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## REFLECTIONS ON THE ANCIENT GREEK SHORT-VOWEL SYSTEM

An analysis of the short-vowel sub-system in the Greek dialects does not give us, to be sure, a chance of outlining as differentiated and as varied a picture of the systemic development as it was the case when we were dealing with the consonantal and the long-vowel sub-systems.<sup>1</sup> The consonantal system offered us greater possibilities of systemic differentiation due to the considerably greater number of consonantal phonemes, while as for the long-vowel system, the possibility of a more extensive differentiation resulted mainly from two facts: firstly a part of the Greek linguistic area was in the first centuries of the 1st millennium B.C. the scene of a doubling process of the  $\bar{\epsilon}$ - and  $\bar{o}$ - long vowels in connection with the accomplishment of different kinds of compensatory lengthening and with vocalic contractions, this doubling having an extensive differentiation effect on the system,<sup>2</sup> and secondly the differentiation development of the long-vowel system was considerably affected by various monophthongizations of diphthongs, whose phonic results assumed as a rule in Greek the form of long monophthongs.<sup>3</sup>

It was, however, already in our former analysis of the long-vowel system in the Greek dialects that we came across several instances which indicated the existence of some short-vowel systemic differentiation as well. Here we shall try to sum them up by way of introduction. First of all it concerned the origin of a quite new short-vowel system in the non-Euboean Attic-Ionic at the time when the phonic transformation of  $\bar{u} > \bar{i}$  was accomplished there sometime in the 2nd quarter of the 1st millennium B.C.<sup>4</sup> As a matter of fact, we feel induced to believe — in accord with our statements in the Development 115 — that in the 6th cent. B.C. at the latest the Attic and Cycladean-Ionic short-vowel system, as well as that of Ionic of Asia Minor (but not that of Euboean Ionic) assumed a character distinctly different from the systems of the other Greek dialects in that its hitherto existing phoneme  $u$  got shifted to the central position of  $\bar{i}$ . The result of it was that the back short-vowel axis accommodated now only two phonemes, namely  $a$  and  $o$ .

A more difficult task is to evaluate the systemic significance of the shift of the

Elean short *e* to the position of *æ* or *ɛ*, as we have discussed it in the Development 89 sqq. It is true that we still believe that the parallel existence of the Elean types *Ἔργον* (A in place of E before P), *μαστράαι* (A for E after P), and *γνῶμαν* = *-μεν* [inf.] (A in place of E not in the neighbourhood of P) shows—just as it was the case with the long *ā* in Elean *μᾶ* = *μη*—that also the short Elean *e* was likely pronounced as an open sound (and that here we do not have to deal merely with an open *ɛ*-variant of the phoneme *e*, bound up with a neighbouring *r*, as it was the case in Locrian and Phocian, where A for E is documented only before P). Yet, we have to face here one problem: the above postulation taken for granted, we should have to assume the origin of a considerably unpoised Elean short-vowel system with *e* shifted towards the position of *a*, without at the same time being able to prove directly from the known linguistic Elean material that this anomaly had been compensated for in the system in some way, e.g. by a more open pronunciation of some other Elean short vowels, particularly of the vowel *i* (the late Elean document *πόλερ* = *πόλις* Schw. 425<sub>16</sub> [Olympia, ca. 200 B.C.] is of no special significance here, because the origin of the *e*-quality seems to be again bound up here with a succeeding *r*). On the other hand, we must say that an entire absorption of the Elean phoneme *e* by *a* is improbable, for the intermingling use of E/A does not display here reciprocity (the spelling A stands sometimes for the original *e*, but the spelling E does not stand for the original *a*).

A still more difficult task present all the other indications of short-vowel systemic differentiation, to which we alluded in our work on the long-vowel system when analysing some older studies that have phonemic aspect for their basis.<sup>5</sup> We have in mind here partly *Rui Pérez's* tendency to attribute the short *e*-phones and *o*-phones of nearly all the phases in the development of Attic a close character,<sup>6</sup> primarily of those phases in which the long *ē/ō* pair was originating either through various types of the compensatory lengthening of the short *e/o* or through the contraction of two short couples *e+e/o+o*, so that it gives the impression as if the long *ē-/ō*-phones had here been doubled (the primary *ē/ō* had shifted to the open position of *ē/ō*). And along with this we have to refer also to the views of those scholars who admit the possibility that the extent of the axes in the short-vowel system may have been shortened in some Greek dialects when compared with the situation in the long-vowel system, in other words, that the terminal short *a* occupied a higher, closer, and maybe even more central position than the long *ā*, which would mean at the same time that obviously also every short *e* and *o* was of close quality. This remarkable theory was expressed by *Allen* concerning Attic-Ionic in connection with the question why the Attic-Ionic (and also Doric [A.B.]) *a* finds in the Aeolic and Arcado-Cypriot dialects its counterpart in a sound of an *o*-shade, with respect to the substitutes for the I.E. sonants *r, ʃ*.<sup>7</sup> A similar view about the closer character of the short Attic *a*—even if falling in this case back upon the fact that the original Attic *ā* was being transformed into *æ* while the short Attic *a* not—was expressed by *Brandenstein*.<sup>8</sup>

Taking all these views into consideration as differently founded attempts to disclose further differences in the short-vowel systems of the Ancient Greek dialects we shall now try to perform a more detailed and more systematic analysis of this set of problems. Our first task will be to clarify the very starting point of this complex investigation, i.e. to determine the character of the proto-Greek short-vowel system. Even if entirely safe results are obviously beyond our reach, yet all the documented Greek dialects point to the existence of one basic systemic short-vowel type, namely to a three-grade triangular system of 5 short monophthongs (*a, e, i, o, u*), analogical with the assumed proto-Greek long-vowel system (*ā, ē, ī, ō, ū*).<sup>9</sup> At the same time it is possible that in the oldest stages of proto-Greek development even some reduced vowel may have had the function of an independent phoneme;<sup>10</sup> nevertheless, we have to point out that Mycenaean Greek, although being the oldest documented Greek dialect supplying us with material as early as from the 15—13th centuries B.C, does not show any traces of the existence of such a vowel. If we, therefore, do not take its existence into account, we may accept the Mycenaean system of five short monophthongs (*a, e, i, o, u*) as a prototype of the Ancient Greek short-vowel system without hesitation.

One must add, however, that certain minor differences in the detailed location of these five Mycenaean phonemes in the oral cavity may be indicated by two peculiarities: i) an occasional occurrence of the Mycenaean *e* in contrast to the Classical Attic *i* (e.g. *qe-to pethos* [cf. *πίθος*; interpretation guaranteed by the ideogram of a pithos], *ku-te-so kutesos* [cf. *κύτισος*]), while, on the other hand, a very exceptional occurrence of the Mycenaean *i* for the expected *e* (e.g. *di-pa dipas*—cf. *δέπας*; interpretation again supported by the ideogram), and along with it occasional inconsistency in the use of *i* and *e* in one and the same word (cf. e.g. *a-te-mi-to Artemitos* [gen. sing.] and *a-ti-mi-te Artimitei* [dat. sing.]; cf. the frequent P amph. *Ἄρτιμι-*); ii) a very exceptional occurrence of the Mycenaean *i* for the expected *u* (e.g. *mo-ri-wo-do moliwdos* [cf. the Attic *μόλυβδος*, but also *μόλιβος*; see Schwyzer, GG I 349 sqq.]).<sup>11</sup>

Nevertheless, considering the isolated character of the quoted examples (the interpretation of some of them being not quite certain, on the top of it), and taking into account their rather veiled origin and etymology, we can so far hardly see in these deviations anything more than isolated phonic differences, bound up with certain lexical units. Of major significance appears to be here only inconsistency in the use of *Artemitos/Artimitei*, but even in this case we cannot altogether exclude the possibility that we encounter here just very archaic doublets and not a manifestation of some phonic change in process or a specific articulation of either the short *e* or *i*.

For other Greek dialects from the 2nd millennium B.C. there is no preserved documentation, nor did we encounter any arguments trying to prove that the situation in the short-vowel system was there essentially different. It will therefore be

necessary to turn our attention to the Classical Greek dialects from the 1st millennium.

In these we can observe a number of short-vowel changes and dialectal differences which in themselves could with certain assumptions be taken for manifestations of differences between the short-vowel systems of the various dialects. We have in mind first of all the contrast of the *a*- and *o*-shades of the substitutes for the I.E. (and may be also proto-Greek) sonants *r*, *l*,<sup>12</sup> which Allen has so acutely applied to this problem, or also of the substitutes for the so-called „voyelle d'appui“, originated in remote Greek prehistory in the neighbourhood of the phones *r*, *l* in some special positions.<sup>13</sup>

Cf., e. g., the Attic-Ionic *καρδία*, *τέτρα-*, *βραχύς*, *στρατός* and the presumably parallel West Greek forms<sup>14</sup> with the Thessalian *πετρο-* = *τετρα-* Schw. 617<sub>g</sub> (Larisa, III), Boeotian *Βρόχυλλο[ς]* Schw. 479,5 (Thespiiai, litt. vetust.), Lesbian *στρόταγοι* Schw. 620 (Mytilene, 324-3), *τρόπην* = *τραπεῖν*, *βρόχεια*, *χόλαισι* = *χαλῶσι* Sappho, Arcadian *ταῖ παραγόρσι* Schw. 654<sub>26</sub> (Tegea, ca. 390), and Cypriot *κόρζα-καρδία* Hesychios.<sup>15</sup>

As for the contrast between the Attic-Ionic and the West-Greek *a*-shade of the substitutes for the I.E. sonants *r*, *l*, and the Aeolic and Arcado-Cypriot *o*-shade of the same substitutes, the prevailing opinion of today is that this contrast had originally been non-dialectal,<sup>16</sup> being bound up with the specific phonic neighbourhood of *r*, *l*. (This state of things evidently still existed in Mycenaean.) And further it is assumed that later, for reasons unknown to us, *a* got generalized in Ionic and West Greek while *o* in Aeolic and Arcado-Cypriot.<sup>17</sup> (Let us add that this explanation may be well applied to the substitutes for *r*, *l*, whereas the problem of distribution of the *a*- and *o*-shades of the substitutes for *η*, *η* still remains unclarified.<sup>18</sup> (Cf. e.g. the quite unexpected Attic-Ionic *εἴκοσι*, *-κόσιοι* with *o* and the Boeotian and Thessalian (*Ἔ)ίζατι*, *-κάτιοι* with *a*.)

Thus the ultimate outcome of this generalization process was by no means a change in the short-vowel system itself of one or other dialect, but only a greater or smaller functional loading of the local short *a* or *o*. Nevertheless, the conclusion we have just drawn does certainly not exclude, on the other hand, the possibility indicated by Allen, who suggested that this double possibility of dialectal generalization of the original substitutes for *r*, *l* might have been a manifestation of the already existing differences in the short-vowel systems in the two above-mentioned dialectal groups. In Allen's hypothesis, to be sure, the existence of a "closer" Attic-Ionic short-vowel system, with *a* shifted to the central position of *Λ*, was not be the outcome of the above-said foregoing phonological processes in the neighbourhood of the old liquids *r*, *l*, but, on the contrary, an impulse to effect a definite phonemic incorporation of the phonic results of these processes.

As far as the vowel *a* is concerned, we unfortunately have no suitable linguistic material so far in Attic-Ionic (or in West Greek), a material which would serve as safe evidence in favour of the existence of a closer short *a* in these dialects. There

exists, however, a certain indication of a closer Attic-Ionic *e*, *o*, which Allen already found useful for his argumentation, that is to say the circumstance that the short *e*, *o* results through compensatory lengthening, or through contraction with another short *e*, *o*, in the close long  $\bar{e}$ ,  $\bar{o}$  in Attic-Ionic (and in some other Greek dialects as well). We alluded to this kind of argumentation in the Development 45 (see mainly Note 79) with some reserve, and stressed that in the dialects in which compensatory lengthenings and contractions had such close  $\bar{e}/\bar{o}$  sounds for their results there stood at the cradle of the close  $\bar{e}/\bar{o}$  a *special systemic isogloss*, which asserted itself for the first time about 1000 B.C. in the neighbourhood of the Corinthian and Saronic Gulfs—in connection with the origination of the so-called 1st compensatory lengthening. (This isogloss later went on spreading to other Greek regions, since due to the later lengthenings and to the *e+e*, *o+o* contraction the universal mid-long  $\bar{e}/\bar{o}$  grew less and less capable to absorb all these realizations even there.) But at the same time we were ready to admit in the Development, i.e.—even if with some reluctance—that about 1000 B.C. there may have existed in the area of the Corinthian and Saronic Gulfs a *group of Greek dialects with short close  $e/o$  sounds*, which situation may have contributed towards the origin of a parallel long  $\bar{e}/\bar{o}$  through the above-said first compensatory lengthening. On the contrary, for a later period, i.e. for the later compensatory lengthenings as well as for the *e+e*, *o+o* contraction, such explanation appeared to us superfluous and we tried to interpret every new origination of such a close  $\bar{e}/\bar{o}$  couple as a mere systemic phenomenon, i.e. as the result of a considerable overloading of the hitherto existing universal  $\bar{e}/\bar{o}$  couple, which up till then had evidently been occupying a mid-long position. We must, however, concede that even in these later-date processes we are willing today to attribute to both of the above-mentioned explanations the validity of equivalent, co-operating factors. In the Development, namely, which concentrated nearly exclusively on the long-vowel problems, one important circumstance escaped our notice: it is the interesting fact that the area of the above-mentioned systemic isogloss with double  $\bar{e}$  and  $\bar{o}$  (that means with 7 long monophthongs), which in its oldest form, springing from the first compensatory lengthening, comprised partly the North-West dialects (possibly including even Achaëa), partly Attic-Ionic, and partly also the Megarian-Corinthian-East Argolic area (while later it took West Argolic, East Aegean Doric and Pamphylian as well),<sup>20</sup> is to a considerable extent identical with the area of the *a*-substitute for the sonants *r*, *l* (and also for the voyelle d'appui in the neighbourhood of *r*, *l*): Likewise the *a* shade of the substitutes for *r*, *l* can be documented as a primary, vernacular phenomenon only in the Attic-Ionic and West-Greek areas,<sup>21</sup> the difference, however, lying in the fact that here we have to deal with *the entire West-Greek*, i.e. including Laconia, Messenia, Elis, and Crete, in which the above-said isogloss with double  $\bar{e}$  and  $\bar{o}$  did not assert itself.<sup>22</sup> Thus a question arises whether in the Ionic-Doric area there did not exist at some early time a special local short-vowel system with a closer *e/o*, which contributed

very much towards the origination of the close  $\bar{e}/\bar{o}$  couple, whereas in the Arcado-Cypriot („Achaean“) dialects and in Aeolic, where the short-vowel system may have been for long centuries quite parallel with the long-vowel system, the  $e/o$  would, in this situation, have preserved its mid-short position, and, in the course of the compensatory lengthenings and the  $e+e$ ,  $o+o$  contractions,<sup>23</sup> it would have quite regularly resulted in the mid-long  $\bar{e}/\bar{o}$ <sup>24</sup>. (In the light of this hypothesis the short close  $e$ ,  $o$  would have occurred in the Ionic-Doric area only and not in the whole Greek-speaking world, as research-workers sometimes a priori assume.) The fact that also a part of the Doric Peloponnese and of the insular Doric area witnessed in the Classical Era an only  $\bar{e}/\bar{o}$  pair may be explained by the assumption that the origination of the second  $\bar{e}/\bar{o}$  pair, though being possibly based on physiological articulation ground, quickly assumed the character of a systemic issogloss<sup>25</sup>, spreading from one or more foci to adjoining territories, and may have encountered on its way hard geographic obstacles (sea, mountains).<sup>26</sup>

At the same time it is necessary to keep in mind that a) even the oldest Cretan inscriptions betray certain traces of a later tendency—which in the Classical Era never experienced its full realization—of distinguishing two  $\bar{e}$ -sounds<sup>27</sup>, and b) that in Elis the distinguishment of two  $\bar{e}$ -sounds had quite consequently been accomplished (even if its realization had primarily been made possible by the foregoing pre-“compensation” shift  $\bar{e} > \bar{e}\bar{e}$ ).<sup>28</sup> All this considered we have to admit that Laconian together with the comparatively little known Messenian (and very much depending on Laconian on the top of it) is practically the only Doric dialectal area, in respect to which we have so far not found even the slightest reason to doubt the assumed continuous existence of an only  $\bar{e}/\bar{o}$  pair<sup>29</sup>.

This high degree of accordance characterizing the isoglosses of the two above-mentioned phonic processes lends, in our opinion, Allen’s hypothesis quite a weighty argumentative support. Obviously, there existed in Ancient Greek also such phonological processes as appear to contradict this hypothesis. Here we have in mind particularly two short-vowel phonological phenomena:

a) The first of them is the tendency to shift the short  $e$  to  $i$  and the short  $o$  to  $u$ . The shift of  $e$  to  $i$  can be documented<sup>30</sup> especially in Arcadian (e.g. *iv*, *μίνουσαι*), in Cypriot (e.g. *iv*, *ἴ(ν)θα*, *μi = με*, *Μιγαλαθέῶ*), and in Pamphylian (e.g. *i = év*, *ics < \*ins*, *Ἀρτιμιδόρον*), but as for its occurrence in the preposition *iv*, this can be documented also in East Crete (particularly in Vaxos and Eleutherna from the most ancient period, but not in Central Cretan Gortys), in Rhodos and in Southern Italian Metapontion (the Achaean substrate may have asserted itself in all these places); all these documents are thus restricted to the neighbourhood of  $n$  or  $m$ , these consonants displaying also in other languages a certain closing capacity.<sup>31</sup> On the other hand, we could hardly include here sporadic instances like the Lesbian *πίσσυρες* (besides *πέσσυρες*), or else in the whole Greek world quite frequent *Ἰστία/Ἰστία*, contrasting with the Att.-Ion. *Ἔστια/Ἔστια*. To these forms we may apply upon the

whole what was said about Mycenaean expressions of the type di-pa, a-ti-mi-te, taking into account their isolated character.

The narrowing shift of *o* > *u*, is, on the other hand, demonstrated<sup>30</sup> chiefly again in Arcadian (e.g. ὀνήσαντι, ἄλλυ, ἀπύ, δπύ = ὑπό, ὑμοίοις, ὑνέθηκε = ὄν-, Μιλτιάδαν < -ᾱο), in Cypriot (e.g. γένοιτι, κείτι, ἀπύ, Διῆν < \*Dīēos, Ὀνασαγόραν < -ᾱο), and in Pamphylian (e.g. ἐβδλάσεται, ἠιαρῦ = ἰαρόν, βΟΛΕμενυς < -os, ὕ = δ), but to some extent also in Thessalian (ἀπύ, ὀνύματα) and Lesbian (ὄνυμα, ἀπύ, ὑμοίως, ὑπίσσω); the expression ὄνυμα may be found, of course, also in Boeotian and nearly all the West-Greek dialects (and again the question may be raised whether this isolated word should be taken into account at all). Thus the phenomenon is in the majority of cases either associated with the termination of the word (or with the last syllable at least) or else with a position before the nasal *n* or before *m* (and exceptionally before *p*).

b) The second to be mentioned is the above-alluded tendency to shift the short *e* in the direction of *a*, as it can be amply demonstrated in Elean (types *Φάργον*, *μαστράαι*, *γνῶμαν*), and with the restriction to position before *r* (exceptionally also before *l*) likewise in Phocian (e.g. *ματάρα*) and Locrian (e.g. *πατάρα*), and sporadically also in Achaea, Aetolia, Thessalia, Argolis, Pamphylia, and Cyprus.<sup>32</sup> And again, we can hardly include here with full justification some special lexically fixed instances, such as the commonly West-Greek and at the same time Boeotian, Pamphylian and partly also Thessalian *ἰαρός/ιαρός*, or the expression *Ἄρταμις*, documented in Boeotia and Thessalia, and in some West-Greek dialects.

The *first* of the two above tendencies, i.e. the two narrowing shifts, have one thing in common: the ethnical centre of their realization were namely the Arcado-Cypriot (Achaean) dialects, Pamphylian including, that is to say, those dialects which had in the light of Allen's hypothesis at the time of generalization of either the *a*- or *o*-substitute for *r*, *l* a short-vowel system which was parallel with its respective long-vowel system (the phonemes *e*, *o* were not shifted to *e*, *o*). Some instances of the two shifts can be demonstrated in the Aeolic dialects as well, but even these dialects should in accordance with Allen be attributed an analogical "non-shift" short-vowel system. And taking into account the very probable existence of the local Achaean substrate we can neither see an important contradiction in the sporadic Cretan and Rhodian *iv*, while the isolated *Ἰστία/Ἰστία* and *ὄνυμα* may have some specific causes of their considerable spread. What might here actually seem to handicap Allen's hypothesis is the very fact that it is just the Achaean area with both mid-long and mid-short *ē*, *ō* that figurates as the centre of this narrowing short-vowel tendency. But this is only a seeming paradox. All the quoted demonstrations of this tendency have essentially the character of combinatory changes, either bound by their phonological neighbourhood or depending on their position in the word. The fact that such narrowing of *e*, *o*, depending on these circumstances, is not of itself a proof of the *whole* phoneme *e* or *o* undergoing the process of narrowing can be demonstrated e.g. in



Latin: although it cannot be doubted that the Latin short *e, o* had an open character throughout the entire history of Roman Latin, yet even these Latin qualities got narrowed into *i, u* in certain positions (e.g. before a consonantal group composed of a nasal and an explosive, or in the case of *u* before the terminal *-m* or *-s* or *-d*; cf. *uncus* [Gr. ὄγκος], *hunc* < *homce*; *dominus*, *-um* < *-os*, *-om*, *aliud* < *-od*). And actually, the question remains open whether for the accomplishment of the combinatory narrowing *e > i, o > u* we should not consider as more favourable the situation when the starting *e/o* is open or of a mid-short quality, and whether the close *e, o* sounds—due to their probably more restricted action radius on their articulation axes—are not more immune against the centrifugal tendencies of those of their realizations which might otherwise be—for physiological reasons—inclined towards narrowing into *i, u*. This suggestion of ours would, naturally, require a more thorough investigation than the present work will permit, and particularly it would be necessary to verify this hypothesis in those languages which prize in their phonemic system close short *e, o* as independent phonemes.

As to the *other* of the discussed tendencies, i.e. the opening of the short *e* towards *a*, the situation seems at first to be very much the same as that we have been outlining when dealing with the first tendency. The geographic centre of this second process was the Doric North-West, the North-West dialects in the narrow sense of the word (i.e., e.g., Phocian, Loerian, Aetolian), lagging, however, in its accomplishment far behind Elean, which, judging from the strictly linguistic point of view, is, as a matter of fact, not a „North-West“ dialect.<sup>33</sup> In any case, all these dialects, as members of the West-Greek family, may, in the light of Allen's hypothesis<sup>34</sup> about the systemic selection of substitutes for *r, l*, naturally be ascribed the existence of the „shifted“, that is to say, closer short-vowel system, and the same may analogically be applied also to all the other West-Greek dialects in which the *e > a* tendency is likewise—even if very sporadically—documented. Judging from this point of view, we may say that the said situation is neither contradicted by the sporadic documents from Bocotia and Thessaly, for the language in these areas as well was subjected to a strong West-Greek influence subsequent to the Doric invasion, not to speak of the fact that most of the local instances confirming the tendency of *e* opening into *a* are represented by isolated expressions *ιαρός* and *Ἀρταμς*. As extraordinary important we find esp. the fact that in a great majority of regions in which the sign A for the expected E is documented (i.e. practically in all the above-mentioned dialects except Elean) the occurrence of this phenomenon appears in combination with the immediately following *τ* (this consonant is even in other languages often endowed with an extraordinary opening capacity). This means that in all these dialects—or at least definitely in all the (non-Elean) North-West dialects in the more narrow sense of the word in which the number and the character of the positive documents really exclude the possibility of a mere sporadic occurrence of the said phenomenon—we have to deal before *τ* either with a fully accomplished combinatory change *e > a*, or at least

with a shift of the short *e* (that may have originally been close in the West-Greek dialects in accord with Allen's theory) to the position of *ε* or *æ*, so that there must have originated in such a case some sort of open combinatory variant of the phoneme *e*, depending on the position before *r* and reproduced in the absence of a more suitable graphic means with the sign **A**. At the same time the basic articulation area of the phoneme *e* may even now have maintained its close character—or it may have got shifted to the mid-position of *e* in the centuries between the accomplishment of the first compensatory lengthening (when the resulting *ē*, *ō* pair, arisen through this process, seemed to point to the close character of the paralled short *ε*, *ο* in the entire non-Elean North-West area) and between the first written documentation of the North-West material.<sup>35</sup> What is, however, necessary to stress in this connection above all and with full vigour is the fact that the just offered explanation, which appears to be quite satisfactory in reference to the non-Elean North-West dialects and in no way contradictory of Allen's hypothesis, can certainly not be applied to Elean with the probably open articulation of its short *e*, *irrespective* of its position in the word.

The Elean situation is really a difficult problem to solve for the adherents of Allen's theory. It was already when comparing the isogloss of the long-vowel system of seven monophthongs with the isogloss of the *a*-generalization of the substitute for *r*, *l* that we found that Elean did not belong to the same camp in either case. The origin of double *ē* was no doubt chiefly influenced here by the fact that the primary *ē* had evidently been shifted to *æ* before the accomplishment of the first compensatory lengthening already, so that the origin of the secondary *ē̄*<sup>36</sup> resulting from the first compensatory lengthening just filled a big gap between *æ* and *ī*, without the assumed short close *ε*, whose existence in Elean could otherwise be postulated from Allen's hypothesis owing to the Elean generalization of the *a*- substitute for *r*, *l*, asserting of necessity in some way its direct influence.

And now we are even able to find in the expressions like *γρῶμαν* quite serious direct arguments in favour of the statement that in the time of the first inscriptional Elean documents the local short *e* was not close but open. At the same time, the fact that to the open character of the Elean short *ε* (<*e*) corresponds the specially open character of the Elean long *ǣ* (<*ē*), which is, no doubt, very old, evidently older than the first compensatory lengthening,<sup>37</sup> this fact, as we say, hardly permits us—owing to our very fragmentary knowledge of the linguistic development during the first few centuries of the 1st millennium B.C.—to question the rather high antiquity of the Elean short *ε* either. And for this reason we cannot, in our opinion, but declare this Elean situation as inconsistent with the principles of Allen's hypothesis. (To count with the possibility that the original close Elean *ε* opened in all word positions rather quickly as much as to assume the position of *ε* would be too venturesome.) Whether this fact represents a menace for Allen's hypothesis as a whole depends on our answering the question to what extent one may see even in the non-Elean North-West

tendency towards the change *er > ar* an analogy to the Elean situation, in other words, whether also this tendency was not in its origin something more than a mere opening process depending on the position before *r*, and whether even here we do not encounter some general opening process of a systemic significance, as we know it from Elean. Now, frankly speaking, even though in the Development, pp. 96 sqq., we ourselves felt inclined to believe in the existence of some such more extensive and older isogloss, we have to admit that we could hardly substantiate this view with some reliable material. Even the Thessalian-Boeotian-Lesbian tendency of changing *ri* to *re* (cf. the Thessalian *κοεννέμεν* = *κοίνειν*, the Boeotian *τρεπέδδας* = *τρι-*, and the Lesbian *Δαμοκρέτω* = *-κρίτω*) which we alluded to in the above study in this connection, is in fact no more than a parallel of the non-Elean North-West Greek combinatory tendency of *er > ar*, and not a proof testifying in favour of a systemic change of the above-said Elean type. All this considered, we actually may see in the Elean situation a unique phenomenon, contradictory, to be sure, to Allen's hypothesis, as far as we can judge on the basis of our present knowledge of the Elean dialect, yet, essentially not annulling its wide-range validity.

If the analysis of the tendency *e → a* has thrown a somewhat restrictive light on our interpretation of Allen's hypothesis, there exists, on the other hand, another possibility, i.e. whether we may not, on the contrary, associate with his hypothesis some other differentiation phonological phenomena in the hope of finding in them some support for his theory. When analysing thoroughly phonological problems of Ancient Greek dialects, we were taken up in this connection especially with one of the most remarkable Old Greek contractions from the differentiation point of view, i.e. the contraction (and the crasis) *a + ě*.<sup>38</sup>

This phenomenon, occurring e.g. in the contrast of the Attic *ἐνίκῶ* and the common West Greek *ἐνίκη*, presents the following dialectal distribution:

a) In the whole of the Attic-Ionic area the uniform outcome of this process is the long *ā*; cf. *ἐνικᾶ*.

b) In the entire West Greek area the outcome is regularly *η* = *ē* or *ē̄*; cf. *ἐνίκη*.

c) In the Aeolic dialects — as far as we can judge from the rather fragmentary material—the situation was as follows:<sup>39</sup>

a) In the Aeolic of Asia Minor the regular outcome is *ā*; cf. e.g. *κᾶμ' Alc.*, *κᾶμεθεν* Sappho, *κᾶγω* Balb., *κᾶλέφαις* as well as some other very frequent expressions;<sup>40</sup> the Theocrit's *κᾶγῶ* 29<sub>3</sub>, *κᾶμέ* 29<sub>24</sub>, *κᾶπι* 29<sub>37</sub>, occurring in one of his idyls imitating Lesbian poetry, can hardly serve—considering the Sicilian-Doric origin of the author—as a counterargument; problematic appears to be *κεμε* in the archaic inscription (see *O. Hoffmann*, GD II 179) from Neandria in Asia Minor [ante 400], which *W. Meister* interprets as *καὶ ἐμέ* (PhW 1892, 514).

(In this connection it is, however, necessary to stress that in the case of a crasis we must always count with the possibility that its outcome may have been secondarily influenced by unconscious striving to secure a maximum intelligibility of the word,

so that the documented *κᾶγω, κᾶμ', κᾶλέφαις*, impairing this intelligibility more than *κεμε*, will evidently have to be taken in the Aeolic of Asia Minor for the primary, phonologically more appropriate outcome of the contraction *a + e*.)

β) In Thessalian we usually find *ᾱ*, e.g. *ἐρουτᾱι* Schw. 617,2<sub>1</sub> [Dodona; III], *ᾱριστάσας* < \**ajer-* Schw. 604 [tit. Magnesia, V]; it is only in the Sotairos-Inschrift Schw. 557 [Thetionion, prope Kierion, V] that we find just *ē = ē* (*κῆν<sub>6</sub> = και ἐν, τῆς<sub>10</sub> = τὰ ἐξ*), of course, Kierion is renowned for its quite frequent occurrence of West-Greek elements.<sup>41</sup>

γ) In Boeotia the outcome of *a + e* is generally supposed to be *ē*, yet, the documents do not indicate it quite uniformly: *ē* can be demonstrated in Aristophanes (*φουσητε* Ach. 863, *κῆπιχάριτται = και ἐπιχάρισαι* Ach. 884) and *ē* in the not quite certain *σουλεῖμεν* (< \**sulaemen?*)<sup>42</sup> BCH 19, 157, No. II, [Orchomenos, 250-200] and *σουλείτω* *Ἀρχ. Δελτ. 2, 235 A<sub>11</sub>* [Koroneia, ca. 200]; but let us add that Korinna has *κᾶμέ, κᾶσσονδη = και ἔσσονται* — according to Nachmanson this is supposed to be an imitation of Lesbian.<sup>43</sup> On the other hand, however, one must admit that the first four cases may have been the products of the West-Greek influence, which left in Boeotian even more traces than in Thessalian. This can be applied particularly to documents relating to Aristophanes, in which *φουσητε* and *κῆπιχάριτται* may be declared to have an analogical Doric shade as the expression *κορᾶν*, which Aristophanes used instead of the normal Boeotian *κοράων* in the same part of the quoted comedy (Ach. 883).

Summing up this Aeolic situation, we find that the *ē*-result of the investigated process, provided it can be identified here at all, may nearly always be ascribed to the West-Greek influence, while those parts of the Aeolic area in which this influence cannot be demonstrated seem to give preference to the *ᾱ*-result.

δ) And finally there is the Arcado-Cypriot and Pamphylian area, which presents the following picture:

ν) In Arcadian, as it appears, the contraction was not accomplished even in the Classical Era; cf. *ἀφᾶἔτοι* SEG XI 1112<sub>5</sub> [Arcadia septentr., ca. 525], *ἀέκων* IG V 2, 4<sub>10</sub> [Tegea, IV]. Exceptionally we find here the form *ἐπαθλα* IG V 2, 6<sub>72</sub> [Tegea, IV] (the influence of Koine is mentioned in this connection),<sup>44</sup> and we have also two instances of the *ē*-crasis: *κῆπι* Schw. 651B [Tegea, V] and *τῆπιόντα* Schw. 650<sub>3</sub> [Tegea, VI—V]. (Consult, of course, once more our remark sub *ca*) about the specific character of crasis, liable to be affected by a secondary influence.)

β) As to Cypriot, we are short of satisfactory documents; Hesychios' imperative *γοᾶ·φάγε* may represent a similar athematic form as another imperative of his, *ἕγα·σιώπα*, or as the form *ἕγασθαι* Schw. 679<sub>3</sub> [Edalion, ca. 450],<sup>45</sup> and need not therefore be traced down to the assumed but undocumented *gra(s)e*.

γ) The last to be mentioned is Pamphylian, which supplies us with but one document, which is not too reliable on the top of it: *ζ]αμίῃσδν (= ζημιούσθων)* Schw. 686<sub>10</sub> [Silyon, IV p.pr.]; this form is considered by some research-workers as derivation

from the  $\bar{a}$ -conjugation verb  $\zeta\alpha\mu\acute{\iota}\omega$ ,  $\zeta\alpha\mu\acute{\iota}\alpha\mu$ , which view is rather uncertain.<sup>46</sup> But even if it were so, also this form could be ascribed to the West-Greek influence, which was quite strong in Pamphylian.

The Arcado-Cypriot-Pamphylian situation may therefore be characterized as follows: The documents presenting the monophthongal outcome of the contraction  $a + e$  are so sporadic — and problematic on the top of it — that these dialects cannot be included in our analysis. The standpoint is all the more justified since the dialect with the most numerous inscriptional documentation among them, i.e. Arcadian, failed to accomplish the contraction  $a + e$ , as it seems, even in the Classical Era. This naturally means that it will now be necessary to reformulate and make more precise the various somewhat simplifying statements about the dialectal extent of the changes  $a + e = \bar{a}$  and  $a + e = \bar{e}$ , as these statements did not often pay due attention to the insufficient documentation of this contraction in the Arcado-Cypriot-Pamphylian area. Cf. e.g. the formulation in *Thumb-Kieckers*, Handbuch I<sup>2</sup> 287, where we read that „in Lesbo-Thessalian, Arcado-Cypriot, and Attic-Ionic the contraction of  $a + e$  results in an  $\bar{a}$ -phone“ („das Kontraktionsergebnis [des Lokrischen] stimmt mit dem . . Westgriechischen überein, weicht aber von dem des Lesb.-Thessalischen, trk.-Kyprischen und Ion.-Attischen, wo ein  $\bar{a}$ -Laut entsteht, ab“). The precise formulation should, in our opinion, run approximately as follows: In the West-Greek dialects and partly in Boeotian the contraction of  $a + e$  results in the phone  $\bar{e}$ , in Attic-Ionic, Lesbo-Thessalian (and partly also Boeotian) the outcome is  $\bar{a}$ , while in Arcadian this contraction was evidently not fully accomplished, whereas in Cypriot and Pamphylian there are no sufficient proofs either for the accomplishment or against it. The above analysis therefore shows that an essential difference between the  $\bar{a}$ - and  $\bar{e}$ - results of the contraction  $a + e$  exists only between West-Greek, on the one hand, and Lesbian-Thessalian and Attic-Ionic, on the other hand, while Boeotian takes share in both these results. The situation in the Arcado-Cypriot-Pamphylian area is, in contrast to it, incomparable with the just-mentioned dialectal groups in so far that the only contradictory feature that may be safely stated is the Arcadian contrast of an *archaizing* dialect, not accomplishing the contraction, as compared to the Ionic-Aeolic-West Greek *innovation* dialects (irrespective of whether Cyprus and Pamphylia had joined the latter or not).

The complete picture of the distribution of the  $\bar{a}$ - and  $\bar{e}$ - results of the investigated contraction is at the same time most interesting from the geographic point of view. It makes us arrive at two conclusions. On the one hand, this distribution bears traces of the dialectal situation succeeding the arrival of the Dorians (the Boeotian, Thessalian, and maybe also Pamphylian documents betray the West-Greek influence), yet, on the other hand, each of the three above-mentioned principal ethnical groups accomplishing the  $a + e$  contraction is characterized in the bulk of its area (the main exception are the Boeotian West-Greek  $\bar{e}$ -forms) fundamentally with one and the same monophthongal result. The first observation makes it clear that the contraction

$a + e$  was not accomplished until in the post-Mycenaean period, while the other observation allows two interpretations: either we have to deal with a closely post-Mycenaean phenomenon that was accomplished at a time when neither the Aeolians nor Ionians had yet emigrated to Asia Minor, living still together with their European brothers (it is especially the intercourse between the Aeolians of Asia Minor and the Continental Aeolians that became very loose in later times), or else we must take into account the possibility that there existed some unknown linguistic factor, which even after the emigration of the Aeolians eastward was capable of making  $a + e$  contract into  $\bar{a}$  both in Lesbos and Thessaly, and partly maybe also in Boeotia, although e.g. the rest of Central and North Greece gave preference to the  $\bar{e}$ -result. The first version—i.e. a very early post-Mycenaean accomplishment of the contraction—appears to be rather improbable in the light of the fact that the Attic-Ionic forms like *ἐνίκα* (or the Homeric *προσηύδα*) indicate that the local contraction  $a + e$  must have occurred after the Attic-Ionic change  $\bar{a} > \bar{e}$ , whose accomplishment is usually placed about 900 B.C. Besides, there exist certain specific developmental features in several Greek dialects which dissuade us from concluding that the  $e + e$  and  $o + o$  contractions—which probably were as early as any contraction process—should have been accomplished definitely prior to the 8th cent. B.C., roughly speaking. All this considered, we are quite entitled to believe that of the two hypothetical explanations the second is more substantiated. The question however to be answered is what sort of linguistic factor it might have been to bring about the same outcome of the  $a + e$  contraction even in dialects that were geographically separated. And by way of answering, another question emerges, namely, whether this problem might not be solved by assuming the existence of a special form of the short-vowel system in the dialect in question—particularly with respect to the coexisting long-vowel system.

Thus, let us try to reconsider our analysis of the dialectal situation with respect to the results of the  $a + e$  contraction from the view-point of Allen's theory, in the light of which Attic-Ionic and W. Greek may be supposed to have had their short-vowel system shifted more in the direction of closer vocalic qualities than it was the case in Aeolic and Arcado-Cypriot, where the local short-vowel system appears to be in the light of Allen's theory unshifted and completely parallel with the coexisting long-vowel system:

a) If we can really rely on the assumption that in some Greek dialects the short-vowel system was upon the whole closer than its long-vowel counterpart, then we may conclude that in all probability the monophthong resulting from the  $a + e$  contraction (or more precisely said  $\Lambda + e$ ) would assume the  $\bar{e}$ -form, particularly in such dialects in which there had already existed by that time double  $\bar{e}$ , the close one and the open one, in the long-vowel system. This postulate is in full accord with the outcome of the  $a + e$  contraction in the W. Greek dialects. (It should, however, be pointed out that Allen's hypothesis should, in fact, presuppose the same situation also in Attic-Ionic;

why this dialectal group went over to the opposite camp [see b] we shall try to explain below.)

b) If, on the other hand, in some of the dialects the short-vowel system was essentially parallel with the long-vowel system, it is obvious that the resulting monophthong of the  $a + e$  contraction must have been more open in these dialects than in the former case, assuming most likely the form  $\bar{a}$ . This situation can be demonstrated in Aeolic. The fact that it is without safe documents in the Arcado-Cypriot area does not diminish the value of Allen's hypothesis, for with respect to this area neither the opposite situation — characterized by the  $\bar{e}$ -result — can so far be safely documented.

Nevertheless, as we have already indicated sub a), our conception appears to be strongly impaired by the Attic-Ionic  $\bar{a}$ -result of the  $a + e$  contraction, which phenomenon seems to be quite incompatible with Allen's hypothesis. Attic-Ionic, which has so far been figurating as the most stable pillar of Allen's theory, which uses in full accord with it the  $\bar{a}$ -substitute for  $\zeta$ ,  $\lambda$ , which prolongs and contracts the short  $e$ ,  $o$  into close  $\bar{e}$ ,  $\bar{o}$ , and which lends no firm support to the assumption of its  $e$ ,  $o$  having any other quality but the close one,<sup>48</sup> the same Attic-Ionic contracts all of a sudden  $a + e$  into  $\bar{a}$ , behaving in this respect precisely in the same way as Aeolic. At the same time it is hardly possible to defend here Allen's theory with an ad hoc explanation that the Attic-Ionic short-vowel system possibly got in the course of time on a level with the long-vowel system. Provided namely that Allen was right and that the Attic-Ionic short-vowel system had actually been closer in the past, then the continual increase of the functional loading of the Attic-Ionic close  $\bar{e}$ ,  $\bar{o}$  through later types of compensatory lengthening as well as through the  $e + e$ ,  $o + o$  contractions speaks more in favour of a long-lasting preservation of the former status quo than against such supposition.

Yet, we believe that there is at hand one acceptable explanation, which may cast satisfactory light on the above-mentioned Attic-Ionic anomaly, and be offered at the same time as a defender of Allen's hypothesis. One must take into consideration that the Attic-Ionic group, as the only one in the Greek dialectal world, was affected by the very important long-vowel change  $\bar{a} > \bar{a}$ , this occurring in such a full degree that subsequent to the accomplishment of this change (it was later than the first compensatory lengthening [type  $*staln\bar{a} > st\bar{a}\bar{a} > \sigma\tau\acute{\eta}\lambda\eta$ ], but earlier than the second compensatory lengthening [type  $tans > \tau\acute{\alpha}\zeta$ ]) there did not exist for a certain time any long  $\bar{a}$  in the whole Attic-Ionic area.<sup>49</sup> It was only the second compensatory lengthening which supplied about the 9th cent. B.C. new phonic material that filled this gap (in Attic this new  $\bar{a}$ -source was still more strengthened with the regressive shift of the quality  $\bar{a}$  to the position  $\bar{a}$  after foregoing  $e$ ,  $i$ ,  $r$ ). Yet, even in Attic, let alone Ionic, this new  $\bar{a}$ , originating in this way, had a comparatively small frequency of occurrence (it was present for the most part in various suffixes, e.g.  $\pi\alpha\iota\delta\acute{\epsilon}\iota\sigma\alpha\zeta$ ,  $\tau\acute{\alpha}\zeta$   $\chi\acute{o}\rho\alpha\zeta$ ,  $\omicron\iota\kappa\acute{\iota}\alpha$  [the last type in Attic only] and the like), and its functional

loading was by far not so great as that of the open  $\bar{e}$ , which most likely just about the time of the second compensatory lengthening also absorbed the older  $\bar{e}$ , originated formerly from  $\bar{a}$ <sup>50</sup> (the Cycladean islands Keos, Naxos, and Amorgos probably still excepting).<sup>51</sup> If about at the same time—or shortly after—the Attic-Ionic area began to be the scene of the accomplishment of contractions as well (the contractions appear to be upon the whole a somewhat later phenomenon than the second compensatory lengthening),<sup>52</sup> then, according to our opinion, it fully stands to reason that in Attic-Ionic the monophthongal outcome of the  $a + e$  contraction preferred to pave its way towards the vowel  $\bar{a}$ , whose functional loading was not so great, than towards the overloaded vowel  $\bar{e}$ . If it actually was the case, then it would mean that in Attic-Ionic the need of a greater distinctiveness of the language became a stronger factor than the physiological mechanism of the phonological development.

In our opinion, Allen's hypothesis, published eight years ago in the *Word*, can therefore cast a new stream of light on the whole complex of dialectological problems in Ancient Greek, problems that have so far been analysed only isolatedly. We are fully aware of the probability that even our solution may be missing the mark, misrepresenting the real state of things, and that we are still before the threshold of a fully satisfactory all-round analysis of the problematic aspect of the short-vowel system. Yet, we believe it correct to make known that when considering the possibilities of applying Allen's hypothesis to our problems we were taken up with quite a number of striking analogies, which, though concerning quite different phonemic changes, seemed to be all pointing in the same direction, and for this reason we have decided to submit the results of our observations to the expert public opinion. Should our conclusions prove to be correct—i.e. should it become clear that the above-mentioned analogies actually transcend the realm of pure chance—our knowledge would have at its disposal another significant short-vowel differentiation feature of a systemic nature, which would enable us to divide the Greek dialects into two distinct groups in their remote past already.<sup>53</sup> To be sure, in the light of this discovery the two other short-vowel system differentiation features, which have already been more or less successfully analysed in the *Development*, namely the not yet sufficiently clarified shift of the short Elean  $e$  towards  $a$  and the quite evident (non-Euboean) Attic-Ionic shift of the short  $u$  to the central position of  $\bar{u}$ ,<sup>54</sup> would appear to be rather local differentiation phenomena. For the time being the author does not venture to attempt a more systematic and detailed treatment of the short-vowel system development in Ancient Greek, yet, he does not exclude the possibility that he may try to deal with this question once more in the future, being prompted by either approving or disproving responses and suggestions of other scholars.



## NOTES

<sup>1</sup> See *A. Bartoněk*, *Vývoj konsonantického systému v řeckých dialektech* (= Development of the Consonantal System in Ancient Greek Dialects), Praha 1961, and *A. Bartoněk*, *Development of the Long-Vowel System in Ancient Greek Dialects*, Praha 1966.

<sup>2</sup> *A. Bartoněk*, *Development*, esp. pp. 62 sqq. and 133 sqq.

<sup>3</sup> *A. Bartoněk*, o. c. 45 sq., 77 sqq., 107 sqq., 119 sq.

<sup>4</sup> *A. Bartoněk*, o. c. 110 sqq.

<sup>5</sup> *A. Bart*, *ék*, o. c. 24 sqq.

<sup>6</sup> *M. S. Ruvpérez*, *Esquisse d'une histoire du vocalisme grec*, *Word* 12 (1956), 67–81.

<sup>7</sup> *W. S. Allen*, *Some Remarks on the Structure of Greek Vowel System*, *Word* 15 (1959), 240–251.

<sup>8</sup> *W. Brandenstein*, *Phonologische Bemerkungen zum Altgriechischen*, *Acta linguistica* 6 (1950–1951), 31–46.

<sup>9</sup> Cf., e.g., *E. Vilborg*, *A Tentative Grammar of Mycenaean Greek*, Göteborg 1960, pp. 41 sq.

<sup>10</sup> We have here perhaps no more to do with the IE. *a*, but with the so-called „voyelle d'appui“, originated in Greek prehistory in the neighbourhood of the phones *r*, *l* occurring in certain consonantal groups (see */e/sp<sup>o</sup>rēn > ἐσπαρην*); cf. *M. Lejeune*, *Traité de phonétique grecque*, Paris 1949, pp. 178 sq.

<sup>11</sup> See more *E. Vilborg*, l.c.; we do not take here, however, into consideration some other phenomena which may be better explained e.g. by various kinds of assimilation (e.g. e-ko-mc-no side by side with o-ko-mc-no *Orchomenos*), nor the unsteady use of *a-/o-* shades in the substitutes for the IE. *r*, *l*, *n*, *m*, this difference between *a* and *o* being in Mycenaean based on the position of the said substitutes in word, and not on any previous dialectal differentiation. (We do not agree here with *V. Georgiev* who tries to explain this by the mixture of the Ionic and Aeolic elements in Mycenaean; cf., e.g., his article *Mycenaean among the Other Greek Dialects*, *Mycenaean Studies—Wingspread* 1961, ed. *E. L. Bennett*, Madison 1964, pp. 125–146. Quite different was, of course, the situation in the Classical Greek dialects as explained on pp. 136 sq.

<sup>12</sup> From this phenomenon various ablaut differences must be distinguished (cf. *ἐρσην: ἔρσην; θεροσ: θασσ-*), their origination being in no way connected with the coexisting short-vowel situation.

<sup>13</sup> Let us remark here that wherever we speak in the following paragraphs about the fortunes of the substitutes for *r*, *l*, we include also those for the voyelle d'appui. Cf. Note 9.

<sup>14</sup> Unexplained seems to be the very frequent West-Greek form *τέτρογες* = Att. *τέτραγες* and the West Greek *γροφ-* in derivatives of *γρόφω* (cf. also some other analogous instances in Buck<sup>3</sup>).

<sup>15</sup> Even *a*-forms may be found in these dialects (they prevail esp. in Thessalian), but the majority of them is to be attributed to interdialectal influence.

<sup>16</sup> Cf. Note 11.

<sup>17</sup> See esp. *F. R. Adrados*, *La vocalización de las sonantes indoeuropeas*, *Emerita* 26 (1958), 249–310.

<sup>18</sup> See *A. Morpurgo-Davies*, *L'esito delle nasali sonanti in miceneo*, *Atti della Acad. naz. dei Lincei*, Vol. XV (1960), 321–333. Cf. *M. Lejeune*, *Traité* 169.

<sup>19</sup> See *A. Bartoněk*, *Development* 133 sqq. and 138 sqq.

<sup>20</sup> The fact that even in Pamphylian no *o*-form is documented at all does not mean that the *a*-shade was a primary phenomenon there. Both the local *a*-shade and local existence of double *ē* and *ō* (see above) may be due to the rather strong Doric influence, which asserted itself in Pamphylia in the 1st millennium B.C.

<sup>21</sup> But see below on p. 138.

<sup>22</sup> Let us remark that in these dialects the compensatory lengthening was not such a frequent phenomenon as in the Attic-Ionic group of dialects or in some regions of the West-Greek area; in Lesbian no lengthening took place at all. Cf. *A. Bartoněk*, *Development* 62 sqq. and 133 sqq.

<sup>23</sup> Even the Thessalian and Boeotian *ē, ô* occupied for a long time a mid-long position, probably till the middle of the 1st millennium B.C.

<sup>24</sup> See *A. Bartoněk*, *Development* 62 sqq.

<sup>25</sup> The said contradiction may be explained also by the presupposition that under the influence of the Achaean substrate, which appears to have been particularly strong just in Laconian, West-Argolic, Elean, and Cretan, the Doric, „more close“, short-vowel system may have assumed an Achaean character, i.e. changed into the „normal“ one, prior to the accomplishment of the first compensatory lengthening already. This argument is, of course, incompatible with our explanation of the difference between the various results of the *a + e* contraction (see pp. 145 sq.),

where we postulate a „close“ short-vowel system for all the West-Greek dialects of the first centuries of the 1st millennium B.C.

<sup>27</sup> See *A. Bartoněk*, Development 55 sqq. and 74 sq.

<sup>28</sup> See *A. Bartoněk*, Development 90 sq.

<sup>29</sup> We do not take here into consideration the late Laconian forms *εμλ*, *τοῦς* etc., which are most probably results of the influence of Koine.

<sup>30</sup> See the respective paragraphs in *Thumb—Kieckers* and *Thumb—Scherer* (*Handbuch der griechischen Dialekte*,<sup>3</sup> Heidelberg 1932, 1959).

<sup>31</sup> Cf. also German *binden* < *bend-*.

<sup>32</sup> Cf. *A. Bartoněk*, Development 91 sq.

<sup>33</sup> About Elean as not belonging to the North-West group of dialects (in the narrow sense of the word) see *A. Bartoněk*, Development 96 sqq.

<sup>34</sup> By the term „Allen's hypothesis“ we mean here—as well as in the following paragraphs—the hypothesis of Allen adapted and supplemented with our standpoints.

<sup>35</sup> See, however, the last words of Note 27.

<sup>36</sup> The sign  $\bar{\epsilon}$  denotes here that the precise phonetic value of the secondary Elean  $\bar{\epsilon}$  might be either  $\bar{\epsilon}$  or  $\bar{\epsilon}$ . See *A. Bartoněk*, Development 98.

<sup>37</sup> Cf. *A. Bartoněk*, Development 90 sqq.

<sup>38</sup> In the following paragraphs we shall speak only „of the contraction  $a + e$ “—for the sake of brevity.

<sup>39</sup> In contrast to the preceding paragraphs, where we did not indicate the provenience of the quoted instances, we do so here in order to present the Aeolic and Arcado-Cypriot evidence as thoroughly as possible.

<sup>40</sup> But even non-contracted forms may be found.

<sup>41</sup> See also the last paragraph of  $\alpha\alpha$  [concerning crasis].

<sup>42</sup> See *Nachmanson*, *Glotta* 2,136 (quoted according to *Thumb—Scherer* 27).

<sup>43</sup> See *Nachmanson*, *Glotta* 2,138 (*Thumb—Scherer* 28).

<sup>44</sup> See *Thumb—Scherer* 122.

<sup>45</sup> See *Thumb—Scherer* 159.

<sup>46</sup> See *Thumb—Scherer* 190.

<sup>47</sup> We have in mind the fact that in West Argolic, Pamphylian and East Aegean Doric the outcome of the  $e + e$ ,  $o + o$  contractions was different than that of the 1st and 2nd compensatory lengthenings (see *A. Bartoněk*, Development 50 sqq. and 138 sq.).

<sup>48</sup> Cf. *E. H. Sturtevant*, Pronunciation 33 and 45.

<sup>49</sup> Cf. *A. Bartoněk*, Development 101 sqq.

<sup>50</sup> Cf. *A. Bartoněk*, o. c. 103 sq.

<sup>51</sup> Cf. *A. Bartoněk*, o. c. 102.

<sup>52</sup> See Note 47.

<sup>53</sup> It is hard to judge whether it was the case in the Mycenaean Era already. Some of the Mycenaean phonemic phenomena, adduced on p. 135 appear to be similar to later Arcado-Cypriot tendencies, nevertheless, we should not venture, on the basis of these observations, to draw the conclusion that in the Mycenaean Era already there must have existed in the Greek-speaking world differences in the formation of the short-vowel systems, while the Mycenaean system—just as later also the Arcado-Cypriot—remained unaffected by these shifts.

<sup>54</sup> In the light of Allen's hypothesis this shift could after all be interpreted as a direct outcome of the pressure of the close  $\sigma$  on the adjoining short  $u$ , similarly as in the case of the long  $\bar{u}$  (it is necessary to keep in mind that the back vocalic articulation axis is shorter than the front one). The reasons why it should have been just the Attic-Ionic  $u/\bar{u}$ , and not the Doric  $u/\bar{u}$  as well, which was undergoing this shift would very likely have to be looked for in the specific conditions prevailing in the Attic-Ionic area, which was probably more exposed to the influence of the Asia Minor substrate (cf. *A. Bartoněk*, Development 115 sq.).

Translated by *S. Kostomlatský*

## ÚVAHY NAD VÝVOJEM KRÁTKOVOKALICKÉHO SYSTÉMU V ŘECKÝCH DIALEKTECH

Rozbor subsystému krátkých vokálů v řeckých dialektech neposkytuje jistě možnost nakreslit tak diferencovaný a peatry obraz systémového vývoje, jak je to možné v případě subsystému konsonantického a dlouhovokalického. Přesto při důkladné analýze starořeckého hláskoslovného vývoje lze zjistit několik jevů, které prozrazují existenci výrazných diferenčních rozdílů v utváření krátkovokalického systému mezi různými řeckými dialekty. Zcela evidentní je zejména případ neubojských ionsko-atičských nářečí, v nichž se nejpozději v 6. stol. př. n. l. posunulo tamní dosavadní krátké *u* do centrální polohy *ü*, a vedle toho je třeba pokládat za velmi pravděpodobné i to, že každé elejské krátké *e* bylo vyslovováno již od dob prvních elejských nápisných dokladů otevřeně jako *ε* nebo *ε̄*. Tyto případy rozebral již autor ve své starší monografii o vývoji starořeckých dlouhovokalických systémů.

Zajímavou, dosud nedocenenou hypotézu o možném uskutečnění významné krátkovokalické systémové diferenciace vyložil anglický badatel W. S. Allen. Ten vyslovil v souvislosti s řešením otázky, proč ionskoattického (a dorského) *ā* odpovídá jakožto střídnice za *ie* sonanty *l*, *r* v dialektch aiolských a arkadokyperských zabarvení *o*-ové, pozoruhodný názor, že v dialektch s *a*-ovým zabarvením (konkrétně v ionskoattičtině) byla snad délka os krátkovokalického systému „zkrácená“ ve srovnání s paralelním systémem dlouhovokalickým, tj. že tu krátké *a* zaujímalo vyšší, zavřenější, a možná i centrálnější polohu než *ā* dlouhé a že tu potom v souvislosti s tím bylo pochopitelné i každé krátké *e* a *o* poměrně zavřenější než paralelní *ē* a *ō* dlouhé. Tento Allenův názor, vyslovený bez konkrétnějšího rozboru jazykového materiálu, se nyní pokouší autor této studie ověřit na základě rozboru rozmanitých starořeckých hláskoslovných jevů a změn a dochází k závěrům, které lze shrnout do těchto čtyř bodů:

1. Rozsah systémové isoglossy, při níž vzniká v některých řeckých dialektch — v souvislosti s realizací různých typů náhradního dloužení a stejnovokalické kontrakce *e* + *e*, *o* + *o* — dvojí *ē/ō*, jednak *ē/ō* zavřené (jakožto přímý produkt těchto změn), jednak *ē/ō* otevřené (jakožto pokračování *ē/ō* primárního), a při níž ono nově vzniklé zavřené dlouhé *ē/ō* ukazuje na pravděpodobně zavřený charakter i výchozího *e/o* krátkého, se do značné míry kryje právě s rozsahem výskytu *a*-ové střídnice za sonanty *r*, *l*. Allenova hypotéza za těchto okolností může nalézt své uplatnění i mimo ionskoattičtinu, tj. konkrétně v západní řečtině (první z obou isoglos zahrnuje ionskoattičtinu a většinu západoreckého území [a navíc pamfylštinu], druhá pak ionskoattičtinu a v zásadě všechny západorecké dialekty).

2. Pozičně vázané zúžení kvality *e*, *o*, doložené zejména v arkadštině, kyperštině a pamfylštině, nepodává samo o sobě žádné svědectví o případném zúžení celého fonému *e*, *o* v těchto dialektch — tak aby to bylo Allenovy hypotéze na závažiu.

3. Elejština se svou pravděpodobně otevřenou artikulací krátkého *e* je v neshodě s principy Allenovy hypotézy. Jde asi o specifický elejský jev, lingvisticky stěží sklobutitelný např. s tendencí otevírat krátké *e* pouze v poloze před *r*, jak je to doloženo v severozápadních dialektch v užším smyslu toho slova; bude tu tedy asi nutno pro elejštinu hledat vysvětlení přímo na její vlastní půdě (v místním substrátu?).

4. Ve prospěch Allenovy hypotézy hovoří i výsledky jedné z diferenčně nejpozoruhodnějších starořeckých kontrakcí, stahování *a* + *e*:

a) Byl-li opravdu v některých řeckých dialektch krátkovokalický systém vcelku zavřenější než systém dlouhovokalický, je nanejvýš pravděpodobné, že v nich monofong vzniklý provedením kontrakce *a* + *e* (přesněji ovšem v tomto případě *ā* + *e*) obdržel podobu *ē*-ovou, zvláště v těch dialektch, kde už v té době existovalo v dlouhovokalickém systému dvojí *ē*. Tento postulát se plně shoduje s *ē*-ovým výsledkem kontrakce v západoreckých dialektch.

b) Byl-li naopak v některých dialektch krátkovokalický systém paralelní dlouhovokalickému, je nepochybné, že výsledný monofong kontrakce *a* + *e* musel být otevřenější než v prvním případě, tj. nejpravděpodobněji měl podobu *ā*. Tato situace je doložena v aiolštině. Ve světle Allenovy hypotézy by ji bylo třeba očekávat i v oblasti arkadsko-kypersko-pamfylské, ale tam kontrakce *a* + *e* buďto nebyla vůbec provedena ještě ani v době klasické (v arkadštině) anebo je tak nedostatečně doložena, že příslušné dialekty nelze zařadit ani sub a) ani sub b) (týká se kyperštiny a pamfylštiny).

c) S principy Allenovy hypotézy se zdá být v zásadním nesouladu *ā*-ový výsledek zmíněné kontrakce v ionskoattičtině. Je však třeba uvážit, že ionskoattický vývoj byl jako jediný v řeckém světě poznamenán změnou *ā* > *ā̄*, a to v takovém měřítku, že po uskutečnění této změny neexistovalo po jistou dobu v celé ionskoattické oblasti žádné dlouhé *ā*. Ale i když později, patrně v 9. stol. př. n. l.), vzniklo nové *ā* druhým náhradním dloužením [typ *tans* > *tās*] — a v attičtině

bylo ještě posíleno zpětným pohybem kvality  $\bar{a}$  do polohy  $\bar{a}$  po předchozím  $e, i, r$  — mělo toto nové  $\bar{a}$  poměrně malou frekvenci a bylo funkčně podstatně méně zatíženo než např. otevřené  $\bar{e}$ , které pravděpodobně právě někdy v době druhého náhradního dloužení (s výjimkou kykladských ostrovů Kea, Naxu a Amorgu) do sebe absorbovalo starší  $\bar{a}$  vzešlé kdysi z  $\bar{a}$ . Za těchto okolností je tedy zcela pochopitelné, že v ionskoattičtině převýšil ohled na větší distinktivnost jazyka fyziologickou mechaniku hláskoslovného vývoje a že si monoftongický výsledek kontrakce  $a + e$  (řecké kontrakce jsou vcelku pravděpodobně o něco mladší než druhé náhradní dloužení) našel spíše cestu k funkčně méně zatížené samohlásce  $\bar{a}$  než k příliš přetíženému  $\bar{e}$ .

