second possibility, which rests on the chance of human error and is accordingly more mundane, we believe more probable. When the earlier version of the Erchia calendar was being revised, it involved, as Dow has suggested, a considerable reworking, with very careful alignment of sacrifices, in order to produce equality of cost, number and type of victim, as well as type of recipient deity (olympian or epichoric) among the columns. This implies an intermediary draft and a (clean) copy from which the mason was to work. We conjecture that those who revised the original calendar noted in their draft copy the substitution of victims they made, as an aid in constructing the new version. It would not, however, have been politic to publish on stone notation of these substitutions for the celebrants to see – and regret. These were then notes for the revisers, to be expunged when a cleaner and final copy was made from which the mason was to work. Inadvertently, however, one instance of ἀντίβους was left in the mason’s copy, much in the same way that the inconcinnity of ἔτι τοῦ αὐτοῦ βιωτοῦ escaped correction in column A for the sacrifice to Semele. The dutiful stone-cutter, of course, inscribed what he had before him.

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THE MANUSCRIPT SOURCES
FOR THE ARISTIDES QUINTILIANUS
AND BRYENNIUS INTERPOLATIONS
IN CLEONIDES’ ΕΙΣΑΓΩΓΗ ΑΡΜΟΝΙΚΗ

In his standard edition of Cleonides εἰσαγωγῆ ἀρμονικῆ1), Carl von Jan cites as authority for the interpolations from Aristides Quintilianus and Manuel Bryennius two manuscripts designated as ‘Vulcanius’ and ‘Possevínus’. The former of these two

1) Musici scriptores graeci (Leipzig 1895) 179–207; (reprint: Hildesheim 1962). The text is reissued with several printing errors corrected in Heinrich Menge, Euclidis Phaenomena et scripta musica, vol. VIII of J. L. Heiberg and
should no longer be considered the most authoritative source for this part of the Cleonides tradition, for ‘Vulcanius’, that is, Lug­
dunensis Perizonianus F. 41\(^2\), can be shown to contain a version inferior to that found in another manuscript, Mediolanensis Ambrosianus gr. 768 (& 135 supplement). In addition, Jan failed to distinguish between two different groupings of manuscripts which contain the interpolations. Lastly, the hyparchetypes of ‘Pos­sevinus’ (= Vaticanus gr. 1341)\(^3\) and Mediolanensis Ambrosianus gr. 768 can be shown to be affiliated with the hyparchetype of M\(^1\), a correcting hand in one of the three twelfth-century manuscripts that preserve the εἰσαγωγὴ ἀριστοκρατία, and P\(^1\)C\(^1\), the correcting hands in the other two twelfth-century manuscripts which contain the treatise. As a result, several readings in Jan’s apparatus can be corroborated or clarified, and a number of new variants can be added.

In all there are six manuscripts which contain the Aristides Quintilianus and Bryennius interpolations – Lugdunensis Perizonianus F. 41 (olim Lugdunensis 135), Mediolanensis Ambrosianus gr. 768 (& 135 supp.), Parisinus Supplementarius gr. 195, Parisinus Supplementarius gr. 449 (olim R. B. 2502, 1839), Vaticanus gr. 1341, and Vaticanus gr. 1346\(^4\)). The Possevinus manuscript belongs to the fourteenth or possibly fifteenth century, the two Parisian manuscripts to the fifteenth, and the Vulcanian (Lug­
dunensis Perizonianus F. 41), Milanese and probably the other Roman codex to the sixteenth. Each of these seven manuscripts shares the following interpolations. Most conspicuous is their ceasing transmission of the treatise at 207.7 (ϕωνῆς) and then sub­stituting a parallel passage from Aristides (28.10–30.17 Win­nington-Ingram). They add other passages from Aristides and Bryen­niius at 185.15 (post ὑπερβολῆων: add. A. Q. 8.3–9.12), 186.21

\[\text{Menge, eds., Euclidis Opera omnia (Leipzig 1916) 186–223; cf. 179.1 (apparatus), 180.12, 180.13, 181.18, 183.20, 188.1, 189.9, 192.20, 198.12, 204.11, and 205.17. Menge neglected to correct the errors at 189.3 and 193.11; also, he added correctly at 193.5.}\]
\[\text{2) (olim Lugdunensis 135), written by Bonaventura Vulcanius in the six­
teenth century. Fol. 1v–13v contain the treatise (attributed to Anonymous). For the last major edition before Jan’s, that of Marcus Meibom, Antiquae musicae auctores septem I (Amsterdam 1642) 41–68, this was one of several codices collated; Meibom’s text reappears in D. Gregorius, Euclidis Quae supersunt omnia (Εὐκλείδου τὰ Σωκράτου) (Oxford 1703) 533–543.}\]
\[\text{3) Fol. 177r–184r, attributed to Euclid.}\]
\[\text{4) Jan omitted collation of Mediolanensis Ambrosianus gr. 768 entirely.}\]
Jon Solomon

(post χρωματική: add. A. Q. 9.15–10.15), 190.11 (post δίτονον: add. A. Q. 12.6–12.8), 187.20 (post βαρύτητι: add. Bry. 100.14–100.21 Jonker), and 189.6 (post ομοια: add. Bry. 102.19–102.20)\(^5\). Each of the six also shares the following significant errors 187.20 χάοςς δύο] δύον; 188.1 διαφωνία – ἀκοήν (188.2) om.; 201.6 παραμέσης ἐπί μέσην] μέσης ἐπὶ παραμέσην; 203.11 ὁν ὁ βαρύτερος] ὁς; et al.

Once these six manuscripts have been separated from the other forty-three which contain the treatise, they can be separated into two groups by author attribution\(^6\) and other significant errors. The first two manuscripts, Lugdunensis 41 and Mediolanensis 768, are attributed to Anonymous, the others to Euclid. These two groups of manuscripts interposed with Aristides and Bryennius also reveal significant differences from each other at 179.5 ἐχόντων] ἔχον (Anonymous group); 179.9 περὶ φθόγγον καὶ τῶν λοιπῶν add. Anonymous group, περὶ φθόγγος καὶ τῶν λοιπῶν add. Euclid group; 183.15 διεξεγεγράμενόν] συνημέρουν (Euclid group); 191.5 κέκληται] κέκληται (Anonymous group), κέκληται Euclid group; 200.5 τοῦ om. Anonymous group; and 204.12 παράλληλοι – τριήμερον] τριήμερον om. Euclid group; and elsewhere.

Within the Euclid group, there are significant separative errors in Parisinus Supp. 449’s addition of τῶ (ante χρώματι) in 183.1 and its omission of ἐ τῶν ομοίων at 193.11. Parisinus Supp. 195 and Vaticanus 1346 share a number of omissions with marginal corrections, and Parisinus Supp. 195 incorporates many of the corrections in Vaticanus 1346 into its text; it is then likely that they are gemelli. The only separative errors in Parisinus Supp. 195 and Vaticanus 1346 against Vaticanus 1341 are these insignificant, accidental omissions with marginal restorations. It is not then unlikely that the hyparchetype of Parisinus Supp. 195 and Vaticanus 1346 was either copied from or corrected against Vaticanus 1341, although it is equally possible that the hyparchetype of Parisinus Supp. 195 and Vaticanus 1346 and Vaticanus 1341 were copied from (and Parisinus Supp. 195 and Vaticanus 1346 corrected against) the same archetype. In either case, Vaticanus 1341 is the manuscript to be collated for the text of the treatise.

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\(^5\) Cf. Jan LXXIV and 175.

\(^6\) The attributions to Pappus, Cleonides, and ‘Zosimus’ in the other manuscripts each serve to identify three separate manuscript groupings; other significant errors show this to be so. The manuscripts attributed to Euclid or Anonymous have various subgroups within each. Cf. supra, n. 3.
Of the other two manuscripts, Lugdunensis 41 omits γένος at 180.1 and makes other significant omissions at 180.18 (ἔναλλαξ – τάσεις 180.19), 181.9 (ἐπεί – φθόγγοι δὲ 181.10), and 194.7 (μέσον – ἐπὶ 194.8), so Mediolanensis 768 is the only manuscript worthy of further stemmatic consideration; 'Vulcanius' can be eliminated, and the readings in Jan’s apparatus which belonged to Vulcanius are now corroborated by Mediolanensis 768. Other than the interpolations previously listed, this includes only the attribution in the apparatus (at 179.1) to 'Ἀνωνύμου.'

I have given these two representative manuscripts, Mediolanensis 768 and Vaticanus 1341, the sigla A and Q, the former for Mediolanensis 786's attribution to Anonymous and for 'Ambrosianus', the latter for the Quintilian (Aristides Quintilianus) interpolations). They share a number of readings against all the other manuscripts which contain the εἰσαγωγὴ ἄρμονική. In addition to those listed supra (187.20, 188.1-188.2, 201.6, 203.11), these include 179.7 post συστημάτων transp. περί γενόν; 179.9 ante φθόγγος add. titulum περί φθόγγων (A) [φθόγγον Q] καὶ τῶν λοιπῶν; 180.2 σύστημα – συγκείμενον (ante γένος 180.1) transp.; 180.15 ἄφαντος] ἄφαντος; 181.4 ἐξύτης μὲν οὖν ἐστι τό; 182.4 εἰς τὸ μὴν οὐν οί; 186.9 ante μεσόπυκνοι add. εἵτ' οὖν ἄπυκνοι; 189.10 μέλος] μέγεθος (ολίμ A); 190.15 ante ίσον add. ἀσύνθετον διάστημα et τὸ om.; 192.20 τεσσάρων] τέσσαρα; 194.18 γὰρ ἐν αὐτῷ] γὰρ; and 199.7 δὲ ἀλόγων ἄλογα] δὲ ἄλογα· ἕξ ἄλογων. All of these readings should be included in a revised apparatus criticus)

The readings peculiar to Q are clearly (usually intelligent) conjectures, e.g. 198.20 (ἐβδομον). The scribe of Q reveals some familiarity with Greek musicological terminology at 184.15–184.18, 184.20–184.22, 185.1–185.3, and 185.7–185.9 by impatiently abbreviating the names of the notes, substituting λυχανὸς μέσων διάτονος, χρωματική, ἐναρμόνιος for the regular λυχανὸς μέσων διάτονος, λυχανὸς μέσων χρωματική, λυχανὸς μέσων ἐναρμόνιος. Because of this prior acquaintance with the subject

7) The siglum E for Euclid would not have distinguished this manuscript from the other twenty which attributed the treatise to Euclid and most of which belong to a different manuscript grouping, and Jan has already used the siglum V for Vaticanus gr. 191 (fol. 291v–295r); Jan labeled fol. 392v–395r of the same codex W.

8) Jan did, it should be pointed out, see an affiliation between Lugdunensis 41, Paris. Supp. 449, and the Possevinus manuscript, but he failed to differentiate between the two groups; cf. LXXIV.
matter, Q probably intentionally increases the omission at 196.20–197.3 to encompass the entire sentence, so that he can avoid the confusion.

A and Q must have had a common hyparchetype which contained the interpolations and numerous significant errors listed supra. It may be that this hyparchetype was affiliated with the hyparchetype of M1, one of the second hands in Venetus Marcianus app. cl. gr. VI/3 (= Coll. 1347), which contains excerpts from book I of Aristides Quintilianus written in the margins of the Cleonides treatise. Winnington-Ingram9) points out that the excerpts do not by and large parallel those found in the six manuscripts described in this paper, yet the presence of the Cleonides and Aristides treatises in such proximity suggests that there may have been some affiliation by the fourteenth century, the date of the correcting hand in M. In fact, the hyparchetypes of M1 and of A and Q do not seem to be quite so unrelated as they may at first appear. Of the major Aristides interpolations found in the hyparchetype of A and Q, the interpolation after 185.15, a passage which has just defined, described, and listed φθόγγοι, is from Aristides 8.3–9.11, a passage which defines and lists φθόγγοι, and this Aristides passage is found precisely on the folios (2b–3a) which contain the relevant Cleonides φθόγγοι passage10). The interpolation after 190.11, a passage which has mentioned the term δεισις, is from Aristides 12.6–12.10, Aristides’ description of δεισις, but M1 here had already presented this passage in the margins of the folio (3b) in which the Cleonides treatise had made an earlier mention of the term δεισις (187.17)11). The interpolation after 186.21, a passage describing the πυκνόν, is from Aristides 9.15–10.15, Aristides’ description of the πυκνόν, and in the margins of this folio (3b) are found the Aristides passages surrounding 9.15–10.15 (the end of 8.3–9.13, 10.16–10.23, 10.23–11.2, et al.); only and precisely those lines of the Aristides interpolation (9.15–10.15) are missing12). If the hyparchetypes of M1 and of A and Q are indeed related, their common hyparchetype would predate M1 of the

9) Aristides Quintilianus De musica (Leipzig 1963) XI.
10) F. 2b: 183.4–185.11; f. 3a: 185.11–186.14.
11) M’s version of Cleonides 190.11 is contained on folio 4b; there M1 presents Aristides 20.1–22.16 (describing Τόνοι).
12) Perhaps the omission was due to the fact that the lines had already been interpolated in the hyparchetype.
fourteenth century, Q of the fourteenth or fifteenth century, and A of the sixteenth century. That this is so is suggested as well by a number of significant conjunctive errors shared by A, Q, and M¹, e.g. 186.22 ἐν – διάτονος (187.2) om.; 187.8 post δίτονον [διάτονον A] add. τομημάτιον; 187.9 post ἰμιτόνον add. δίεσις; 187.18 post τόνος add. τομημάτιον; 196.6 μεσον] πρῶτον ἐπὶ τὸ δὲ ὕμ. (Q corr.); 196.7 ante γένεσιν add. τῇν¹³); 198.14 post δὲ add. τῷ; 198.7 πρῶτον] ἐβδομον; 198.22 τοῖς] πέμπτον; 204.1 δὲ ἐπέρεος – καλεῖται (204.2)] ὁ μὲν βαφυς, ὁς καὶ ιάστιος, ὁ δὲ δὲς M¹ A: ὁ μ. β., ὁ καὶ ιάστι, καλεῖται, ὁ δὲ δὲς Q; and 206.4 διαστηματικοῦ (corr. A).

This same hyparchetype of A, Q, and M¹ seems also to have been affiliated with the hyparchetype of the two correcting hands in two twelfth-century manuscripts uncollated by Jan, C and P (C¹ and P¹) both from Vaticanus gr. 2338¹⁴). All five manuscripts AQMP²C¹ omit ἀσοσαν at 205.15, C¹ A share the omission of τόνος at 190.14, OP²C¹ share the omission of ἀσωθοῦς – ἀςῶνθετον (201.22) at 201.20 f. (A corr.), P¹C¹Q share the addition of ὅ at 203.7 (A corr.), and AQMP²C¹ alone share ἐμελείεις ἦττον ἦ ἐκεμελείες at 205.15, although this latter might be the correct reading (by omitting the preceding ἀσοσαν). The following stemma will illustrate the affiliations and parentage of all these manuscripts.

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13) A lectio facilior deriving from a variety of subconscious error which is described in M. L. West, Textual Criticism and Editorial Technique (Stuttgart 1973) 18.

14) I have described this manuscript in another paper, Vaticanus gr. 2338 and the Εἰσαγωγὴ ἄμβωτη, Philologus 127 (1983) 247–253.
U (Venetus Marcianus gr. 322, *olim* 711) shares all of the same significant errors which already served to identify the group AQM\(^1\)P\(^1\)C\(^1\) under discussion here (186.22, 187.8, 187.9, 187.18, 196.6, 196.7, 198.14, 198.17, 198.22, 204.1, and 206.4), yet it also shares a number of errors with PCM. The numerous manuscripts for which U serves as archetype will be discussed elsewhere\(^1\).