ⏑ – ⏑ – –		+ phal	+ B
13	– – – ⏑ ⏑ – ⏑ – –		+ hipp	+ F

There are six types of colon here, all very common, except for the final hipponactean, and relations between the cola are all clearly intelligible. Thus, 1 (glyc) is followed by phal. (= glyc + ba). 3–6 is a simple, aeolo-choriambic quatrain of anacreontic type (3 glyc + clausular pher). In 7–8, Sophocles starts as if to repeat the quatrain, but interrupts with a surprise interlude at 9–10: dactylic tetrameter and catalectic iambic dimeter. 11 and 12 return to the beginning of the stanza (glyc + phal). Then the stanza is wound up by another pendent colon (hipp = glyc + –).[29] L, however, offers a different division, which is presumably Alexandrian in origin, since it corresponds perfectly in strophe and antistrophe, except for one minor scribal error at 670–1 = 683–4. That division runs as follows:

1	– – – ⏑ – ⏑ – –	hipp	A
2	⏑̄ – ⏑ – ⏑ – ⏑ – –	aceph phal	B
3	⏑̲ – – ⏑ – ⏑ –	glyc	C
4	– ⏑̲ – ⏑ – ⏑ –	glyc	C
5	⏑̲ – – ⏑ – ⏑ – –	hipp	A
6	– – ⏑ – –	reiz	D
7	⏑̲ – – ⏑ – ⏑ – –	hipp	A
8	– – ⏑ – ⏑ –	tel	E
9	– ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑	da tetr	F
10	⏑ – ⏑ – ⏑ – –	ia dim cat	G
11	– – – ⏑ ⏑ – ⏑ – – ⏑ –	glyc + cr	C + H
12	⏑ ⏑ – ⏑ – ⏑ – –	anac	I
13	– – – ⏑ ⏑ – ⏑ – –	hipp	A

Here there are nine different types of colon, of which 11 is peculiar and 12 (an anacreontic) inappropriate to the context. The way in which acephalous cola follow pendent cola, and *only* pendent cola, is manifestly suspect. The common sequence glyc pher (that is glyconic and its own catalectic form) becomes hipp reiz:

.. .. – ⏑ ⏑ – ⏑ – –
× – ⏑ ⏑ – –

A pair of glyconics becomes hipp tel:

[29] There is a textual problem with metrical repercussions at 67–80 = 692–3. Lloyd-Jones and Wilson retain the MS *θείαις* at 680 (accepting Wilamowitz's defence at *GV*, 249, n. 2) and propose *αὖθ'* for *αὖ* at the end of 692, to avoid verse-end (marked by hiatus), as in Pearson's text. It is arguable whether verse-end here is less acceptable than elision at the end of a pendent colon. Dawe removes a syllable by accepting Elmsley's *θεαῖς* at 680 and ejecting the definite article in 693. The result would be better divided; – ⏑ – ⏑ – ⏑ – ⏑ – hipp than phal – – ⏑ – ⏑ – ⏑ –. The acephalous colon is intrusive in this stanza.

.. .. – ◡ ◡ – ◡ – –
× – ◡ ◡ – ◡ –

Cola 11 and 12 (glyc + cr, anac) are surprising, given that, still following word-end for the most part, the *colistes* could have produced hipp aceph phal. repeating the pattern of his first and second cola. But, again, it does not seem that he studied the structure of the stanza as a whole, with a view to identifying recurrent patterns.

Bacchylides 18 is also an aeolo-choriambic stanza and the papyrus division has much in common with L's version of *O.C.* 668ff. = 681ff.:

1	◡ ◡ – – ◡ ◡ – ◡ – –	hipp	A	
2	⏑ – ◡ ◡ – ◡ ◡ – – ‖	aceph phal	B	
3	◡ ◡ ◡ – ◡ ◡ – ◡ – –	hipp	A	
4	– – ◡ ◡ – ◡ ◡ – –	+ aceph phal		+ B
5	⏑⏑ ⏓ – ◡ ◡ – ◡ –	glyc	C	
6	– ⏓ – ◡ ◡ – ◡ – –	+ hipp		+ A
7	⏓ – ◡ – ◡ –	ia trip	D	
8	– – – ◡ ◡ – ◡ – ‖	glyc	C	
9	– ◡ – ◡ ◡ – ◡ – –	hipp	A	
10	– – ◡ ◡ – ◡ – ‖	tel	E	
11	– ⏓ – ◡ ◡ – ◡ – –	hipp	A	
12	⏑ – ◡ ◡ – ◡ ◡ – ◡ –	tel + ia	E + F	
13	– ⏓ – ◡ ◡ – ◡ –	glyc	C	
14	– ◡ ◡ – ◡ ◡ –	+ lec		+ G
15	– – – ◡ ◡ – ◡ ◡ – –	phal	H	

The stanza is repeated four times and the *colistes* could not altogether avoid synartesis. Cola 3 and 4 are linked in the third stanza, 5 and 6 in the fourth. The division between cola 13 and 14 is more interesting. The metrical pattern is exactly the same as that of cola 6 and 7, that is glyc lec:

– × – ◡ ◡ – ◡ – ◡ ◡ – ◡ – ◡ –
(–)

In 6 and 7 there is consistent word-end after the first position of the lec, so the *colistes* changed lines there:

– × – ◡ ◡ – ◡ – –
(⏓) – ◡ – ◡ –

The metrical oddity of hipp ia trip seems not to have worried him. At 13 and 14, however, he found word-end in the first stanza, and *only* in the first stanza, after the glyc, and divided (correctly, as we should say) glyc lec. The second stanza in fact has word-end after the first position of the lec, as at 6 and 7, but the *colistes* ignored that. One may recall *Ag.* 104ff. = 122ff. (see above, pp. 39–40), where twice the *colistes* divides following word-end in the strophe, splitting a word in the antistrophe. The impression is of a rather slapdash procedure: division follows word-end in the first stanza and the rest of the poem is made to fit. As with the *O.C.* stanza, there is no evidence of study of the shape of the stanza as a whole, or of attempts to identify repeating patterns. There are eight different types of colon.

The modern analysis (given by Snell, though not, of course, adopted in his text) is far simpler and more coherent:

1	⏑ ⏑ – – ⏑ ⏑ – ⏑ –	glyc		A	
2	– ⏒ – ⏑ ⏑ – ⏑ – ⏑ – – ‖		+ phal		+ B
3	⏑ ⏑ ⏑ – ⏑ ⏑ – ⏑ –	glyc		A	
4	– – – ⏑ ⏑ – ⏑ – ⏑ – –		+ phal		+ B
5	⏒ ⏒ ⏓ – ⏑ ⏑ – ⏑ –	glyc		A	
6	– ⏓ – ⏑ ⏑ – ⏑ –		+ glyc		+ A
7	– ⏓ – ⏑ ⏑ – –		+ lec		+ C
8	– – – ⏑ ⏑ – ⏑ – ‖	glyc		A	
9	– ⏑ – ⏑ ⏑ – ⏑ –	glyc		A	
10	– ⏒ – ⏑ ⏑ – ⏑ –		+ glyc		+ A
11	– ⏓ – ⏑ ⏑ – ⏑ –	glyc		A	
12	– ⏑ – – ⏑ ⏑ – ⏑ – ⏑ ⏑ –		+ glyc ia		+ D
13	– – – – ⏑ ⏑ – ⏑ –	glyc		A	
14	– ⏑ – ⏑ – ⏑		+ lec		+ C
15	– – – ⏑ ⏑ – ⏑ ⏑ – –	phal		B	

It is possible to identify just four cola here (half as many as in the traditional division), but it is more enlightening to think of the stanza as a blend of glyconic with iambic. The lecythia are the longest iambic segments. The phalaecian hendecasyllable is made up of glyconic + bacchiac (the catalectic form of the iambic metron), while 12 compounds glyconic with a full iambic metron, making an acatalectic form of the hendecasyllable, as it were. At colon 7, the fusion of aeolo-choriambic with iambic is so complete that the first two positions of the lecythion are treated as aeolic base. Or, to look at it in another way, the lecythion is assimilated to a glyconic with single short substituted for the central double short: – ⏓ – ⏒ – ⏑ –.[30] Whatever value he may have attached to the papyrus colometry, Snell clearly regarded the modern colometry as 'right'.[31]

Alexandrian *colistae* regularly receive credit for their relative success in dividing dochmiacs, but there is need for some caution here. A 'correct' division of dochmiacs (that is, between metra) does not constitute good evidence of metrical understanding if the division follows word-end, and between 60 and 70 per cent of dochmiacs in Attic drama are marked off by word-end. So following word-end, as Alexandrian *colistae* tended to do, would produce a fair degree of success willy-nilly. The dochmiac division *against* word-end in M at *Sept.* 91–2 (a non-corresponding passage) is more convincing evidence of metrical understanding and interest:

ὁ λεύκασπις ὄρνυται λαὸς εὐ-
τρεπὴς ἐπὶ πόλιν . . .

[30] The lecythion gets the same treatment in the eupolidean of later Attic comedy (see Parker, *PCPS*, 214 [1988], 115–22), where it makes up a dicolon with the reversed form of glyconic, the polyschematist (base + – × – ⏑ ⏑ –). Whether Eupolis borrowed the idea from Bacchylides, or from elsewhere, or thought of it independently, we cannot tell.

[31] In his new edition (*Dithyramben*, 20, 214–15), Maehler throws Maas and Snell overboard and offers an analysis of the papyrus colometry, making liberal use of the suspect sequence 'hipp ^ glyc' (^ glyc = tel), on which see above, p. 42. At colon 7, ⏓ – ⏑ ⏑ – ⏑ – ('ia ⏑ –') seems to worry him no more than it did the Alexandrian *colistes*.

⏑ – – ⏑ – ⏑ – – ⏑ –
⏑ – ⏑ ⏑ ⏑ –

On the other hand, L's division at *Ant.* 1262–3 = 1285–6, which looks authentically Alexandrian, since it corresponds, without, in the antistrophe, following word-end, is unlikely to be correct:

1262–3 ἰὼ φρενῶν δυσφρόνων
ἁμαρτήματα στερεὰ
θανατόεντ' . . .

1285–6 ἰὼ ἰὼ δυσκάθαρ-
τος Ἅιδου λιμήν, τί μ' ἄρα
τί μ' ὀλέκεις

⏑ – ⏑ – – ⏑ –
⏑ – – ⏑ – ⏑ ⏑ ⏑
⏑ ⏑ ⏑ –

The rest of the stanza is dochmiac, interspersed with occasional cretics, and in L, while the division of the strophe after 1263 is highly disordered throughout, the antistrophe is indeed divided into dochmiacs from 1287 onwards. The traditional version of the opening can indeed be interpreted as syncopated iambic, but the words fall naturally into dochmiac, with initial ἰὼ *extra metrum*:

ἰὼἰὼ
⏑ – – ⏑ – ⏑ – – ⏑ –
⏑ ⏑ ⏑ ⏑ ⏑ ⏑ –

This also suits the context far better. The *Fragmentum Grenfellianum* (see above, II, p. 42) is evidence of some interest in and understanding of dochmiacs in the Alexandrian period, and, much later, Hephaestion still recognized ⏑ – – ⏑ –, but the performance of *colistae* in dividing them seems to have been somewhat hit-and-miss.

One test of the correctitude of Alexandrian colometry is absolutely beyond dispute. Since Boeckh's observation[32] that the phenomena which mark verse-end in stichic metres (regular, full word-end, combined with occasional hiatus and/or *brevis in longo*) have the same function in Pindar (although the verses so marked off are uniform neither in length nor in composition), it has been possible to check the Alexandrian division of Pindar in one very important respect. Where a verse-end located by Boeckh's criteria falls within a traditional 'colon', the traditional division is wrong. The traditional colometry of Pindar has been thoroughly studied by Irigoin,[33] who finds a notable distinction between the poems in dactylo-epitrite and those he classifies as 'composées de séries iambiques'. In the twenty-three dactylo-epitrite poems, he finds that twenty verse-ends out of a total of 296, or about 7 per cent, fall within the traditional cola. In the twenty-one odes classified as 'iambic', the proportion missed in

[32] A. Boeckh, *Pindari Opera quae supersunt* I (Leipzig, 1811). Boeckh's metrical treatise constitutes Part II of the first volume. See also *Praefatio*, xxviii–xxxii.
[33] *Scholies*, 17–34.

this way rises to sixty out of 277, or 21 per cent.[34] The much higher success rate with dactylo-epitrite is consistent with the fact that that metre was still in use until at least the early years of the second century B.C. (see above, II, p. 32). The *colistes* could, however, have done considerably better, whether or not he understood the metres, simply by noting carefully the points at which word-end coincides in every repetition of the stanza. But to do that in a poem of four or five triads is laborious and time-consuming. It would seem that the effort was not always made.

In Bacchylides there were far fewer verse-divisions confirmed by hiatus or *brevis in longo*. This is partly because we have far fewer poems or parts of poems running to four or five complete triads. In Pindar, verse-end is sometimes confirmed by no more than one or two verses out of eight or ten repetitions. In a fragmentary or mutilated text, such rare indications could often have been lost. Moreover, hiatus seems to be generally rarer in Bacchylides than in Pindar, and *brevis in longo* can only be securely identified in verses which end blunt (e.g. – ⏑ – ‖, – ⏑ ⏑ – ⏑ ⏑ – ‖). Partly because of our own uncertainties, it is only possible to identify one place where the *colistes* of Bacchylides has undoubtedly missed verse-end: X. str. 5–6, which he divides thus:

1 2 3 3 1 1
– ⏑ | – | – – | ⏑ – ⏑ ‖ – | ⏑ – | –

2 1 1 2 3
– | ⏑ | ⏑ – ⏑ ⏑ | – | ⏑ ⏑ – |

This is curious, since verse-end after the eighth position here emerges with unusual clarity: it is marked out not only by word-end, but by hiatus in all three repetitions of the verse. The practice of *scriptio plena* meant, of course, that the task of distinguishing between hiatus and elision was left to the reader, but the collocations of vowels here (15–16 ἕκατι | ἄνθεσιν, 33–4 γέμονται | ἀμφί, 43–4 τιταίνει· | οἱ δ') are not such as to suggest elision to anyone metrically competent. Moreover, word-end *never* occurs after the twelfth position, where the *colistes* has chosen to divide. This division is an arresting example of disregard of the clearest possible indications of verse-end.

Apart from verse-end, dactylo-epitrite poems offer further possibilities for assessing the skills of *colistae*. All competent metricans would now agree that a colon division within the phrases – ⏑ –, – ⏑ ⏑ – ⏑ ⏑ –, – ⏑ ⏑ – ⏑ ⏑ – ⏑ ⏑ –, – ⏑ ⏑ – is unmetrical, whereas colon-division between such phrases and either before or after 'link' anceps is acceptable.[35] Judging by these criteria, there are two certain misdivisions and one possible one in Bacchylides' dactylo-epitrite poems.

[34] How far, one might ask, did the *colistes* of Pindar understand the phenomenon of verse-end in lyric? Some conception, albeit limited and defective, survives in Hephaestion (Consbruch, 14.15–15.13) and Aristides Quintilianus (Winnington-Ingram, 44.7–10). Curiously, both ignore the phenomenon of hiatus at verse-end. One would feel that Alexandrian scholars should have understood it better, but their mistakes include ignoring hiatus as well as consistent word-end.

[35] Acceptable, but not necessarily *right*, in the sense that the poet himself would have recognized such a division as marking the end of a rhythmic phrase. It may be that the poet and his contemporaries had a sense of rhythmic phrasing which told them whether the anceps 'belonged' with what preceded or with what followed, but that is beyond us.

1. I, str. 1–2

⏑ ⏑ – – – ⏑ ⏑
– ⏑ ⏑ – – – ⏑ –

It has been established above (I, p. 25) that, surprising as it may seem, this really must have been the Alexandrian division. It is conceivable that the false reading *νούσων* (for *νόσων*) in 170 led the *colistes* to believe that the seventh position was anceps:

⏑ ⏑ – – – ⏑ ×
– ⏑ ⏑ – – – ⏑ –

But such an assumption would itself be evidence of metrical ignorance, since true anceps beside short is not found in Greek metre without intervening verse-end, and 'final anceps' (at verse-end) must be followed by word-end:[36]

2. VIII. str. 8–9

– – ⏑ ⏑ – –
⏑ ⏑ – ⏑ ⏑ – –

The eighth poem seems to have consisted of a pair of corresponding stanzas,[37] of the first of which only tiny fragments survive. If the reconstitution printed by Snell and Maehler is right, the colometry was the same in both stanzas, but the pattern of word-end in the first stanza cannot be determined. The division as it survives is highly enigmatic. In the papyrus colometry, with supplements, 24–7 run as follows:

παῖς ἐὼν ἀνήρ τε π[λεῦ-
νας ἐδέξατο νίκας.
ὦ Ζεῦ κεραυνεγχές, κα[ι ἐπ' ἀργυ]ροδίνα
*ὄχθαισιν Ἀλφειοῦ τελέσ[αις μεγ]αλοκλέας

– | – | ⏑ – – | – |
⏑ | ⏑ – – ⏑ | – – |
– – | ⏑ – – | – ⏑ ⏑ – – ⏑ ⏑ – – |
– – ⏑ | – – – | ⏑ ⏑ – | ⏑ ⏑ – – |

These are, in fact, three identical verses, yet the *colistes* divided only the first, and divided it not only unmetrically but against word-end. But at the point where he divided the first verse word-end does in fact occur in the next two verses, which he left

[36] Maas, 'Kolometrie', 306, n. 21 (= *Kleine Schriften*, 15) saw in the reading *νούσων* at 170 and the scansion *εὐ-* rather than *ἐϋ-* (⏑ –) at 9 a possible explanation for the inconsistent colometry of the papyrus, which he took to be original, not mere scribal error. The two lines, however, present different difficulties. At 9, the *colistes* seems to have divided after what he took to be the seventh syllable, while at 170 he actually did divide after the seventh syllable. This does not help us with the divisions after the eighth syllable in 55–6 and 78–9.

[37] See Maehler, *Siegeslieder* 2.137–9.

undivided. It may be that in the (missing) first stanza the pattern of word-division was different: cola 8–9 may have been divided by word-end into:

– ⏑⏑– – –|⏑⏑–⏑⏑– –

That would account for the *colistes*' division of the first verse, but not for his decision to leave the next two verses undivided.[38] It is at least clear once again that he did not seek to reveal repeating patterns.

3. There may possibly be another error in Encomium fr. 20 D. 9–10, where there seems to be division, following word-end, within a choriamb:

–|⏑⏑–⏑|⏑– – –|
⏑⏑–| – –⏑⏑–⏑⏑–⏑

But no corresponding verse has survived to prove that this is genuine Alexandrian colometry rather than a scribal slip to word-end.

Pindar, of course, provides a far better opportunity to study this kind of error.[39] I find in the traditional colometry of the complete poems twenty-six examples of unmetrical division of – ⏑⏑–⏑⏑– and – ⏑⏑–⏑⏑–⏑⏑–⏑:

Ol.:			
1	7. ep. 6	⏑⏑– –⏑⏑–|⏑⏑– – –⏑⏑–	7 + 7
2	8. str. 1	–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑–	8 + 7
3	11. ep. 7	–⏑⏑–⏑⏑– – –⏑⏑– – –⏑⏑–|–⏑⏑– –	15 + 9
		–⏑⏑– –	
4	12. str. 2	–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑–	8 + 8
Pyth.:			
5	1. ep. 5	⏑⏑–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑–	8(9) + 7
6	3. str. 5	–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑–	8 + 7
7	3. ep. 3	–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑–	8 + 7
8	3. ep. 8	–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑––	8 + 8
9	4. str. 4	–⏑⏑–⏑⏑–|⏑⏑– ⏑ –⏑⏑– –	7 + 8
10	9. str. 5	–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑– –|	8 + 8 + 7
		–⏑⏑–⏑⏑–	
11	9. ep. 3	–⏑⏑– – –⏑⏑–|⏑⏑– – –⏑⏑–	8 + 7
12	9. ep. 5	–⏑⏑– ⏑ –⏑⏑–|⏑⏑– ⏑ –⏑⏑–	8 + 7
Nem.:			
13	1. ep. 2	–⏑⏑–⏑⏑–|⏑⏑– – –⏑⏑– – –⏑⏑–	7 + 11
14	1. ep. 3–4	–⏑⏑– – –⏑⏑–⏑⏑–|⏑⏑– – –⏑⏑– –| –⏑⏑–‖	11 + 8 + 11 + 7
		– –⏑⏑– –⏑⏑–| –⏑⏑– – –⏑⏑–	
15	5. ep. 4	– –⏑⏑– – –⏑⏑– –⏑⏑–|–⏑⏑– ⏑ –⏑⏑–	12 + 8

[38] The remains of 11 in the strophe suggest that it may well have had the same pattern of word-end as 26 and the corresponding 27: – π]αῖδας Ἑλλά[νων ⏑ – ⏑ – ⏑ – –.

[39] As a source for the traditional colometry, I have used Heyne's edition of 1798, checked against the metrical *scholia vetera*. For these, see Irigoin, *Scholies*, 131–62 and A. Tessier, *Scholia metrica vetera in Pindari carmina* (Leipzig, 1989). I have only listed passages where the two are clearly in agreement. Verses are numbered as in Snell's edition (rev. Maehler, Leipzig, 1987).

16	5. ep. 6	– ⏑ ⏑ – – ⏑ ⏑ ⏑ ⏑ ⏑ – ‖ ⏑ ⏑ – – ⏑ ⏑ – –	11 + 8
17	8. str. 4	⏑ ⏑ – ⏑ ⏑ ⏑ – – ⏑ ⏑ – ‖ ⏑ ⏑ – ⏑ ⏑ ⏑ – –	11 + 7
18	8. ep. 3	⏑ ⏑ – ⏑ ⏑ – – ⏑ ⏑ ⏑ ‖ – ⏑ ⏑ ⏑ – ⏑ ⏑ –	10 + 8
19	10. str. 4	– ⏑ ⏑ – ⏑ ⏑ ⏑ – ‖ ⏑ ⏑ – – ⏑ ⏑ –	8 + 7
20	10. ep. 1	– ⏑ ⏑ – – ⏑ ⏑ ⏑ – ‖ ⏑ ⏑ – – ⏑ ⏑ –	8 + 7
21	10. ep. 2	– ⏑ ⏑ – – ⏑ ⏑ ⏑ – ‖ ⏑ ⏑ – – ⏑ ⏑ –	8 + 7
22	10. ep. 6	⏑ ⏑ ⏑ – ⏑ ⏑ – – ‖ ⏑ ⏑ – ⏑ ⏑ ⏑ ⏑ – – ‖ – ⏑ ⏑ – – ⏑ ⏑ –	8 + 7 + 7

Isthm.:

23	3 + 4. str. 2	– ⏑ ⏑ – – ⏑ ⏑ ⏑ – ‖ ⏑ ⏑ ⏑ – – ⏑ ⏑ –	8 + 7
24	5. ep. 8	– ⏑ ⏑ – ⏑ ⏑ ⏑ – ‖ ⏑ ⏑ ⏑ – – ⏑ ⏑ –	7 + 7
25	6. str. 8	– – ⏑ ⏑ – – ⏑ ⏑ ⏑ – ‖ ⏑ ⏑ ⏑ – – ⏑ ⏑ –	9 + 7
26	6. ep. 7	– ⏑ ⏑ – – ⏑ ⏑ ⏑ ⏑ ⏑ ‖ – – ⏑ ⏑ – – ⏑ ⏑ – – ⏑ ⏑ –	10 + 11

One principle seems clear: the *colistes* never splits double short between cola. Thus, there is no example of, say, – ⏑ ‖ ⏑ – ⏑ ⏑ – or – ⏑ ⏑ – ⏑ ‖ ⏑ ⏑ –. He also prefers not to end a colon with double short. There are just three examples (15, 18, 26). Otherwise, it is hard to understand his method. One can see that he could , mistakenly, have chosen to divide (as he quite often does) – ⏑ ⏑ – ‖ ⏑ ⏑ –, because Pindar does in fact begin dactylo-epitrite verses with ⏑ ⏑ – . . . But many of the verses so divided are such ordinary dactylo-epitrite sequences that mistakes seem hard to account for. Nor in most of these verses does the division follow recurrent word-end. In only eleven out of the twenty-six examples is there word-end in half or more of the repetitions at the point the *colistes* has chosen for colon-end. Indeed, in several verses, following recurrent word-end would have produced a metrically sounder division:

2	*Ol.* 8. str. 1	– ⏑ ⏑ – – ⏑ ⏑ ⏑ ⏑ ⏑ – ‖ – ⏑ ⏑ –	11 + 4
7	*Pyth.* 3 ep. 3	– ⏑ ⏑ – – ⏑ ⏑ ⏑ ⏑ ⏑ ⏑ – ‖ – ⏑ ⏑ –	12 + 3
9	*Pyth.* 4. str. 4	– ⏑ ⏑ – ⏑ ⏑ ⏑ ⏑ ⏑ ⏑ ⏑ – ‖ ⏑ – ⏑ ⏑ – –	10 + 5
10	*Pyth.* 9. str. 5	– ⏑ ⏑ – – ⏑ ⏑ ⏑ ⏑ ⏑ ⏑ – ‖ – – ⏑ ⏑ – – . . .	11 + 5
16	*Nem.* 8 ep. 3	⏑ ⏑ – – ⏑ ⏑ – ‖ – – ⏑ ⏑ ⏑ ⏑ ⏑ ⏑ – ‖ ⏑ – ⏑ ⏑ –	6 + 12 or 14 + 4

Here, as in the list on p. 48, I give the number of syllables in each colon at the end of the line. It will be seen that in 2, 7, 9, 10 and 16 dividing according to recurrent word-end would have produced cola of very unequal length, whereas in the traditional colometry, in almost every case, the cola are as nearly equal in length as they could be without division of double short. The only exceptions are 3, 14 (where the *colistes* also missed a verse-end), 16, and 25, and of these, 14, 16, and 25 could only have been divided more equally by placing colon-end after double short, which, as has been observed, is avoided, if not absolutely. The fact that these misdivisions are exceptional suggests that the *colistes* was deliberately dividing *contra metrum* in order to produce cola of equal or nearly equal length.

CONCLUSION

It is generally assumed that the object of division into cola was to reveal the metrical structure of classical and pre-classical lyric, at least as Alexandrian scholars understood it. Since Snell wrote the words with which this enquiry began, scholarly fashion

has swung somewhat in their favour, with carefully qualified approval from Irigoin, Barrett, and Diggle, greater enthusiasm from Zuntz, and whole-hearted acceptance from Fleming and Kopff.[40] One could multiply examples, but the examination above should be enough to cast serious doubt on the hypothesis that traditional colometries are based on sound metrical understanding and careful work.

In dactylic, we have seen that Alexandrian *colistae* divided the longer verses (hexameters, pentameters) as near to mid-verse as possible, following word-end, with the result that colon-end sometimes falls within a metron, sometimes between metra. A reluctance to divide double-short means that hexameters are often divided at the penthemimeral caesura (– ⏑ ⏑ – ⏑ ⏑ – |), but rarely at the trochaic caesura (– ⏑ ⏑ – ⏑ ⏑ – ⏑ |). The division of the elegiacs at *Andr.* 103–16, so bizarre to a modern eye, was carried out on the same principles as those of dactylic lyric. It did not strike the maker of that division that elegiacs should always be divided in the same way (unless he was working too hastily to recognize them: he had no reason to expect elegiacs *there*). There is some evidence of ability to recognize dochmiacs, but the frequent coincidence of word-end with metron-end in that metre would make it possible for a *colistes* chiefly guided by word-end to get better results than his metrical knowledge would warrant. For aeolo-choriambic, *colistae* follow their usual practice of dividing with word-end where possible. The resulting stanzas are amorphous by the standards of modern analysis, although the luxuriant nomenclature makes it possible for anyone so minded to put names to the resulting cola. But there is no more reason to accept these divisions than to accept the divisions of dactylic. The *colistes* of Pindar could, with care, have found all, or very nearly all, the verse-ends, even if he did not fully understand the concept, but in fact he missed a considerable number, including some in dactylo-epitrite, a metre still in use in the first decade of the second century. At the same time, his much greater success in making metrically correct divisions in dactylo-epitrite than in other types of Pindaric metre show that he was neither wholly ignorant of metre, nor wholly indifferent to it. In that same metre, however, he makes some blatantly unmetrical divisions, apparently in order to equalize the lengths of his cola. In general, *colistae* seem to have studied the texts before them carefully enough usually to spot correspondence, where it existed, but not carefully enough to gain a sense of the overall forms of stanzas, or to identify repeating patterns.

If one adheres to the view that the prime purpose of Alexandrian colometry was to reveal metrical structure, three positions are theoretically possible. First, because the Alexandrians lived so much closer in time to the classical period than ourselves, they *must* have possessed essential knowledge that we lack, so that even their least comprehensible divisions are, in some sense, correct. This is mysticism rather than scholarship, and anyone who believes it must be prepared to accept (and ultimately to try to explain) all the numerous oddities of traditional colometries. It will not do to pick out stanzas here and there as evidence of Alexandrian expertise. Second, the Alexandrians worked on the basis of theories which were, to a significant degree, erroneous. That is not impossible. Poetry comes first; theories of metre come afterwards. English is still a living language, and poetry has been composed in post-medieval England for some five centuries, but we still lack a coherent, comprehensive, generally accepted theory

[40] Irigoin, *Scholies*, 20–34; Barrett, *Hippolytos*, 89, n. 1; Diggle, *Textual Tradition*, 132, n. 2 (Cf. *Euripidea*, 379, n. 57). It does not appear that any of these scholars would be prepared to defend traditional colometries in the face of modern metrical knowledge; Zuntz, *Drei Kapitel* (n. 26), 50–8; Fleming and Kopff (n. 16), 758–70.

of English metre.[41] To Aristophanes, the teaching of metre seems to have been an innovation which could suitably be attributed to the arch-pseud, Socrates.[42] There are, of course, good reasons for studying MS colon-divisions. They can cast light on the relationships between MSS and they can help to elucidate the processes of corruption.[43] Sometimes, too, MS colon-divisions are good, or at least interesting, by modern standards, but in principle Wilamowitz's judgement of some eighty years ago holds good: '. . . die Handschriften mit ihrer Versabteilung unverbindlich sind'.[44]

The wish to see merit in traditional colometries has much to do with the reputation of Aristophanes of Byzantium. Could the work of so great a scholar really be of little value to us? Aristophanes seems to have been a man of immense industry, occupying a position that allowed him to set his mark far and wide on surviving Greek poetry. That in scholarship can certainly pass for greatness, but we have to take his talents as a metrician on trust.[45] In the matter of colon-division he seems to have been a pioneer, but we have no right to assume that his motives or his methods must have been exactly those of a modern scholar. It may prove more rewarding to turn our attention from what Alexandrian *colistae* knew to what they meant to achieve. Irigoin's study of the colometry of Pindar led him to suggest that one primary purpose was to produce a satisfactory layout,[46] and the apparent concern with producing cola of more or less equal length lends that view some support. It is, however, hard to believe that the huge effort of colizing the whole body of Greek lyric then surviving could have been justified by that alone. Another observation by the same scholar suggests a more compelling motive. Irigoin identifies Aristophanes himself as the *colistes* of Pindar by the fact that, according to the scholia, it was he who athetized the words *φιλέοντι δὲ Μοῖσαι* at *Ol.* 2.27–8, because of the lack of corresponding cola in other stanzas.[47] The bulk of Greek lyric which came down to Alexandria will have been in either repeating or corresponding stanzas. Division into short, corresponding lengths would have aided

[41] Different languages pose different problems. Stanza-forms, so problematic in classical Greek, are clearly marked out in traditional English lyric verse by rhyme. It is patterns of stress and how they should be analysed and described which give rise to doubt and contention.

[42] See *Clouds* 636–45. On the analogy of the grammar lesson which follows (659–93), we should expect 'Socrates' to use real terminology in a silly way. In fact, the technical words he uses (*τρίμετρον, τετράμετρον*) are of a type which goes back to Herodotus (1.47, 174, 5.610), so to about the 440s. Significantly, they are very simple descriptive terms, applicable to rhythms in repeating metra which cause no problems of analysis to us, but which were not infrequently misdivided at Alexandria. 'Socrates'' rhythmic terminology goes back to Damon, so, it would seem, to a similar date. Interest in establishing a science of metre and rhythm would be consistent with the intellectual atmosphere of the time.

[43] On relations between MSS, see, for example, D. Mervyn Jones, *CQ* 2 (1952), 172; Diggle, *Textual Tradition*, 131. On corruption, see Parker, *Songs*, 143, 145–7.

[44] *GV*, 83.

[45] A desperate defence of Aristophanes is to suggest that divisions which seem particularly disconcerting by modern standards must have been the work of someone else. Thus, Barrett (*Hippolytos*, 89, n. 1): 'M B H L's colometry of the elegiacs at *An.* 103–16 . . . is an oddity that I should be loath to father on Aristophanes of Byzantium.' Zuntz (*Drei Kapitel*, n. 26), 55: 'Und vielleicht dürfen wir so überraschende Mängel wie *P.* VIII einem Assistenten zuschreiben, dessen Irrtümer der Meister übersah'. It would be agreeable to look forward to a similar indulgence towards one's own lapses.

[46] See *Sc holies*, 33.

[47] A. B. Drachmann (ed.), *Scholia vetera in Pindari carmina* (Leipzig, 1903), 73, on 48a. Bowra quotes the scholium in his apparatus. Irigoin, *Scholies*, 18: 'Si la colométrie était antérieure à Aristophane de Byzance, l'interpolation aurait été décelée avant lui. Et si la colométrie remontait à Pindare lui-même et s'était transmise sans modification, l'interpolation n'aurait pas pu être insérée sans qu'on la remarquât immédiatement comme telle.'

immeasurably anyone seeking to identify interpolations and other types of corruption. Division would not only have aided comparison between stanzas in the same text, but between one text and another. For that purpose, moreover, short cola are easier to work with than long ones, which explains why traditional colometries break up longer verses, like dactylic hexameters, in lyric contexts. To use the division in that way would require the ability to scan, but not any profound or sophisticated knowledge of metre. Cola tend to be divided at word-end, because that makes for easier reading. Although the ancients did not divide words in writing, the multiplicity of rules and tendencies governing the incidence of word-end in verse shows that they were very much aware of it. Here it is also worth observing that the system of layout attributed to Heliodorus, according to which longer cola commence further to the left and shorter cola closer to the middle of the column, is a further powerful aid to matching colon to colon in corresponding stanzas. Indeed, it is hard to see any other practical purpose that it serves.

It is true that metricians in later antiquity, whose work is known to us chiefly from the metrical *scholia vetera* on Aristophanes and Pindar, used the Alexandrian colometries as the basis for metrical studies. At least they provided verbal descriptions of the cola before them, and believed that by so doing they were adding to the sum of human knowledge. That they used what they had inherited in that way is natural enough. It does not follow that the divisions were made for purely metrical reasons, or that the founders of classical scholarship thought as we do or had the objectives that we think they ought to have had.

One could not maintain that Alexandrian *colistae* were wholly indifferent to metre. Indeed metrical considerations could have played a part in the decision to divide into relatively short cola. Their chosen column-width accommodates various dimeter-lengths, as well as some of the most common aeolo-choriambic cola. Nonetheless, the evidence suggests that their concern was far from consistent, and that they could be satisfied with divisions which were no more than approximately metrical, or even unmetrical, if dividing into short, more or less uniform cola produced that result. They were far more successful in making corresponding divisions than in making metrically intelligent ones, a fact which confirms where their interests really lay. These are texts for scholars and readers, not for actors and musicians. Over all, one is left with the impression that, not surprisingly, the divisions were made rather hurriedly.

A doctrine of Alexandrian infallibility might be welcome to some prospective editors, who would thus at a stroke win exemption from the irksome task of studying metre, together with a pleasant sense of superiority to those who have studied it.[48] Unfortunately for such, however, it remains the business of an editor to provide the reader with the best that modern scholarship can offer in metre as much as in any other aspect of the study of ancient texts.

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[48] Few share the honesty and modesty of C. G. Heyne: 'In varias partes trahebatur animus, quotienscumque lectio et critica ad rem metricam me vocabat. Bene perspexeram in Pindaro vel maxime eam esse necessariam, refugiebat tamen animus quoties ad eam accedere constitueram' (Oxford, 1807, *Praefatio*, 6). Heyne was rescued by Hermann.