

NICOMACHUS OF GERASA AND THE DIALECT OF ARCHYTAS, FR. 1

The main source of Archytas, fr. 1 Diels–Kranz is Porphyry. in *Ptol. harmon.* p. 56,5–57,27 Düring; there is also an extensive quotation of its initial part in Nicomachus, *Introd. Arithm.* p. 6,16–7,5 Hoche.¹ In recent years both the text and the interpretation of this fragment, whose authenticity was questioned by W. Burkert,² have been re-examined, and a good deal of progress has been made especially by paying more attention to the nature of Nicomachus' quotation and its context.

For clarity's sake, I reproduce the initial ten lines of the fragment as they are printed in *Vorsokratiker*⁶:

καλῶς μοι δοκοῦντι τοὶ περὶ τὰ μαθήματα διαγνώ-
μεναι, καὶ οὐθὲν ἄτοπον ὀρθῶς αὐτοῦς, οἳά ἐντι, περὶ
ἐκάστων φρονέειν· περὶ γὰρ τᾶς τῶν ὅλων φύσιος καλῶς
διαγνόντες ἔμελλον καὶ περὶ τῶν κατὰ μέρος, οἳά ἐντι,
5 καλῶς ὀφείσθαι. περὶ τε δὴ τᾶς τῶν ἀστρων ταχυτάτος
καὶ ἐπιτολᾶν καὶ δυσίων παρέδωκαν ἡμῖν σαφὴ διάγνω-
σιν καὶ περὶ γαμετρίας καὶ ἀριθμῶν καὶ σφαιρικᾶς καὶ
οὐχ ἥκιστα περὶ μωσικᾶς. ταῦτα γὰρ τὰ μαθήματα δο-
κοῦντι ἡμεῖς ἀδελφεά· περὶ γὰρ ἀδελφεὰ τὰ τῷ ὄντος
10 πρῶτιστα δύο εἶδεα τὴν ἀναστροφὰν ἔχει.

In a detailed study of the whole fragment published in 1982, A. C. Bowen was able to show among other things that in quoting it Nicomachus actually replaced Archytas' description of astronomy (lines 5f. *περὶ τε δὴ τᾶς τῶν ἀστρων ταχυτάτος καὶ ἐπιτολᾶν καὶ δυσίων*) with his 'term of preference for astronomy', *σφαιρικῇ*.³ It is now clear that Diels and Kranz have conflated the version of Porphyry with that of Nicomachus, and that the words *καὶ σφαιρικᾶς* at line 7 do not belong to Archytas.

Another important contribution was made by C. A. Huffman in 1985. It concerns the sentence at lines 9–10 *περὶ γὰρ ἀδελφεὰ τὰ τῷ ὄντος πρῶτιστα δύο εἶδεα τὴν ἀναστροφὰν ἔχει*, which is totally foreign to Archytas' thought. Huffman drew attention to the fact that it is absent from Porphyry and demonstrated that it actually belongs to Nicomachus, who wanted to explain the preceding sentence of Archytas (*ταῦτα γὰρ τὰ μαθήματα δοκοῦντι ἡμεῖς ἀδελφεὰ*) in terms of his own philosophical views.⁴ According to Huffman, Nicomachus wrote that sentence in Attic but a later scribe mistook it for Archytas' text and gave it a veneer of dialect. The elimination of *περὶ γὰρ...ἔχει* from Archytas' text has removed one of the most serious obstacles to the recognition of the fragment's authenticity.

Apart from some remarks of Huffman's on the superficial doricizing of *περὶ γὰρ...ἔχει*, there is no mention in these two studies of problems concerning Archytas' dialect. Yet they must be fairly serious, if Wilamowitz was able to maintain in 1928

¹ Other authors quote only a couple of short sentences (see Diels–Kranz).

² See *Lore and Science in Ancient Pythagoreanism* (Cambridge, MA, 1972), p. 379 n. 46.

³ A. C. Bowen, 'The Foundations of Early Pythagorean Harmonic Science: Archytas, Fragment 1', *Anc. Philos.* 2 (1982), 79–104, p. 84f.

⁴ 'The Authenticity of Archytas fr. 1', *CQ* 35 (1985), 344–8, p. 346.

that it is 'completely ravaged'. He offered two examples from the text printed above: *διαγνώμεναι* and *φρονέειν*.⁵ The main question is: was he right? And if so, in what way can this 'ravage' be linked to the problem of the fragment's authenticity?

Although it is highly likely that Archytas used not the Tarentine dialect, but a fairly 'international' form of Doric,⁶ Wilamowitz must certainly have been right in considering those dialect forms inadequate.

Let us first concentrate on *διαγνώμεναι*, which is printed as Archytas' text by Diels-Kranz, Timpanaro Cardini⁷ and Bowen. This form is found in the manuscript tradition of Nicomachus. That of Porphyry has the Attic (and *koine*) form *διαγνώναι*, which comes as no surprise as slips into Attic are very common among scribes; moreover Porphyry himself seems not to have cared much about the linguistic form of his Doric originals.⁸

Actually, what we expect is the Doric form *διαγνώμεν* (more correctly to be accented *διαγνώμεν* in a modern edition).⁹ *διαγνώμεναι* seems impossible for Archytas: the *-μεναι* infinitive suffix is typical of the Lesbian dialect and is an Aeolic feature in Homer; there is no plausible reason why Archytas should have used Aeolic forms.¹⁰

διαγνώμεναι disturbed not only Wilamowitz, but also Wackernagel, who, in a discussion of other instances of *-μεναι* infinitives attested in the manuscript tradition of Doric literary texts,¹¹ suggested that *διαγνώμεναι* had originated either from Doric *διαγνώμεν* which merged with an 'explicative' *-ναι* written *supra lineam* or from Attic *διαγνώναι* corrected by somebody into the required Doric form by means of a superscribed *-μεν*.

Although this explanation is plausible in principle, in this case the real solution is likely to be different. Let us look at Diels and Kranz's apparatus at three different points:

(1) The one I have just discussed. *διαγνώμεναι*, the 'Homeric-Aeolic' form, is in Nicomachus, while Porphyry has *διαγνώναι*.

⁵ U. von Wilamowitz-Moellendorf, *Geschichte der griechischen Sprache* (Berlin, 1928), 18 n. 1 = *Kleine Schriften* 3 (Berlin, 1969), 461-95, p. 473 n. 1: 'Sein Dialekt ist ganz verwüstet: da steht *διαγνώμεναι*, *φρονέειν*, *ἄμμες*, *ζατείν*, um nur die grössten Fehler aufzugreifen'. *διαγνώμεναι* and *φρονέειν* will be discussed presently; on *ἄμμες* (*Vors.* 47 v 1; vol. 1, p. 434,3) see n. 15. *ζατείν* is surely the *ζητείν* of *Vors.* 47 v 3 (vol. 1, p. 437,5f.), probably a double slip into Attic; Archytas is likely to have written *ζατέν*. (For *-έν* as the infinitive of verbs in *-έω* cf. *φιλοσοφέν* in the letter of Lysis, p. 158,57 Städele [see n. 8]. Such infinitives are very common in the MS. tradition of Hellenistic and later Pythagorean texts; however that of Philolaos and Archytas offers only *-εῖν*).

⁶ A. Uguzzoni, 'Note sulla lingua dei Pitagorici: Filolao ed Archita', *Quad. Ist. Glottologia Univ. Bologna*, 7 (1962-3), 53-71, esp. 61-3.

⁷ M. Timpanaro Cardini, *Pitagorici: Testimonianze e frammenti* 2 (Firenze, 1962), p. 360.

⁸ See A. Städele, *Die Briefe des Pythagoras und der Pythagoreer* (Meisenheim am Glan, 1980), p. 208 n. 12.

⁹ See A. Thumb-E. Kieckers, *Handbuch der griechischen Dialekte* i (Heidelberg, 1932²), pp. 74-7 on *Die Dorische Betonung*.

¹⁰ It should be noted that *-γνώμεναι* is likely to be an artificial form taken from Homer (*Il.* 21.266). The situation in Lesbian is not very clear: one would expect **γνων* on the analogy of *πρόσταν*, but *γνώναι* seems to be the only attested form; see W. Blümel, *Die aiolischen Dialekte* (Göttingen, 1982), pp. 208-16 (the doubts raised by Blümel 209 n. 262 on the reading *γ[νω]ναι* in *IG* 12.2, 526 d 21/22 are now solved by the photograph published by A. J. Heisserer, *Alexander the Great and the Greeks* [Norman, 1980], p. 46; I owe this reference to R. Hodot). No aorist infinitive of *γινώσκω* seems to be attested in the Lesbian poets.

¹¹ J. Wackernagel, 'Akzentstudien III', *Nachr. Kön. Ges. Wiss. Gött., Philol.-hist. Klasse*, 1914, 97-130, p. 102 n. 1 = *Kleine Schriften* 2 (Göttingen, n.d.), 1154-87, p. 1159 n. 1. See also H. L. Ahrens, *De dialecto Dorica* (Göttingae, 1843), pp. 316 and 322.

(2) Line 6: Porphyry has ἀμῖν, the correct Doric form, while Nicomachus has ἄμμιν, a Lesbian and Homeric form (most unlikely to have been used by Archytas).

(3) Line 9: Porphyry's MSS. have either εἶμεν (in Düring's 'g-Klasse' only) or ἦμεν, both Doric;¹² Nicomachus has another Lesbian and Homeric form, ἔμμεναι (again inadequate for Archytas).

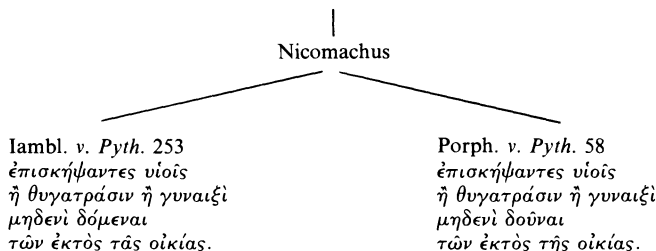
In practice, whenever we find Aeolic–Homeric forms they are attested only in Nicomachus.¹³ It looks as if it was he who deliberately substituted them for the Doric ones of his original.

This suspicion is strengthened by the fact that Nicomachus moved exactly along the same lines on at least one other occasion, and again in handling the text of a Pythagorean.

In Iambl. *V. Pyth.* 253 (p. 136,3–11 Deubner) and Porphyry. *V. Pyth.* 58 (p. 50,2–9 Nauck) we read that the last Pythagoreans entrusted their writings to members of their families, with the recommendation not to make them available to people outside the family circle.

It is commonly agreed that this piece of information goes back to Nicomachus, and that his source was the famous letter of Lysis to Hipparchus.¹⁴ Apparently Nicomachus changed the substance of his original (in which it was Pythagoras who requested his daughter not to make known his ὑπομνάματα to anybody outside the family circle), but reproduced some of its wording with remarkable faithfulness. For clarity's sake I append the relevant texts:

Lysidis epist. 7, p. 158,57–60 Städele: Λέγοντι δὲ πολλοί τε καὶ δημοσίᾳ φιλοσοφέν, ὅπερ ἀπαξίωσε Πυθαγόρας, ὃς γε Δαμοὶ τῷ ἑαυτοῦ θυγατρὶ τὰ ὑπομνάματα παρακαταθέμενος ἐπέσκαψε μηδενὶ τῶν ἐκτὸς τῆς οἰκίας παραδιδόμεν.



In Porphyry everything is 'translated' into Attic; on the contrary Iamblichus decided to reproduce the dialect colouring of his model Nicomachus, and what we have for 'to give' is δόμεναι, a Lesbian (and Homeric) form. The letter of Lysis, which served as a basis for Nicomachus' manipulation, has παραδιδόμεν, a correct Doric form. Here, too, the Aeolic–Homeric form is due to Nicomachus.

It would take too long to deal in detail with the reasons why Nicomachus decided to replace some of the Doric features he found in his Doric originals with Homeric–Aeolic ones. It was probably due to the fascination exerted by rare or poetic dialect forms in imperial times, and more specifically to the existence of poetic traditions employing artificial dialects in which Doric features were associated with

¹² Obviously Archytas must have written ἦμεν, the *Doris severior* form, which is rightly printed by Diels–Kranz.

¹³ I have also collated two MSS. not considered by Hoche, Vat. gr. 186 and Neap. III C 1: both of them have διαγνώμεναι, ἄμμιν and ἔμμεναι.

¹⁴ See Städele (op. cit., n. 8), p. 207 and n. 11, with previous bibliography.

Aeolic ones (derived either from Homer or from the Lesbian poets) – choral lyric, Theocritus, Erinna.¹⁵ In particular, as far as infinitives are concerned, some learned people in antiquity must have reached the conclusion that wherever Attic had *-vai* suffixes, dialects (especially Doric) had *-μεναι* ones; according to some (probably late) grammatical sources *ἔμμεναι* is Doric.¹⁶ Infinitives in *-μεναι* are attested in the manuscript tradition of many Doric texts¹⁷ and can also be found in late Ionic authors (sporadically also in manuscripts of Herodotus).¹⁸

It is not hard to see according to what principle Diels–Kranz and subsequent editors have established the text of this fragment. When the manuscript tradition offered a choice between a Doric and an Aeolic form they have rightly chosen the Doric one; but in the case of *διαγνώμεναι* the only alternative being the Attic form, they have fallen back on the dialect one in spite of its inadequacy. This practice is hardly to be recommended, and there is not the slightest doubt that at line 1 Archytas wrote what we expect, *διαγνώμεν*, and that Porphyry (or an early scribe of his works) made an obvious slip into Attic. *διαγνώμεν* had already been put in the text by Fr. Blass in an edition of Archytas' fragments of 1884;¹⁹ yet Blass's interventions have been disregarded by later editors probably because he tended too much to reshape the dialect according to the usage of the Tables of Heraclea. However, in this case at least Blass was certainly right (and probably in others too).

If Nicomachus has tampered with dialect in this way, one wonders whether he has anything to do with *φρονέειν*, the other *bête noire* of Wilamowitz's. It should be noted that it is found only in Nicomachus: Porphyry has *θεωρεῖν*. And as a matter of fact, *φρονέειν* looks distinctly less 'innocent' than *θεωρεῖν*, which can be easily explained as a slip into Attic from *θεωρέν*²⁰ (and is printed by Bowen [n. 3]).

φρονέειν is an uncontracted infinitive of a kind that can be found in poetry, especially in Homer (where we actually read *μάχεσθαι τε φρονέειν τε*, *Il.* 6.79), in the manuscript tradition of Herodotus and, as it happens, in that of Theocritus' Aeolic poems. Again, there is no clear reason why Archytas should have employed it; and I would not rule out the idea that *φρονέειν* is yet another intervention by Nicomachus, an attempt to 'improve' Archytas' language by poeticizing it:²¹

¹⁵ Obviously not all the learned people who quoted or copied Doric texts will have been as daring as Nicomachus was. Apparently most scribes confined themselves to alterations involving minimal changes of the originals (e.g. *ἄμμες* instead of *ἀμέες*): see e.g. the apparatus of the *Letter of Lysis*, p. 158,64 Städele. There is also one example of *ἄμμες* in a passage of Archytas, fr. 1 (*Vors.* 1, p. 434,3) where Porphyry is the only source: obviously Nicomachus has nothing to do with this alteration, for which an early scribe of Porphyry is likely to be responsible.

¹⁶ See Ahrens (op. cit., n. 11), p. 316.

¹⁷ See Wackernagel (n. 11).

¹⁸ *ἔμμεναι* is normal in Aretaeus, the Cappadocian physician writing in Ionic in the age of Nero (F. Kudlien, *Abh. Akad. Wiss. Lit. Mainz*, Geistes- und Sozialwiss. Klasse, 1963, nr. 11). *ἐστάμεναι* is in most MSS. at Hdt. 1.17.

¹⁹ *De Archytæ Tarentini fragmentis mathematicis*, in *Mélanges Graux* (Paris, 1884), pp. 573–84.

²⁰ On the *-έν* infinitives of verbs in *-έω* see n. 5. It is unlikely that Archytas used *θεᾶρέω*, as *θεωρέω* comes from the Ionic and Attic intellectual vocabulary. In the letter of Lysis (p. 156,28 Städele) we find *θεωρήματα*. On the dialect forms *θεᾶρός* etc. (in the religious technical sense of the word), which are only superficially doricized, see R. B. Harlow, *Eine Dialektanalyse der koischen Asylieurkunden* (Dunedin, New Zealand, 1972), p. 5f.

²¹ It seems to me that the present infinitives of *φρονέειν* regarded as Aeolic by us would have caused some difficulties to Nicomachus. *φρονήμεναι* would have been acceptable as a Homeric form (P. Chantraine, *Grammaire Homérique* 1 [Paris, 1948], pp. 305f.; cf. e.g. *Il.* 15.310 *φορήμεναι*), but *-μεναι* would have corresponded to no *-vai* in Attic. On the other hand, the correct Lesbian form for *φρονεῖν*, namely *φρόνην*, is not Homeric, whereas all the other Aeolic forms interpolated by Nicomachus we have come across (*-γνώμεναι*, *ἄμμιν*, *ἔμμεναι*, *δόμεναι*) are

notice that the verb *φρονέω* is amply attested in poetry while *θεωρέω* – in the meaning ‘speculate’ (upon something) – is not.

Thus both philosophical and linguistic arguments lead to the conclusion that Nicomachus did not really quote Archytas in our sense of the word, but manipulated his text in order either to introduce his own terminology (*σφαιρική*) or to embellish his dialect according to his own tastes.²² At least as far as *διαγνώμεναι* is concerned there is no question of ‘ravage’, and probably the same goes for *φρονέειν*, too: these forms do not belong to Archytas, but are not due to random corruption, either.

It is clear that the only reliable basis for establishing the text of Archytas’ fragment is Porphyry; and there should be no further doubts as to its authenticity.²³

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attested in Homer. As I said, *φιλέειν*, *φρονέειν* etc. are in the MS. tradition of the Aeolic poems of Theocritus; see A. S. F. Gow, *Theocritus* (Cambridge, 1950), ii.500 and n. 2; they are corrected into *-έην* by Gow but not by C. Gallavotti, *Theocritus quique feruntur Bucolici Graeci* (Romae, 1946).

²² Given these premisses, one might wonder whether Nicomachus did not deliberately falsify Archytas’ thought by writing *περὶ γὰρ...ἔχει* in dialect (*δντος* for *έόντος* might be a scribe’s mistake, and MS. Vat. gr. 186 has *πράτιστα* instead of *πρώτιστα*). Yet, if so, *ἔχει* is strangely careless, as Archytas has *τὰ μαθήματα δοκοῦντι* at lines 8–9; see also Huffman (n. 4), 346. In any case I do not want to commit myself on this point: *videant doctiores*. – It is curious that *τὰν ἀναστροφὰν ἔχει* is metrically – – – – –; even more striking is the fragment of Androcydes in Ionic (probably a late forgery) quoted by Nicomachus immediately before (p. 6, 11–16 Hoche), which ends with a series of pure trochaics, *πρὸς λόγων σοφῶν μαθήσεως συνεργίην ἔχουσιν* – – – – –. Did Nicomachus in writing his own sentence employ the rhythm with which the preceding quotation ended?

²³ This article is a revised version of part of a paper on Doric literary prose read to seminars in Oxford and Cambridge in May 1987. I am very grateful to Dr Colin Austin, Professor Hugh Lloyd-Jones, and Professor M. D. Reeve for inviting me, and to all those present for their comments. I am also indebted to Mr Nigel G. Wilson for reading a previous draft of this paper, and especially to Professor Anna Morpurgo Davies for corrections and suggestions concerning dialect problems.