MONOPHONEMIC DIPHTHONGS IN MYCENAEAN

As to the question whether this differentiation concerned only the short diphthongs, or whether it affected the long ones as well, the following may be stated. Even if in some of the just quoted instances we have to deal with an *originally* long diphthong (see e.g. * $p\bar{o}i$ - in the Mycenaean spelling po-me, * $n\bar{a}u$ - in na-u-do-mo), these are at the same time instances in which the Mycenaean existence of a long-diphthong character can in no way be safely established (cf. the Classical Greek $\pioi\mu\eta\nu$, $\nu\alpha$ -); yes, even

¹ See more on p. 55 ff.

² The sign z with the question mark means that the precise phonetic quality of the Mycenaean z- has not been with full certainty discovered as yet, Cf. my article "The Pronunciation of the Mycenaean Z", Sborník prací filosofické fakulty brněnské university, A 12 (1963), in print.

³ In the Pylian Fr- series we find more often e-ra₃-wo instead of e-ra-wo, i.e. the form with the sign No. 33, which is, therefore, sometimes interpreted as rai (see e.g. L. R. Palmer, The Interpretation of Mycenaean Greek Texts, Oxford 1963, p. 19).

⁴ On the quoted Knossian tablet the reading of the last sign is not quite certain.

⁵ The quoted Knossian reading is not quite certain.

the Mycenaean ending of Dat. Sing. of ā-stems and o-stems (Mycenaean spelling -a, -o) cannot be with full certainty interpreted as the proto-Greek long-diphthong -āi, -ōi, since in the first millennium B.C. we meet in Dat. Sing. (in Arcadian, the North-West dialects, Boeotian, and South-West Thessalian) even with the parallel "short" endings -ai, -oi, both the latter being, thus, not quite inapplicable also in Mycenaean —especially if there seem to exist some closer connections between Mycenaean and Arcadian in a lot of linguistical points. At the same time, very likely neither the secondary sources bringing out new long diphthongs had asserted themselves fully yet in Mycenaean —e.g. the contraction of vowels so that Mycenaean can hardly be said to have been abounding in long diphthongs. Thus, in the light of these facts, we feel justified in restricting our original formulation of the difference in the Mycenaean graphic reproduction of the i- and u-diphthongs -without running the risk of misinterpreting things grossly— to a formulation alluding to short diphthongs only.

Now, how are we to explain the above-mentioned difference? When considering this problem we begin to feel that this difference between the Mycenaean *i*-diphthongs and *u*-diphthongs may after all have had the character of a contrast of the monophonemic diphthongs (i.e. independent phonemic units most probably with a gliding pronunciation, such as the diphthongs ai, au, ou, ei in English) to the polyphonemic ones (i.e. which are to be conceived as a combination of two independent phonemes as we see it demonstrated for instance by all the Spanish diphthongs).

The said hypothesis need not be considered, according to our opinion, as altogether inapplicable to the history of Old Greek, since for the monophonemic character of the diphthongs ai, ei, oi (and also of ou) there exist—at least in some of the Greek dialects—indications also in the first millennium B.C. In the first place we have to mention indications of the gliding pronunciation of the diphthongs ai, oi, demonstrable from the 6th cent. B.C. in several Greek dialects (we mean cases when the original ai, oi is being represented by the gliding spelling AE, OE or even OEI, AIE e.g. Aèθρα,

⁶ See A. Bartoněk, "Zur Problematik der phonematischen Wertung der altgriechischen kurzen Diphtonge", Sborník prací filosofické fakulty brněnské university, E 5 (1960), pp. 85-88.

Κροεσος on Attic vases, Αἰθον, ᾿ΑθαναΕα, ΠεραΕοθεν, αὐτοπο(ε)ια = αὐτοποία in Corinthus, προροε = φρουροί in Argolis Ἦποιαν = Ἦποιαν, καιε = καί on Samos, ἀναιερει = ἀναιρεῖ in Boeotia, etc. And secondly, when taking into account the well-known strong monophthongizing tendency of the diphthongs ei, ou, which must be taken for granted in a number of Classical Greek dialects as early as before the middle of 1st millennium B.C., we cannot altogether exclude the possibility of these diphthongs having the monophonemic character even in the more remote historical stage of the respective dialects (there is, of course, one disproportion here, i.e. the fact that the monophthongizing tendency of the diphthong ei is as a rule accompanied by an analogical tendency of the diphthong ou, whereas in Mycenaean we find no indications of the monophonemic character of the latter).

And now we shall try to examine critically this hypothesis of ours on the basis of a detailed analysis of the respective linguistic material.

Thus we shall have to find out to what extent the situation described on p. 51 may be considered regular, in other words, whether any deviations from the there assumed "regularity" can be demonstrated, and if so, whether they support our hypothesis or oppose it:

We meet with ke-u-po-da even on another cognate tablet, namely PY Na 395.

see e.g. a-na-i-ta KN Sf 0419 —probably an adjective—beside a-na-ta on the similar tablet KN Sf 0420, ko-i-no MY Ge 606.7 = = skhoino-? (cf. $\sigma \chi \circ i v \circ \varsigma$) beside ko-no on the similar tablet MY Ge 602.5+8, or perhaps also ko-to-i-na KN Uf 981.a+ = ktoinā-(cf. $\kappa \tau \circ i v \circ \iota$ Hesych.) beside ko-to-na PY passim, and ku-ta-i-to KN Ch 902.10 —probably a place-name—beside ku-ta-to KN X 80+.

Note: In contrast to it, the following "deviations" characterized by the apparent two-sign reproduction of the *i*-diphthongs should not be included, for they probably represent only a prospective vocalic joining a+i, e+i, o+i, the real phonic value of the Mycenaean spelling a-i, e-i, o-i being here possibly still that with an intervening h going back to the original intervocalic s:

- α) The s-stem (patronymic) type e-te-wo-ke-re-we-i-jo PY An $654.8-9 = Etewoklew\ddot{e}ios$ or $-klew\ddot{e}hios < *-klew\ddot{e}sios$ (cf. Έτεοκλης, Hom. βίη Έτεοκληείη).
- β) The s-stem (Dat. Sing.) type e-u-me-de-i PY Fr 1184.2 = $Eum\bar{e}d\bar{e}i$ or $-\bar{e}hi < *-\bar{e}si$ (cf. Εὐμήδης), beside e-u-me-de PY Ea 773+.
- γ) The \bar{a} and o-stem (Dat. Plur.) type e-qe-ta-i PY An 607.3 = $hekwet\bar{a}i$ or $-\bar{a}hi$ (cf. $\hbar\pi\hbar\tau\alpha\nu$ Pind.) < Loc. *- $\bar{a}si$, and do-e-ro-i PY Fn 50.11-13+ = doeloii or -oihi < Loc. *-oisi (cf. δ οῦλος); Merlingen was first to arrive at this conclusion and a number of other scholars hold this view after him. As for those who, on the other hand, prefer to see in the above-mentioned Mycenaean spellings -a-i, -o-i a mask for the endings -ais, -ois (Ruijgh must be mentioned here in the first place) neither does their view make our hypothesis untenable, for in this case the Mycenaean spelling -a-i, -o-i may be explained as just an effort to establish a graphic differentiation of Dat. Plur. -ais, -ois from Nom. Sing. Fem. + Masc. - \bar{a} (- \bar{a} s), -os, Acc. Sing. Fem. + Masc. (and Nom. +Acc. Sing. N.) - \bar{a} n,

⁸ And perhaps on KN F 953.2 (2x), 3b, but not on PY Eq 213.6, where ko-no is possibly a place-name Koino- (cf. Koivós).

⁹ See W. Merlingen, Bemerkungen zur Sprache von Linear B, Wien 1954.

¹⁰ See C. J. Ruijgh, "Les datifs pluriels dans les dialectes grecs et la position du mycénien", Mnemosyne XI (1958), pp. 97-116.

-on, Dat. Sing. $-\bar{a}i$, $-\bar{o}i$, Nom. Plur. -ai, -oi, Acc. Plur. -ans, -ons (and also Gen. Sing. $-\bar{a}s$ of the \bar{a} -stems, as well as Gen. Plur. $-\bar{o}n$ of the o-stems and Nom. + Acc. Plur. N. $-\bar{a}$)¹¹, all these endings being reproduced in Mycenaean with the final -a, -o.

If we are now to evaluate the significance of the exceptions mentioned in paragraph 1 for our hypothesis, we have to point out that the said exceptions do not make it less weighty, since we meet here either with exceptional cases, which have besides quite often "regular" doublet parallels, or else with phonic groups which we could classify at least as heterosyllabic vocalic combinations.

- 2. A significant deviation from the "regular" usage in reproducing the Mycenaean i- and u-diphthongs is represented by those cases when the Mycenaean i- or u-diphthong is followed by a vowel (and the u-diphthong also by the consonant r). Concretely spoken we may describe the situation as follows:
- a) The *u*-element of the *u*-diphthong, if followed by a vowel, is *sometimes* expressed by reproducing this following vowel by the respective sign of the *w*-series (and similarly, if the *u*-diphthong is followed by *r*, the *u*-element of the diphthong is again occasionally expressed by a sign of the *w*-series, its vocalic shade being that of the following syllable). Cf. e.g. *e-wa-ko-ro* KN V 1005.A = Euagros (cf. Eŭaypos) beside]*e-u-wa-ko-ro* PY Jn 431.23, *ra-wa-ra-ti-ja* PY An 830.11 = Lauranthia? beside *ra-u-ra-ti-ja* PY On 300.9.

This occasional usage of reproducing u-diphthong before vowels and before r certainly does not interfere with our hypothesis; even in this case a splitting of u-diphthongs into two signs takes place, though the graphic method be somewhat different, and thus even here the biphonemic character of these diphthongs is directly indicated (let us add that in the doublet form e-u-wa-ko-ro the diphthong eu is graphically contained in no less than three successive signs).

b) The *i*-element of the *i*-diphthong, if followed by a vowel, is as a rule expressed by reproducing this following vowel in an ana-

About the possibility of even the IE Instr. Plur. -ōis being hidden under the spelling -.o, we are not fully convinced of the correctness of this view,

logical way as sub a), i.e. by the respective sign of the *j*-series. See e.g. e-re-pa-te-jo PY Ta 642.3+, KN Sd 0403.a = elephanteio- (Adj.; cf. ἐλεφάντειος), ko-ru-we-ja KN L 472 = korweia (Nom. Plur. N. of Adj.; cf. Ep. κουρήϊος), i-je-re-ja KN and PY passim = (h)iereia (cf. ἰέρεια), i-pe-me-de-ja Tn 316v.4, 6 = Iphimēdeia? (cf. Ἰφιμή-δεια), te-o-jo PY passim = theoio (Gen. Sing.; cf. Hom. θεοῖο from θεός), te-re-ja PY Eb 940+ = teleiā? (Athem. 3rd Sing. Praes. from the stem teles-; cf. Hom. τελείω).

This usage in the reproduction of the *i*-diphthongs, which is essentially identical with the above-said occasional reproduction of the *u*-diphthongs before a vowel or before *r*, seems somewhat to disagree, no doubt, with our hypothesis at first sight, for it might imply the existence of a biphonemic value of the Mycenaean *i*-diphthongs as well. Notwithstanding we believe that in comparison with the *u*-diphthongs a serious difference can be here pointed out, a difference aiming at the core of the problem and putting a question mark over the very existence of the *i*-diphthongs in the just quoted expressions. In order to substantiate as concretely as possible our doubts we shall now have to analyze the main types of cases to be found sub 2b). We have to include here:

α) Adjectives of material ending in -e-jo (type e-re-pa-te-jo = elephantejo- 12 cf. ἐλεφάντειος), whose suffix may be interpreted according to E. Vilborg 13 , either 1) as a probable continuation of the IE suffix -eio-, or 2) as an analogy of the material suffix -eo-, known from Classical Greek (cf. χρυσέος > -οῦς; in this case the Mycenaean j would have to be taken in such expressions as e-re-pa-te-jo for a mere "transitional semivowel"), or 3) as the suffix -ejo-, the same being an older form of -eo-, with the still preserved j, to be sure, which got altogether dropped before the language reached the stage of Classical Greek. When taking into account the fact that in Mycenaean there occasionally occur such doublets of adjectives of material as e-re-pa-te-jo / e-re-pa-te-o, we shall no doubt consider in this connection Vilborg's second and third possibilities as the most probable. Should we, notwithstanding, take for granted in Mycenaean the existence of a few adjectives of material or the like,

 $^{^{12}}$ Our transcriptions in the headings of the paragraphs $\alpha\text{-}\varepsilon$ are already in accordance with our following commentary.

¹³ A Tentative Grammar of Mycenaean Greek, Göteborg 1960, p. 150 ff.

which originally actually contained the IE suffix -eio, it is open to question whether perhaps even those adjectives under the pressure of the very frequently occurring material suffix -ejo- had not transformed their original suffixal form of -ei/o- into the suffixal form -elio-.

- β) Mycenaean adjectives, or may be also nouns, ending in -e-jo and expressing the idea "belonging to" (type ko-ru-we-ja = korweja; cf. Hom. κουρήϊος); here we have to deal with expressions that likewise may have been formed with the help of either suffix -eio- or suffix -ejo-. In any case, it is just this type of word to which one may well apply what was stated towards the close of paragraph α).
- y) Feminine nouns ending in e-ja, derived from eu-stems (e.g. i-je-re-ja = (h)iere(w)ja; cf. lé ρ εια), whose original formation is supposed to have been $-\bar{e}w$ -ja $< -\bar{e}w$ -ja; this formation should have been reproduced in Mycenaean as -e-wi-ja, but it may be that the parisyllabic -e-ja was given preference here to the non-parisyllabic -e-wi-ja just simply to distinguish this -ew-ja from the kindred suffix $-\bar{e}w$ - $io/\bar{e}w$ - $i\bar{a}^{14}$. As a matter of fact, it is quite possible that the Mycenaean i-je-re-ja was still pronounced with the w-sound, i.e. like [(h)ierēwja], just as it was the case with Mycenaean i-je-re-wi-jo, = (h)ierewion (cf. Hom. lephiov), whose stem form was the same as that of i-je-re-ja, only the derivative suffix was different, namely -io-. It is therefore not impossible that e may still have been separated from j by the phone w in Mycenaean nouns of the type i-je--re-ja. But even if we did not count with the w-sound in the pronunciation of the Mycenaean i-je-re-ja, we should, nevertheless, have to consider the question whether this Mycenaean combination of e+i could already be ascribed the diphthongal character ei, or whether even here it was not just such combination, whose second element would still have been j, which had appeared in this type of word but shortly before —after the liquidation of the foregoing w— in the neighbourhood of the vowel e.

¹⁴ See A. Thumb - A. Scherer, Handbuch der griechischen Dialekte II², Heidelberg 1959, p. 333; for other explanations see esp. Thumb - Scherer, l.c., and E. Vilborg, o.c. 43, but on the basis of none of them may the existence of diphthongal ei be taken for granted in i-je-re-ja.

- δ) As to the occurrence in Mycenaean also of such feminine nouns whose terminal -e-ja is a graphic form of the local substitute of the proto-Greek -es-ja < -es-ja (type i-pe-me-de-ja = Iphi $m\bar{e}de(h)ja < *Iphim\bar{e}desja$; cf. Ίφιμήδεια), the same upon the whole may be applied to them which was stated in reference to the type i-je-re-ja; in the Mycenaean era the former -esja either still had the form of -ehja (Mycenaean h in place of the original s can still be documented in a few instances)15, and, this granted, the diphthong ei could not have been present yet in words like i-pe-me-de--ja, or else if the simplification -ehja < -eja had already taken place in Mycenaean, it again remains to be answered whether the thus arisen intervocalic j had time enough to get transformed into the i-element of the diphthongal ei. This revaluation must, no doubt, have taken place sooner or later (Classical Greek supplies proofs of it), yet, in our opinion, this could have occurred only after the general liquidation of the phoneme j in Greek, which change was not yet accomplished in Mycenaean (see material like jo-do-so-si = $j\bar{o}$ $d\bar{o}sonsi$; $j\bar{o}$ = relative adverb corresponding with the first part of the Classical Greek τς, τδε)16.
- E) The explanation given sub δ) fits at the same time all right in some other cases as well that are documented in Mycenaean and in whose Classical Greek parallels we find the secondary *i*-diphthong in the place of former phonic combination vowel+s+j. Above all we should like to point out the following instances:
- ε_1 : Gen. Sing. of o-stems ending in -o-jo, such as te-o-jo = theojo¹⁷ or theohjo <*theosjo (cf. Hom. $\theta \varepsilon \circ i \circ i$);
- $ε_3$: Forms of verbs derived from s-stems, such as te-re-ja = te- $lej\bar{a}$ or $telehj\bar{a} < *telesj\bar{a}$ (cf. Hom. τελείω);
- ε_3 : Feminine forms of the s-stem Participle Perf. Act., such as a-ra-ru-ja = a-raruja or a-raruhja <*a-rarusja (cf. Hom. α - α - α - α); here, to be sure, we have to deal with an i-diphthong which we have not yet discussed, i.e. the diphthong ui, which was in fact,

In a number of Linear B sign-groups containing the sign No. 25 (a_2) , which is now sometimes transcribed as ha.

According to other scholars, the spelling j- in the particle jo- is to be interpreted as an attempt to denote aspiration; see E. Vilborg, o.c., pp. 43 and 48.

As for the consonantal j in theojo see also E. Vilborg, o.c., p. 42.

according to Schwyzer¹⁸, in Classical Greek of secondary origin practically¹⁹ every time, its occurrence being essentially restricted to positions before vowels.

In closing paragraph 2 let us express our opinion that the detailed analysis of the Mycenaean graphic combinations .a-j., .e-j., .o-j., and also of the spelling .u-j.²⁰, makes us feel justly doubtful whether these were cases of diphthongal joining at all, for the respective documentary material is in Mycenaean to a great extent restricted to instances in which we feel inclined to see in the j-component of these combinations rather the initial consonantal j-element of the following syllable. In contrast to it in cases of the type e-wa-ko-ro we have to see the reproduction of real tautosyllabic, but at the same time evidently polyphonemic diphthongs, as we can judge especially from the existence of the parallel variants e-wa-ko-ro | e-u-wa-ko-ro²¹.

- 3. All the other deviations from the "normal" spelling rules concern only some special *i*-diphthongs or a special pair of them. They are as follows:
- a) Of all the Mycenaean diphthongs only the initial ai has its own specific "diphthongic" sign ai (sign No. 43); cf. e.g. ai-ka-sa-ma PY Jn 829.3 = aiksmans (Acc. Plur. from $aiksm\bar{a}$; cf. $\alpha i\chi u\eta$). Nevertheless, even the "regular" spelling a- (e.g. a-ta-ro-we PY An 129 = Aithalowens, cf. $Ai\theta\alpha\lambda\delta\epsilon\iota\varsigma^{22}$ besides ai-ta-ro-we PY Cn 285.2+, KN Da 1221.B with ai), as well as the "non-regular" spelling a-i are possible initially (e.g. a-i-qe-u PY Eb 895.1+ = Aikweus?), the latter of the two spellings being, however, limited to a-i-qe-u and its oblique cases.

The ai spelling seems again to support our hypothesis, as it

¹⁸ Griechische Grammatik I, p. 199 and 348.

Of primary character were according to Schwyzer, *l.c.*, only the forms vi(f)os, vi(f)i.

There remain not discussed here only several problematic instances, such as a-ja-me-no KN Sd 0401.b+ = aiaimenos? (Part. Perf. Pass. from the stem *aiai(s)-?; see Vilborg, o.c. 105).

Besides, the occurrence of the prevocalic u-diphthongs is neither usually restricted to the suffixal termination of a word, as it is regularly the case just with the above-said j-combinations—the very problematic expression a-ja-me-no excepting.

²² In Classical Greek a river, in Mycenaean a personal name.

stresses²³ the possibility of the diphthong ai being conceived as only one phonemic unit.

b) In a few odd cases the second element of the diphthongs ai, oi is represented with the sign e, these cases being as follows: mi-to-we-sa-e KN Sd 0404.b = $miltowess?ai?^{24}$ (Nom. Plur. Fem. from the compound Adj. milto- [cf. Hom. $\mu \lambda \tau o \pi \alpha \rho \eta o s$] + -wess?a < -wetja < -wntja [cf. - $e\sigma\sigma\alpha$]), and perhaps also to-e PY Eb 842 = $t\bar{o}i$ or $t\bar{o}i$ (Dat. Sing. of the Demonstrative Pronoun; cf. Att. $\tau\bar{\omega} < \tau\bar{\omega}i$ or Arc. $\tau\sigma i$) —if Myc. to-e is not a verb²⁵.

Even these instances may be conceived as documenting the gliding character of the Mycenaean pronunciation of ai, oi, which again supports our view of the possible monophonemic character of the said diphthongs.

* * *

The detailed analysis of the deviations from the basic "rule" consisting in the two-sign reproduction of the u-diphthongs and in the one-sign reproduction of the i-diphthongs has shown that our hypothesis of the possible monophonemic character of Mycenaean ai, ei, oi finds more support than objections raised on the basis of these deviations. The above facts, to be sure, do not suffice in themselves to verify quite fully our hypothesis, yet we may venture on their basis to draw at least the conclusion that the difference in graphic reproduction of the two types of the Mycenaean diphthongs in question is a more regular and systematic phenomenon than might be expected if it were a mere product of graphical chance.

On the other hand, however, we can hardly imagine some deliberate intention of making the Mycenaean texte more intelligible to have played a role in this differentiation. In this respect

Similar significance may perhaps be ascribed to the above-mentioned sign No. $33 = ra_3$ or rai (see note 3).

The question mark denotes even here uncertainty of the transcription ss; see again the article quoted in note 2.

²⁵ See V. Georgiev, "Das Problem der homerischen Sprache im Lichte der kretisch-mykenischen Texte", Minoica und Homer, Berlin 1961, pp. 10-19, or L. R. Palmer, The Interpretation of Mycenaean Greek Texts, Oxford 1963, pp. 205 ff.

it is namely necessary to bear in mind that considering the intelligibility of the Mycenaean texts the neglect of the second component in the diphthongs ai, ei, oi appears to be a more serious drawback than if the same tendency had asserted itself in the diphthongs au, eu, ou (the diphthongs ai, ei, oi occur very often both in nominal and verbal endings in Ancient Greek playing there an important distinctive part, whereas no such importance may be ascribed there to the u-diphthongs). Thus we can in no case explain the different reproduction of both of the two types of Mycenaean diphthongs as a manifestation of an effort of the Mycenaean scribes to emphasize graphically more significant phonic elements.

All this considered, we really believe that in all probability it was the existence of some actual linguistic difference between the two types of diphthongs which gave impulse to graphic differentiation between the Mycenaean i- and u-diphthongs. Our concentrating in the present study just on one possibility of tackling this problem does not imply the assumption that no other hypothetic explanation is available. Our object is just to present our hypothesis, whose speculative character we by no means deny, to the community of scholars for a critical examination.

In finishing, we shall try to draw once more the picture of the probable phonemic conditions of the Mycenaean short diphthongs: Of the six Mycenaean short diphthongs (the Mycenaean ui was only the heterosyllabic u-i, as it seems), three, i.e. au, eu, ou. had no doubt a polyphonemic character (they were composed cf two phonemic units, that is to say, of the short a, e, o and of the semivocalic). On the other hand, with respect to the Mycenaean diphthongs ai, ei, oi we cannot altogether exclude the possibility of each of them representing a quite independent phoneme, although we have to admit that neither can this be quite safely documented so far. Thus, when trying to formulate our own view still more precisely, it appears to us most appropriate to say that the monophonemic character of the three latter diphthongs may be accepted as one of the possible explanations of the graphic difference that no doubt characterized the Mycenaean reproduction of the diphthongs ai, ei, oi on the one hand, and of the diphthongs au, eu, ou on the other.

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