ACTA ACADEMIAE ABOENSIS HUMANIORA XXIV. 3

AN INTRODUCTION TO THE PYTHAGOREAN WRITINGS OF THE HELLENISTIC PERIOD

BY

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ÅBO AKADEMI ÅBO 1961 have been Pythagoras' immediate successor as head of the School¹; and Okkelos who, according to the forged correspondence between Archytas and Plato, was a very remarkable man and who, besides, had possessed important Pythagorean documents.² And Timaios Lokros is a parallel to Philolaos; besides, Plato makes him considerably older than Sokrates. As we have noted above (p. 74), some of the tracts attributed to these four Pythagoreans really seem to be intentional forgeries and thus stand out from the rest of Class II, disregarding the rather special cases of Archytas' letters. And this type also has some points of contact with Class I.³

Aristaios' $\Pi \varepsilon \varrho i$ $\delta \varrho \mu o v i \alpha \varsigma$, Okkelos' $\Pi \varepsilon \varrho i$ $\tau \eta \varsigma$ $\tau o v$ $\tau \alpha v \tau \delta \varsigma$ $\varphi v \sigma \varepsilon \omega \varsigma$, Philolaos' $\Pi \varepsilon \varrho i$ $\psi v \chi \eta \varsigma$, and Timaios' $\Pi \varepsilon \varrho i$ $\psi v \chi \alpha \varsigma$ $\varkappa \delta \sigma \mu o v$ $\varkappa \alpha i$ $\varphi v \sigma \iota o \varsigma$ apparently arose from the belief that Pythagoras himself did not publish anything, but that particular weight should be attached to the teaching of those of his disciples who had direct access to his doctrines. I find it very essential to note that the above-mentioned types 1-5 can hardly be given this explanation. They seem on the whole to follow the Archytas convention.

4. ON DORIC PROSE

It will appear from the conspectus of the writings above that poetic and Ionic prose fragments only occur in Class I, except for Periktione's

¹ Iambl. VP 265.

² See Harder, Ocellus Luc., p. 39—48. I shall deal with these letters in an article which is to be published in Eranos, 1961.

³ Note in particular Aristaios as Pythagoras' successor, and Okkelos and Philolaos as possessors of such secret $\delta\pi o\mu\nu\dot{\eta}\mu\alpha\tau\alpha$ to which reference is made in Lysis' letter, variant B. Cf. the next note.

⁴ Aristaios, it is true, does not occur in all διαδοχαί. The Anon. Phot., for instance, does not mention him. On the other hand this document supplies the interesting piece of information (438 b. 23—27) that there existed a terminological distinction between the Pythagoreans of Pythagoras' own times ($\Pi v \vartheta \alpha \gamma o \varrho \iota \kappa o i$), later Pythagoreans ($\Pi v \vartheta \alpha \gamma o \varrho \iota \kappa o i$), and external associates ($\Pi v \vartheta \alpha \gamma o \varrho \iota \kappa o i$). — Philolaos' Π . $\psi v \chi \tilde{\eta}_{\varsigma}$, Vors. 1 p. 418. 6 has a curious $\tilde{\epsilon} \lambda \epsilon \gamma \epsilon$ which may indicate that the writing was supposed to record Pythagoras' personal teaching.

⁵ This has been sometimes suggested; cf. Zeller 3. 2 p. 115, Beutler, Okellos, p. 2364. However, from Nikomachos onwards ancient writers seem to have identified all the pseudepigrapha with the Pythagorean $\delta\pi o\mu\nu\dot{\eta}\mu\alpha\tau\alpha$. These were supposed to have been written down by various Early Pythagoreans who escaped the disasters of the early School, and they were later collected and edited: cf. Iambl. VP 252—253, Porph. VP 57—59; Iambl. VP 157—158, 161, 198—199, Porph. VP 6—7.

Π. γυν. άρμ. I shall not consider the special problems of their language here. For the purely Attic or Koiné texts, cf. below p. 112. In this connection only the Doric prose writings will be considered: i.e., with few exceptions, the whole of Class II; and from Class I the following: Brotinos Π. νοῦ καὶ διανοίας, Lysis' letter, Myia's letter, and Pythagoras' $I_{Ερος}$ λόγος in Doric prose.

It is reasonable to begin with a survey of the main trends in the development of Doric literature besides the Pythagorean texts here in question. The modern handbooks all seem to deal very briefly with this matter.³

The Doric of choral lyric, beginning with Alkman, is comparatively well known even from a linguistic aspect, though many details remain problematic.⁴ After Pindar the Doric of lyrics only led a very artificial life.⁵ But the Doric mixed with Lesbian and Epic features, which was introduced by Erinna of Telos in the 4th century⁶, is an interesting example of an attempt to fit the spoken language into literature.

A study of the epigrams of the Anthology⁷ shows that occasional dorisms, mostly Doric \bar{a} 's, occur as a slight flavour of the language from the Simonidean type of epigram onwards throughout antiquity. But there is a notable increase in the number and variety of dorisms from the latter part of the 4th century until some 150 years later. Some epigrams attributed to Erinna open this tradition; note further e.g. Nossis of Lokroi, Anyte of Tegea, Kallimachos of Kyrene, Leonidas of Tarentum, Theokritos and Theodoridas of Syracuse. Later there are

¹ The Ionic prose fragments should be examined in connection with a study of Ionic prose literature as a whole. It cannot be done here, though it would probably also throw some light on the history and the tradition of the Doric prose texts.

² Cf. above, p. 29.

³ Cf. below, p. 83—85, for works dealing with Doric prose.

⁴ Thus, for instance, the extent of Doric (Laconian) features in the original text of Alkman, and the employment of the feminine participle in $-o\iota\sigma\alpha$ in classical choral lyrics.

⁵ Convenient references are to be found in Thumb and Kieckers, Hdb. d. gr. Dial. II², p. 217—221. — The fragment of a certain Hermolochos in Stob. 4 p. 845 is in my opinion choral lyric.

⁶ See Latte, Nachr. d. Ak. d. Wiss. in Göttingen, Philol.-hist. Kl., 1953. 3, p. 79—94.

⁷ For the inscriptional epigrams, see Thumb, Hdb. II² p. 221—223.

occasional instances of this manifestly doricizing tendency: Moschos of Syracuse (about 150 B.C.), Diodoros Zonas of Sardes (about 85 B.C.) and some others; even in Byzantine times the scholastici Agathias and Eratosthenes. But on the whole the tendency disappears again after 200 B.C.¹

The Doric comedy known to us is essentially that of Epicharmos and the tradition following him (Pseudepicharmea).² This tradition was still alive in the 4th century; but it is doubtful whether it was carried on in the 3rd century and later.³ The language used appears to have been colloquid Syracusan, with an intermixture of Attic elements in some pieces. Of the mimes of Sophron there survive a number of short fragments which probably display genuine Syracusan, though the spelling employed by some of our texts may not be the original.⁴ The late 4th century *phlyakes* of Southern Italy (Rhinton, Skiras, Blaisos) are much better known from the vases and terracottas than from literary fragments⁵; but at any rate the latter show some peculiarities which presumably derive from the spoken Tarentinian of those times.

In the 3rd century there are some other notable examples of Doric poetry: Kallimachos' Hymns 5 and 6, and above all the Idylls of Theokritos and his school.⁶ Neither of course employs a consistent Doric. Kallimachos' hymns have a strong Epic flavour. And Theokritos and his followers mix conversational idioms and, perhaps, literary Doric with Epic and Lesbian features.

¹ Cf. H. Beckby's introduction to his edition (München 1957), p. 33—34; he refers to the »Spartan episode» and the Doric style (rather than language) of the epigrams of the latter part of the 3rd century B.C. — I cannot here produce the details of my analysis of the language of the epigrams.

² For fragments of Doric comedy not occurring in Kaibel's edition, see references in Thumb, Hdb. II² p. 208.

³ Cf. above, p. 52 n. 3. No fragment of the $\Pi \rho \delta \zeta$ 'Av $\tau \eta \nu o \rho \alpha$ is preserved.

⁴ The forms $\pi\varrho o\tilde{\eta}\chi\varepsilon=\pi\varrho o\varepsilon\tilde{\iota}\chi\varepsilon$ in Sophr. frg. 11 and $\chi\tilde{\eta}\varrho\alpha=\chi\varepsilon\tilde{\iota}\varrho\alpha$ in the fragment discussed by Latte in Philol. 42 (1933) 259—264, line 3, look particularly dubious. Normally the contraction was spelt $\varepsilon\iota$ in Syracusan; cf. also Thumb, Hdb. II² p. 210.

⁵ Cf. Olivieri, I frammenti della comm. fliacica, Napoli 1925, p. 407-420.

⁶ Cf. further Lesky, Gesch. d. gr. Lit. (Bern 1958), p. 645—651. The influence of Philitas of Kos on the doricizing tradition of Hellenistic poetry is now difficult to estimate; probably it was not negligible. — Kallimachos was a Cyrenean by birth; and Theokritos was certainly influenced by the Syracusan comedy and mime; cf. Latte, Nachr. d. Ak. d. Wiss. in Göttingen. Philol.-hist. Kl. 1949. 8, p. 227. For Theokritos' language, see conspectus and references in Buck, the Greek Dial., p. 347.

After the Bucolics Doric poetry only occurs in occasional archaistic pieces such as the above-mentioned epigrams, or Mesomedes' Hymns (beginning of II cent. A.D.). It need not concern us further.

The first trace of Doric in prose literature is an isolated $\ell\chi o\nu\tau\iota$ in a fragment of Alkmaion of Kroton (about 500 B.C.). The rest of this fragment, and the other fragments, appear to be in Ionic. Indeed, Ionic is the natural language of prose until Attic takes its place; and we know of several speakers of West Greek dialects who wrote Ionic prose. In view of this fact I find it extremely improbable that Alkmaion employed a mixed dialect, as has been suggested. Perhaps the $\ell\chi o\nu\tau\iota$ is due to a conscious or subconscious emendation by a »pythagorizing» reader.

The next landmark in the official history of literary Doric prose is Philolaos of Kroton in the latter part of V cent. B.C. We shall return to this special problem below (p. 102). But in the 4th century, at least, Archytas of Tarentum obviously employed Doric prose; and, as was suggested above (p. 76), the later Pythagoreans seem to follow the tradition inaugurated by him. From IV cent. B.C., however, we also have some seemingly non-Pythagorean prose works in Doric: the so-called Dissoi Logoi⁴, the Rhetor Anonymus of an Oxyrhynchus Papyrus⁵, and some fragments of the History of Argos by (Agias and) Derkylos.⁶ The last-mentioned author appears to have used his native Argolic mixed with »Ancient Argolic» (i.e. Epic) elements.⁷ The dialect employed in the History was probably a mere curiosity which revealed the local patriotism of its author, but hardly followed any literary conventions or models. But the language of the Dissoi Logoi and the Rhetor Anonymus is very similar to that employed by the Pyth-

¹ Alkmaion frg. 1 (Diog. 8. 83), Vors. 1 p. 214.

² E.g. Akusilaos of Argos, Hippokrates of Kos, Antiochos of Syracuse.

³ Cf. Carla Schick, Archivio glottol. ital. 40 (1955) 122. — And is it likely that such an exceptional form would have been preserved through the long tradition from Alkmaion to Diogenes, as it is not protected by metre like the notorious $\varphi \varepsilon \acute{\nu} \gamma \varepsilon \nu$ in Theogn. 299?

⁴ Vors. 2 p. 405-416.

⁵ P. Oxy. 410, 3 p. 26—27; New Chapters 2, p. 116—117; Radermacher, Artium Scriptores, Sitz. ber. d. Österr. Ak. d. Wiss., Philos.-hist. Kl. 227. 3, Wien 1951, p. 231—232. Radermacher (ibid. p. VIII) dates the writing about 350 B.C.

⁶ Jacoby, Fr. G. H. 305, III B p. 7, III b Komm. p. 17 ff. Derkylos probably was the user of the dialect.

⁷ Note $\kappa \varepsilon$, and uncontracted $\lambda o \varepsilon \tau \varrho \acute{\alpha}$ (twice).

agoreans¹; and as will be shown below, it is reasonable to assume that they were written in Southern Italy in the days of Archytas.

The last datable and manifest stage in the development of literary Doric prose is Archimedes' mathematical output from the latter part of III B.C.² His use of Doric may appear as a fairly isolated phenomenon.³ However, I find it tempting to regard it both as an indication of his personal Pythagorean interests, and as a manifestation of the Doric vogue of the time which was of course particularly appropriate to a Syracusan of the days of Hieron II (cf. below p. 98). It is very uncertain whether there existed any Syracusan prose tradition which Archimedes could reasonably have followed.⁴

Aristippos of Kyrene had some forged Doric letters fathered on him⁵, and Diogenes Laertios (2. 83) states that he wrote part of his dialogues in Doric, which presumably implies the existence of such pseudepigrapha. As the letters have a very superficial Doric touch which suggests no direct acquaintance with the Pythagorean prose, the same may be assumed of the dialogues. I am not prepared to decide anything about the place and date of such compilations, except that Southern Italy or Sicily are out of the question. And this also applies to the other forged Doric letters attributed to non-Pythagoreans, which we happen to know: the letters ascribed to Cheilon of Sparta⁶, Epimenides of Knossos⁷, Kleobulos of Lindos⁸, and Periandros of Corinth.⁹

Inscriptional West Greek is on the whole much better known than Doric prose literature. We may note here the following general facts.¹⁰

¹ Cf. below, p. 93.

² Ed. by J. L. Heiberg, I—III², Leipzig 1910—1915.

³ Wilamowitz, Hellen. Dicht. I, p. 92 n. 1 calls it »eine persönliche Marotte». — On the whole Archimedes has received very little attention by others than specialists in Greek mathematics.

⁴ The historian Antiochos at least wrote in Ionic. A fragment of the cookery-book of Mithaikos of Syracuse (Athen. 7. 325 f) has $\tau \dot{\alpha} \nu \kappa \epsilon \varphi \alpha \lambda \dot{\alpha} \nu$; but it suggests Epicharmos rather than serious prose.

⁵ Four of the five letters attributed to him, Hercher, Epist. Gr. p. 617—634.

⁶ Diog. 1. 73.

⁷ Diog. 1. 112—113.

⁸ Diog. 1. 93.

⁹ Diog. 1. 99—100.

¹⁰ Cf. Buck, The Greek Dialects, p. 176-179.

From IV cent. B.C. onwards the Attic and Koiné influence grew gradually stronger. This led to the development of two kinds of West Greek Koiné, which were used over larger areas than the old dialects and which admitted a considerable amount of Attic Koiné forms whereas the specific characteristics of the local dialects on the whole were absent. The Northwest Greek Koiné was mainly employed by the states of the Aetolian League. As its typical features we notice the use of $\dot{\epsilon}\nu = \epsilon i\varsigma$ and the dative plural of consonant stems in $-o\iota\varsigma$. It is obviously irrelevant to the history of literary prose. The other kind, the so-called Doric Koiné, is rather more interesting in this connection. It seems to have been employed all over the Doric world from the late 4th century right down to the 2nd and sometimes even the 1st century B.C., with occasional archaistic instances later. There were some local varieties, but on the whole the Doric Koiné may be characterized as follows: Some common West Greek features are preserved in a fairly consistent manner, e.g. \bar{a} , gen. $-\iota o \varsigma$, 3 pl. $-\nu \tau \iota$, future and a rist in ξ , athematic inf. - $\mu \epsilon \nu$, the preposition $\pi o \tau \ell$. In some other cases the corresponding Attic forms are frequently used or even preferred, e.g. εi for αi and αv for $\kappa \alpha$ (εi and $\varkappa \alpha$ being on the whole preferred), Attic declension of ι and $-\varepsilon i \varsigma$ nouns (except the gen. sg. $-\iota o \varsigma$), fluctuation between o i, αi and $\tau o i$, $\tau \alpha i$, and inconsistent application of the rules of contraction. Conspicuously local characteristics are on the whole absent.

The Doric states thus managed to maintain, for some centuries, a fairly homogeneous inscriptional language, probably as a conscious contrast to Attic Koiné. With the Roman conquest, however, such national ambitions were gradually lost, and in Imperial times Doric was rarely used in inscriptions. The revival of Laconian in the Hadrianic age is a local phenomenon. It may be noted in this connection that dialect mixture is not infrequent in inscriptions of the Imperial age; it occurs, for example, in a Neopythagorean monument from Lydia (I cent. A.D.)¹. — On the other hand Doric was spoken at least in the Peloponnese and in Southern Italy throughout antiquity.²

¹ See Brinkmann, Rh. Mus. 66 (1911) 616—625.

² Note the survival of Laconian features in modern Tzakonian and of Doric \bar{a} in Modern Greek of Southern Italy. Cf. S. C. Caratzas, L'origine des dialectes néogrecs de l'Italie méridionale, Coll. de l'Inst. d'Études byz. et néo-hell. de l'Univ. de Paris 18, Paris 1958; Tsopanakis, Byz. Z. 48 (1955) 49—72; Schwyzer, Gr. Gramm. 1 p. 94—95.

The importance of the national pride of the Dorians for the rise of a Doric literature in the Hellenistic age should not be pressed too far. Dorian nationalism in a very elusive thing. But whatever was its direct influence on literature, it can be regarded as a fact that writing Doric or »doricizing» prose in a Doric country in the late 4th and the 3rd century B.C. was rather in line with the general vogue of the times.

Later, however, the use of Doric came to be regarded as typical of Early Pythagorean dignity and severity. We may note, for example, the ascription of Doric prose texts to Pythagoras himself², the legend of »Pythagoras of Sparta»³, Pseudo-Metrodoros' eulogy on the Doric of Pythagoras and Epicharmos⁴, and Porphyry's assertion that one reason for the extinction of Early Pythagorism was the use of Doric in the writings.⁵

Before I proceed to a somewhat closer examination of Pythagorean Doric, I shall give a brief survey of the most important publications dealing with literary Doric prose. It is convenient to consider some studies of non-Pythagorean Doric prose texts at the same time.

Ahrens (1843) was the first to consider systematically from a linguistic point of view all Doric prose texts known at that time. A pupil of his, Matthaei, in 1878 published a dissertation on Pythagorean Doric, in which he also considered the Dissoi Logoi. He regarded the inconsistency in the employment of the Doric characteristics as mainly due to corruption of the texts, and consequently tended to generalize features occasionally found. His aim was analytical; no definite conclusions were drawn out of the material. A very detailed analysis of Archimedes' language was carried out by Heiberg in 1884. He applied to the material the rather more scholarly principle of restoring Doric features in the text only in so far as the manuscripts have a clear preference for them

¹ Cf., for earlier times, Éd. Will, Doriens et ioniens, Publ. de l'Un. de Strasbourg 132, Paris 1956 (Thèse compl.), p. 57—73.

² Cf. below, p. 104.

³ Cf. Ollier, REG 59-60 (1946-1947) 139-149.

⁴ See the reference to Metrodoros in the introductory list, above.

⁵ Porph. VP 53. — Orpheus was also said to have used Doric, Iambl. VP 243 (for the approximation of Orphism and Pythagorism, cf. above, p. 47 n. 3). In fact the curious (hyper-Doric?) form $Z\acute{a}\varsigma = Z\epsilon\acute{v}\varsigma$ is early found in Orphic connections (see references in Liddell and Scott s.v. $Z\epsilon\acute{v}\varsigma$, and Vors. 1 p. 46—48).

or there is other clear evidence of corruption. He thus assumed that some general Doric characteristics were used inconsistently, or not at all, in the original text. And he also very diligently listed the Koiné parallels found for each Doric feature. Similar principles of textual criticism were adopted by Weber in his study of the language of the Dissoi Logoi (1898). This text was later treated from a linguistic point of view by Høeg (1922).

In discussing the position of dialect literature during the Hellenistic age, Thumb (1901)¹ fully endorsed the view of Hatzidakis that the linguistic inconsistency of the Doric prose writings shows that they were composed in an environment where the dialect was not spoken. Others, among them Kretzschmer², have propounded a different opinion: according to them, Koiné traces in dialect literature are principally a sign of the influence of the official literary language. In Thumb's »Handbuch der griechischen Dialekte» (I² ed. Kieckers, 1932) Doric prose literature is to some extent considered. The other dialectological handbooks do not pay very much attention to it.

Reference was made above (p. 58) to Wilhelm's study of the language of certain Pythagorean tracts. Magnien in 1920^3 analyzed »literary Syracusan» from a very general point of view. He assumed that the Doric of Theokritos essentially derives from the same literary language as that of Archimedes and even that of the Pythagoreans, which he tended to regard as Syracusan in origin. A minute analysis of one of the Pythagorean pseudepigrapha, Aresas Π . $dv\partial \rho \dot{\omega} \pi \omega \ \phi \dot{v} \sigma \iota o c$, was carried out by Fohalle in 1928. Having scrutinized the phonology, morphology and vocabulary of the text, Fohalle concluded, very cautiously, that the writing is »assez tardif». The methodological importance of Fohalle's study has been pointed out. Fohalle in particular stressed the fact that the vocabulary is more conclusive with regard to chronology and authenticity, than phonological and morphological facts. The same line was later followed by Lucien Delatte (1942).

The theory that the supposed aeolisms of literary Doric were in fact

¹ Die gr. Sprache im Zeitalter des Hellenismus, Strassburg 1901, p. 29 f. Cf. Hatzidakis, Einleitung in die neugr. Gramm., Leipzig 1892, p. 167.

² See references in Schwyzer, Gr. Gramm. I p. 120, cf. 116.

³ MSL 21 (1920) 49—85, 112—138.

⁴ Étrennes de ling., off. à Benveniste, p. 27-49.

⁵ See Idg. Jb. 14. 155.

⁶ Cf. above, p. 65—67.

an ancient Peloponnesian feature was advanced by A. Braun in 1931.¹ — Finally mention should be made of two papers by Carla Schick (1955).² She holds that a scientific prose style, influencing even the Eleatics, was developed by the Early Pythagoreans. Philolaos' fragments, which are the first examples of this »scientific» Doric, are even stylistically less advanced than the fragments of Archytas.

A detailed new analysis of the language of the Pythagorean Doric prose is needed, not merely for a more minute study of the relations of the writings to each other and to non-Pythagorean literature, but also in order to establish a more definitive text for the writings. Such an analysis cannot be carried out here. I shall make some general observations; and I shall refer to details only in so far as they seem to me particularly notable.

A survey of the linguistic practice of the Doric pseudepigrapha shows that the following Doric characteristics are more or less regularly employed in the majority of the writings:

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Original \bar{a}
Uncontracted \varepsilon\varepsilon
           »
                         \varepsilon\alpha
           »
                          \epsilon o
                         \epsilon\omega
Apokopé
Gen.sg. -\bar{\alpha}
Gen.pl. -\tilde{\alpha}\nu
Gen.sg. -\omega
Acc.pl. -\omega\varsigma
ι- inflection at least in the gen.sg. of ι-stems
τοί, ταί
τόκα, etc.
\varkappa\alpha
\tilde{\omega}v = o\tilde{v}v
ποτί
3rd pl. -\nu\tau\iota
Thematic inf. -\varepsilon \nu, also with \varepsilon-stems
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¹ Riv. di filol. 40 (1931) 181 ff., 309 ff.

² Archivio glott. ital. 40 (1955) 89—135; Riv. di filol. 33 (1955) 361—390.

Athematic inf. $-\mu \epsilon \nu$ Guttural in aor. and perf. of $-\zeta \omega$ verbs Doric future $\vec{\epsilon} \nu \tau \ell$ sg. and pl.

The list could probably be considerably extended if there were sufficient evidence on points such as the use of personal pronouns, $3 \text{ sg. } -\tau\iota$, $3 \text{ sg. } \tilde{\eta}\varsigma$ (for $\tilde{\eta}\nu$), $\tau\tilde{\eta}\nu o\varsigma$, $\tilde{\alpha}\tau\varepsilon\varrho o\varsigma$, etc.

However, no fragment of any considerable length uses every occurring characteristic consistently. And the distribution of the Doric forms and the corresponding Koiné forms is never completely identical in any two writings. Yet the differences are on the whole very small. There are, however, a few outstanding exceptions which confirm the homogeneity of the rest and, at the same time, suggest that the general picture given by our manuscripts is not altogether unreliable, as is sometimes believed.1 I should like to call particular attention to the following fact. Some characteristics are normally used more or less consistently throughout the whole text, e.g. uncontracted $\varepsilon \omega$, gen. $-\iota o \varsigma$, the modal particle $\kappa\alpha^2$, the preposition $\pi \sigma \tau \ell$, 3 pl. $-\nu \tau \iota$. Some other Doric characteristics very often, or even normally, alternate with Koiné forms in the same text, notably uncontracted $\varepsilon\varepsilon$ and εo . As I see no reason why an εo should become more easily corrupted than an $\varepsilon \omega$, I would rather trust the general picture given by our manuscripts and infer that this difference reflects the state of the originals. Whatever rules, or principles, may be detected in the individual cases³, it can be stated, in general, that the Pythagoreans tend to use the above-mentioned

¹ Cf. Matthaei, p. 6—24; Thumb, Hdb. II² p. 101. — As to the principles of textual criticism employed in this survey, the following should be noted. Like L. Delatte (Les Traités, p. 64), I accept Doric forms which only occur in one Ms., but normally I do not correct Koiné forms for which there is a codicum consensus. Contrary to Delatte, I accept hyper-dorisms without a consensus. However, these principles cannot of course be mechanically applied; and the details largely remain uncertain.

² Sometimes corrupted into $\kappa \alpha i$. However, $\tilde{\alpha} v$ is also fairly frequent. Note the hybrid $\tilde{o}\kappa\kappa\alpha\nu$ Hippodamos Π . $\varepsilon \dot{v}\delta$. 4. 911. 1, cod. A; but it is exceptional, and may be due to corruption.

³ For instance, uncontracted $\varepsilon\varepsilon$, and even more often uncontracted εo , seem to be preferred in forms such as $\beta \varrho \alpha \delta \acute{\varepsilon} \varepsilon$, $\gamma \acute{\varepsilon} \nu \varepsilon o \varsigma$, $\acute{\varepsilon} \varkappa \acute{\alpha} \lambda \varepsilon o \nu$, where the second of the two vowels combined belongs to the ending and thus has a distinct function of its own. On the other hand forms such as $\varkappa \alpha \lambda o \acute{\nu} \mu \varepsilon \nu o \varsigma$ (or $\varkappa \alpha \lambda \varepsilon \acute{\nu} \mu \varepsilon \nu o \varsigma$, even $\varkappa \iota \nu \omega \mu \acute{\varepsilon} \nu \alpha$ Tim. Lokr. 95 d) or $\varkappa \alpha \lambda \varepsilon \~{\iota} \tau \alpha \iota$ (or $\varkappa \alpha \lambda \~{\eta} \tau \alpha \iota$) are on the whole more common than the corresponding uncontracted forms.

characteristics, and possibly some others omitted here; but the degree of consistency was apparently not the same for the different characteristics.

The notable exceptions from the above practice are:

Archytas' $K\alpha\partial o\lambda i \pi o i$ $\lambda \delta \gamma o i$: Very inconsistent use of all Doric characteristics. Except for \bar{a} , the Koiné forms are clearly preferred.

Charondas' $\Pi gooi \mu \iota \alpha \ v \circ \mu \omega v$: Only the first paragraph is in Doric.

Periktione's Π ε ϱ ι σοφίας: A fairly consistent Doric, but always inf. -ναι (never -μεν), even εἶναι. Note also the intermixture of Doric forms in the Ionic of Periktione's Π ε ϱ ι γυναικὸς άρμονίας, cf. below p. 111.

Zaleukos' $\Pi \rho ooi \mu \iota \alpha \nu o \mu \omega \nu$: On the whole a Koiné text with occasional dorisms¹ and one ionism.²

The short fragments are not considered among these exceptional cases.

Special difficulties arise with some other Doric characteristics. Thus for instance the individual authors normally prefer one or the other of the two alternatives εi or αi . When the manuscripts employ both in the same text³ it is tempting to regard one or the other as corrupt. This is, however, very hypothetical. Perhaps the same applies to the alternatives $\varepsilon i \mu \varepsilon \nu$ and $\tilde{\eta} \mu \varepsilon \nu$ which not very often occur in the same writing. The problem of the contraction of $\alpha \varepsilon$ into η is extremely complicated and connected with the confusion of α - and ε -verbs. The free employment of ν movable is of course a sign of Koiné influence.

¹ Note $\pi\varrho\tilde{a}\tau o\nu$ 4. 124. 1 (two Mss.), $\mu\epsilon\tau\alpha\tau\iota\vartheta\dot{\epsilon}\mu\epsilon\nu$ 4. 126. 20 (all Mss.), διακόσμασιν 4. 124. 2 (two Mss.).

² In 4. 125. 16 $\tau \iota \mu \omega \varrho i \eta \varsigma$ (all Mss.).

³ In Archyt. Π . ἀντίκ., Diotog. Π . βασ., Hippod. Π . πολ., Kallikrat., Myia, Pempelos, and Tim. Lokr. εἰ is preferred; in Archyt. Π . νόμον and Ekphantos αἰ is preferred. But the majority of the writings use either of the alternatives consistently.

⁴ In Archyt. Π . $\pi \alpha \imath \delta$. $\mathring{\eta}\vartheta$., Bryson, Ekphantos, Hippod. Π . $\varepsilon \mathring{\iota}\delta$., Kallikrat., Philol Π . $\psi v \chi \tilde{\eta} \varsigma$, where $\varepsilon \tilde{\iota} \mu \varepsilon v$ is preferred; and in Archyt. Π . $\mathring{\alpha} v \delta \varrho$. $\mathring{\alpha} \gamma$., Π . $v \acute{o} \mu o v$, and Phintys, where $\mathring{\eta} \mu \varepsilon v$ is preferred.

In order to show that this really is a problem, I refer to the following facts. A form such as the infinitive $\delta\varrho\tilde{\eta}\nu$ (Archyt. π . $\nu o\tilde{v}$ 1. 316. 6) may be analyzed as $\delta\varrho\alpha$ - $\varepsilon\nu$ according to the normal phonological rule in Doric, or as $\delta\varrho\varepsilon$ - $\varepsilon\nu$ with η for $\varepsilon\iota$ as in the indicative $\kappa\alpha\tau\alpha\sigma\chi o\lambda\tilde{\eta}\tau\alpha\iota$ (Archyt. Π . $\nu o\tilde{v}$ ap. Iambl. de comm. math. sc. p. 37. 10 Festa), because there is a tendency to confuse verbs in - $\varepsilon\omega$ and - $\varepsilon\omega$ cf. e.g. $\delta\varrho\varepsilon o\nu\tau\varepsilon\varepsilon$ Archyt. Π . $\pi\alpha\iota\delta$. $\mathring{\eta}\vartheta$. 2. 232. 4 and $\sigma\kappa o\pi\tilde{\alpha}\nu$ ibid. 231. 13 (with Attic contraction [or hyper-Doric $\bar{\alpha}$?] as in $\delta\varrho\mu\tilde{\alpha}\nu$ Tim. Lokr. 94 e); note also the parallel existence of $\mu\iota\mu\tilde{\alpha}\tau\alpha\iota$ Ekphant. 4. 275. 16 (codd.) and $\mu\iota\mu\acute{\varepsilon}\varepsilon\tau\alpha\iota$ ibid. 277. 14; even