## the I/E ALTERNATION IN MYCENAEAN GREEK

A. It has been observed ${ }^{1}$ that certain words in Mycenaean Greek show an alternation of $i / e$, and that others show $e$ where classical Greek has $t$, and vice versa. In attempting to discover the extent and origins of this phenomenon, I propose to make the following distinctions:

Firstly, vocabulary words must be distinguished from proper names: the interpretation of the latter is largely a matter of guesswork, and even when Mycenaean shows forms with both $i$ and $e$ the possibility has to be considered that we are dealing with two different words, as the context cannot help us.

Secondly, in vocabulary words alternations which occur in the root must be distinguished from those which occur in the suffix, as the latter may be due to morphological causes, while the former usually cannot be ${ }^{2}$.

It must be borne in mind throughout that Mycenaean does not normally write diphthongal $i^{3}$, so $e$ may represent $e i$ : also that alternations observable in Mycenaean itself are, ceteris paribus, more certain evidence than cases when the alternation is between a Mycenaean and a classical Greek form and depends on our interpretation of the Mycenaean form.
B. Cases where an alternation has been proposed in the roots of vocabulary words are as follows (there is no case where an alternation has been certainly proved by Mycenaean evidence alone):

[^0]1. «Horse» words: these normally show $i$ (always $i$-qi-ja $=h i q q^{*} i a$ *i $\pi \pi^{i} \alpha$ «chariot», $i$-qo "i $\pi \pi o \varsigma$ 'borse'), but proposals have been made to assign certain words which show $e$ to this root, e. g.:
e-qe-a-o(-)a-to-mo KN V 56, e-qe-o a-to-mo PY Sn 64: Mühlestein (Museum Helveticum XII, 1955, p. 125 [ $=H M 2]$ ) compares $i$-za-a-to-mo PY Fn 50, and interprets as hiqq ${ }^{\underline{u}} i \bar{a} \bar{o} n \mid$ hiqq $q^{u} i-a r t h m o i(i)$ '(to) the chariot-fitters': Docs. doubts this, suggesting arthmos ('fellowship') of the e.; Ventris (Experimental Myc. Vocabulary [privately circulated]) originally suggested heqü-eon (cf. है ens) as a reading of e-qe-a-o; Ruipérez (Minos IV, 1956, p. $156[=M R 5])$ suggests that e-qe-o is the genitive of heqos 'company'; finally, Georgiev (Second Supplément $[=V G 5])$ suggests that $e-q e-o$ is an error for $e-q e-t a-o$. Whether these suggestions are right or not, no confidence can be placed in Mühlestein's interpretation. He is also quoted by Georgiev (Lexique $[=V G 3$ 3]: this work is referred to when no indication is given) as suggesting Hiqq iorwos as a reading of the man's name e-zo-zo PY Cn 599.

Gallavotti (Documenti e struttura del greco nell'età micenea, Roma 1956[= $C G 1]$, p. 62, 90, 142) reads e-qe-ta KN As $821+$ (generally accepted as hequ ${ }^{n}$ etas $=\dot{\varepsilon} \pi \dot{\varepsilon} \tau \eta \xi_{\mathrm{s}}$ 'follower') as $i \pi \pi 0 \tau \alpha$, e-po PY Vn 493 as $i \pi \pi o v s$ (other suggestions are

 $q^{u}$ ontes $\left.=\tilde{\varepsilon} \pi 0 \nu \tau \varepsilon \varsigma\right)$ and $e-q e-s i-j a \mathrm{KN} \mathrm{Ld}{ }_{57} \mathrm{I}+\mathrm{as}=$ Latin equestri (Docs.: he$q^{u}$ esia 'suitable for the class of hequetai' ? Georgiev $=\varepsilon^{\varepsilon} \notin(\alpha ?)$ : all these seem very unlikely to be 'horse' words, and the assignment of them (except $e$-po) to the root of $\tilde{\varepsilon} \pi \sigma \mu \alpha \iota$ is probably correct. He also suggests that $i$-qo-e-qe KN Gd $0404+$ may show both forms of the 'horse' root, or alternatively the second part

 also show an $i / e$ alternance in the root: but the word remains very obscure and is useless as evidence. It is to be noted that the common Greek form ${ }^{\circ} \pi \pi 0 \varsigma$ is anomalous, and it would therefore seem plausible that a Mycenaean i/e alternation should occur in this word (a possible development being *ekwos $>*_{u k w o s}$ by assimilation, thence *hukwos $>*$ kikwos >iiñoc: v. Ambrosini $C G I$ p. 62), but there is no real evidence to show that it does.
2. ' $\theta$ ह́ $\mu \epsilon \xi^{\prime}$ words: $o-u-k i-t e-m i$, o-u-te-mi KN V 280 are probably to be read oú(хi) $\theta$ ह́plc (VG 3 etc.): more dubious are ti-mi-to KN As 821 (gen. thimistos $=$ 0́́plotos 'of tribute' ? Docs.), ti-mi-to-go-] PY An 218 (Georgiev, Supplément [=

 ti-ja PY Jo 438+ (both Espiotia Docs., but Georgiev, VG 4, proposes to read for the first $a j$-te-mi-ti-ja 'Apгєpicia) and ti-mi-to a-ke-c PY Ma 123 , ti-mi- to a$k e-i$ PY An 66 I (so Docs.; Bennett, Pylos Tablets II, now reads, pi-82 theimistos hage(e)i Palmer Trans. Phil. Soc. 1954, p. $48[=L P 3]$ but Tuivorc Voc. p. 86), and the personal name ti-mi-za KN Dk 1076 (Georgiev, $V G 4$ © $4 \mu \tau \tau i \alpha, ~ d i s b e l i e v e d ~$ by Chadwick, Et. Myc., p. $86[=\mathscr{F} C$ 7]).
3. The preposition èv: $e$ forms seem certain in $e$-ne-e-si PY En 609 (eneensi $=$ हैveto «are in» Docs.), e-ne-o KN Uf 625 (ėvećv 'being in' same), but forms
with in- (as in Arcado-Cyprian) have been proposed: e. g. i-na-ma-ta PY Ma 126 $=$ enammata 'garments' Lurja (SL I, p. 14), or $i v \not \ddot{\alpha}_{\mu} \alpha \tau \alpha$ (sc. $\pi \alpha \dot{\alpha} \tau \alpha$ ) Sittig as al-
 Lejeune (Revue de Philologie XXX, 1956, p. $426[=M L 4]$ Gallavotti , CG 1, p. 92, assigns to the 'horse' root, also Docs. - or cf. ' $\xi \dot{\circ} \dot{s}$ 'waist': compare e-tei$k u$-wo-te PY Na 604 Euingurentes ? Georgiev, VG 5); cf. also the place-name $i$-na$n i-j a$ PY An 18 (Enarnia cf. ápvóc Lurja loc. cit.: obviously unverifiable) and the
 05 as $n i$, which is disputed. All these cases are dubious.
4. i] ra-qe-te-ra PY Va $15:$ compare perbaps ra-qi-ti-r $a_{2} \mathrm{PY} \mathrm{Ab} 356$ (variously read as $\dot{\rho} \dot{\alpha} \pi \tau \rho \iota \alpha t, \dot{\rho} \alpha \dot{x} \rho \rho \alpha \iota)$ as suggested by Georgiev (VG 5). The former reading is however uncertain, and a comparison of $35-k a-t e-r e$ on the same tablet suggests the second sign may be not qe but $k a$.
C. Other cases of apparent vowel alternative $i / e$ depend on the interpretation alone: examples of $e=$ Greek $\iota$ are:

1. a-pe-re-qo KN U 49 (the new Knossos Tablets reads a-pe-re QO): Georgiev (VG 4) suggests amphilcipos.
2. e-pa $a_{2}-n a-q e$ PY Ua ${ }_{15} 8$ : Georgiev ( $V G$ 4) compares i iṔóvr.
3. e-te KN Am 600 +: Furumark (Eranos LI, 1953, p. 103-1 20; ibid. LII, 1954, p. 18-60, $22 \mathrm{a}\left[=A F_{I}\right]$ ) suggests ězt but there are many alternatives, including

4. ke-e PY Aa $93+$ (place-name Turner): Georgiev suggests Kíç or Kiç.
5. ku-te-so PY Ta 707, ku-te-se-jo PY Ta 713: Ventris (Eranos LIII, 1955,

6. Suggestions by Georgiev ( $V G 3,4,5$ and Et. Myc. p. 63-67 $[=V G 7]$; reading 34 and 35 as $m e_{2}$, he assigns the following to the root of $\mu$ i $\gamma v o \mu \mathrm{c}$ (cf. for all me-ka-ta KN L 469 meisgōta):
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a-35-ka KN Le 786+ ameisga
35-ka-te-re PY Va I5 meisgateres (or Megathersès)
i4-ke-ja PY Fn 187 meisgeia
34-ke-te-si PY Es 645 + mei(s)ktersi
34-ke-t PY Ta 709 meisgeus
.35-ki-no-o PY Vn 46 Meisgi-noos
34-zo KN Px 1253 Meisgön
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and the following to the root of $\mu$ uotos

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a-35-to PY La 626 ameisthos
34-te PY An 218 meisthèr (= \mueo0\omegató¢)
35-to PY Eb +72 meisthos (or mèstör)
34-to-pi PY Vn 130 meisthophi
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It is to be noted that as Georgiev's reading of the signs (or sign) 34 and 35 is not generally accepted, the above are subject to a double uncertainty.
7. me-tu-ra PY Ae 264: Docs. compares $\mu i \tau u \lambda \alpha$ 'hornless cattle', but Lurja (.SL I, p. 22) suggests methoura 'border country'.
8. ne-pan-sa-pi KN K 872, nepa $a_{2} s a t a$ PY Fn 324: Georgiev (VG 4, p. 7) reads
these as neiqu ${ }^{u}$ saphi, neiqutatas (cf. ví ${ }^{\underline{u}} \omega$ ). It is to be noted that this suggestion, like 2 and 6 above, involves vowel gradation rather than alternation.
9. ouqe KN L. 64 I + is read by Mühlestein (cited VG3) as oo้tc and o-qe PY Cn 4 by Ambrosini (Annali della Scuola Normale Superiore di Pisa, XXV, 1956, p. 67) as oँ $\tau:$ there seems no objection to the commonly accepted oü $\tau \varepsilon$, 0 of
ı. pe-ne-ve-ta KN Ld $57 \mathrm{I}+$ : Chadwick (Docs. p. 3 18) suggests a derivation

11. pe-re po-re-na PY Tn 316: Mühlestein's (Olympia in Pylos, p. 7 [= HM 1]) suggestion phorinăs 'skins' involves an alternance, though there is no good parallel for Myc. $e=$ Greek $i$, but again there are many alternatives (Palmer, Eranos LIII, 1955, p. 10 [=LP5], 'impurities'; Furumark, $A F I$ p. 5 i, cf. $\varphi \varepsilon p v \alpha$ 'dowry'; Docs. بoprual 'to carry').

12 qe-to PY Ta $641+$ may well be $\pi i \theta 0$ (Bennett) though the etymology is difficult: Ventris has abandoned his alternative suggestion $q^{u}$ elthos, (Archaeolo$g y$ VII, 1954, p. $18[=M V 2]$ ) 'tribute' in Docs.
 Lejeune (Rev. de Philologie XXIX, i955, p. 169 [ $=. / L L 2]$ ) 'of cedar-wood'.
14. wi-ri-mi-jo etc. $\mathrm{KN} \mathrm{Sd} 040 \mathrm{I}+$, only shows an alternance if repeveós of wild figwort', as suggested in Evidence (p. ıoo a): but Palmer's (Gnomon XXVI, $1954[=L P$ 1]) suggestion fpıvéoc 'of leather' is accepted in Docs.
D. Cases of Mycenaean $i=$ Greek $\varepsilon$ in vocabulary word roots are very rare: I have been able to find only:
I. dipa PY Ta $641+$, generally accepted as $\delta \dot{\varepsilon} \pi \alpha c$ (first suggested by Blegen. 'E $\varphi$ 'Apx. 1953, p. ooo): Mühlestein (Les trépieds de Pylos, privately circulated $[=H M$ 5]) compares the Arcadian place-name $\Delta i \pi \alpha i \alpha$.
2. mira, PY Ta 715 may be connected with $\mu \varepsilon \lambda_{i} \eta^{\prime}$ 'ash' (Ventris, MV4) if this is not from $*_{\mu \varepsilon \lambda}$ Docs. p. 342.
E. The cases of apparent vowel alternance in suffixes are easier to classify. I shall deal with: I. dative/locative singulars from consonant stems in $-e$ or $-i$. 2 , the $-e-j o /-e-o /-i-j o$ suffixes. 3. the $-t i-r i-j a /-t i-r a_{2}$ suffixes. 4. the $-e$ suffix $\left(=-t s^{?}\right) 5$. the -we-sa / -we$t a /-w i-t a$ suffixes. 6 . various spellings with $-a-\theta,-a-i .7$. possible cases of vowel dissimilation $-e-e>-e-i$ or $-i-e$, which may be included under this head as being of morphological origin.

1. Dative/locative singular of consonant stems are normally -e: but stems in I. E. *-s- nearly always show $-i$ (by dissimilation ? v. $\sigma$ below), e. g. a-ko-ro-we-i
 $e-r e-i$ PY Jn 829 (locatives of "Eגos Docs.) and ti-mi-to a-ke-e with ti-mi-to a-ke-i (see B2 above)], and in other roots forms with -i are usually preferred at Mycenae ( $k a-k e-w i$ MY Oe $121 \chi \alpha \lambda x \tilde{\eta}_{\mathrm{Ft}}, k e-r a-m e-w i$ MY Oe 125 кєр $\alpha \mu \tilde{\eta}_{\mathrm{Ft}}$ etc.) and sometimes

subject v. Chadwick ( $\mathcal{F} C .3$ p. 10), Risch (Et. Myc., p. $172[=E R$ 2]), Georgiev (VG 8 p. 181), and Docs. p. 85: it is uncertain whether this fluctuation has its origin in the separate I. E. dative (*-ei) and locative ( $-i$ ) endings, in phonetic change (Georgiev loc. cit. suggests $-e i>\bar{e}>\bar{i}$ ), or in an $i / e$ alternance in Mycenaean Greek. The forms that are found cannot be assigned to separate cases ( $-e$ dative, $i$ locative): for fluctuations in the locative see above, and po-se-da-o-ni (loc. cit.) is marked as dative by the following do-so-mo $=\delta o \sigma \mu o ́ s$, cf. po-se-da-o-ne do-so-mo PY Es 646.
2. The -ejoi-eot-ijo suffixes (for discussion v. Chadwick, $\mathfrak{F C}$ 3; Lejeune, $M L 5$, p. 73 ; Docs. p. 89) may in some cases represent three different classical suffixes (-عו0¢, -ع0૬, -to૬: v. Schwyzer, Griechische Grammatik I, p. 465).

In this connection let us state that the symbol $-j$ - in Mycenaean denotes: firstly, a vowel glide which may be written (i-je-re-u PY An $218+$ ) or omitted ( $i-e-r e-u$ PY En $74+$ ) (this is its only function after $-i$ ); secondly, the second element of an $-i$ diphthong (as presumably always after $a, o$, e.g. genitive singulars of thematic stems invariably show $-0-j o=-000$ ). Chadwick thinks that the writing of $e-j o$ is paralleled to this latter, and so always interprets it as -eio, but I am inclined to think that the situation after $e$ is partly paralleled to that after -i- in view of the apparently random variations here listed. Palmer (LP 3 p. 21) suggests to-ro-qe-jo-me-no PY Eq 213 is a present participle (cf. т $\rho 0 \pi \varepsilon \in \omega$ ), Furumark ( $A F I$ p. 51) that $a-r e-j a \operatorname{Tn} 316={ }^{\prime} A \lambda \varepsilon ́ \alpha$ in Arcadia (Docs. compares 'Ap $\alpha$, 'Apstar Schwyzer, Delectus ${ }^{3} 665$ ): if either of these is correct it shows that $-e-j a,-e-j o$ can be -ea-, -eo-. The occasional spelling in $-e-i-j a \mid j o$ does not help as $-a-i-j a|j o,-o i j a| j o$ also occur. There seems no ground to assume that the distinction is one between I. E. ${ }^{*} y$ - and ${ }^{*}-s-(E R 3$, p. 253). See Hampe, Glotta XXXV, 1956, p. 290, who has independently come to the same conclusion, and thinks the Homeric parallels ( $\chi \dot{\alpha} \lambda x \in \iota 0 \varsigma \chi \dot{\alpha} \lambda x \in o \varsigma$ etc.) cited by Chadwick are artificial creations metri gratia.

However, one word frequently shows two or three different forms with no apparent distinction of meaning: for adjectives of material compare:
$k a-k e-j a-p i \operatorname{KN~Sd} 0409, k a-k i-j o \mathrm{KN}$ So 894: both from classical $\chi \alpha \dot{\alpha} \lambda x \in 0 ¢$ Docs.; Mühlestein (cited VG 3) compares further $k a-z a$ KN M o452, but Chadwick (7C 7 p. 85) doubts if -kia>-kya>-za.po-ni-ke-a KN X 1017 , po-ni-ki-ja KN Sd 0402+: ( $=\varphi 0<v i x \in \alpha$ 'painted crimson' Docs.).
po-pu-ro. KN L 758, po-pu-re-ja KN L 474. ( $=\pi о р \varphi \dot{p}$ коs Georgiev, Docs.): this assumes that $-\mathrm{ro}_{2}$ can represent -rjo or rio.
wi-ri-ne-jo KN Sd 0415 , wi-ri-ne-o KN Sd 0408+, wi-ri-ni-jo KN Sd 0401 : v. C 14 above, and for single cases with $i \mathrm{cf}$.
$k u-r u$-so PY Ta $707+$ adjective ( $=\chi$ ро́бsoc in meaning): Mühlestein (Et. Myc., p. $93[=H M$ 7]) suggests this is derived from $\chi$ póбгоє via * $\chi$ púooos and interprets khrus(s)os, but Docs. p. 345 suggests $\chi$ puoós is both noun and adjective.
$k u$-wa-ni-jo PY Ta $714=$ xuáveos, implied by Docs. p. 344, and suggested by Gallavotti, La Parola del Passato 52, 1957, p. 13.
$q 0-w i-j a$ PY Tn $316+$ : Georgiev etc. suggest $g^{w}$ owia $=\beta$ ócıa.
Other adjectives of material show consistently -e-jo, e.g. $k u-t e-s e-j o$ v. C 5 above. The apparent partial substitution of the I. E. *-iyo suffix for the -*eyo suffix is complete in Lesbian and Thessalian: we may have here an intermediate stage,
or this may be in part a general confusion of $i$ and $e$ : this latter seems more likely when confusion occurs in cases other than adjectives of material, though here most examples are very uncertain:
$k e-s e-n u-w i-j a$ KN Ld 573, ke-se-ne[we-ja ? KN Ld 649, ke-se?]nu-zee-jo KN X65 may all be connected with Homeric $\xi_{\varepsilon \iota v i a}$ / $\xi_{\varepsilon \iota \nu \eta i ́ a ~(D o c s .) . ~}^{\text {. }}$
$k z-p a-r i-s e-j a$ PY Sa 488 is probably an adjective 'of cypress wood' (Docs. etc.), but $k u-p a-r i-s i-j o$ PY An 657 is probably an ethnic, though Lejeune (Et. Myc., p. ${ }_{151}[=M L 7]$ ) thinks they may be the same word (ethnic).
po-si-da-e-ja PY Tn 316 (*Пooi $\delta \dot{\alpha} \varepsilon \iota \alpha$ Evid.) is a proper name, while po-si-da-i-jo on same tablet is probably a place (Hooiठ́aiov 'shrine of Poseidon ? v. Docs. p. 288). Adrados however reads po-si-da-e-ja as Пoctoaĩ (Emerita XXIV, 1956, p. 399.) qe-ra-si-ja KN Fp $1+$ : Furumark ( $A F_{1}$ ) suggests $\tau \varepsilon \rho \alpha \tau \varepsilon i \alpha$ (but Docs. compa-
 $\sigma \tau \varepsilon ́ \lambda \lambda \omega$ ? Palmer, Eranos LII, 1955, p. $28\left[=\right.$ LP 6 b] $q^{u}$ elioi cf. $\left.\varphi \alpha \lambda o ́ v, \varphi \alpha ́ \lambda \alpha \rho \alpha\right)$.

Still more dubious are single examples which show unexpected suffixes, e. g.:
a]-ko-so-ni-ja KN Pp $437=$ ágóvea ? Furumark (cited VG 3).
$p a-k e-t e-j a$ PY An 18+: the termination is unexpected if from $\pi \tilde{\eta} x \tau \iota \varsigma$, but the word may be an ethnic (Docs.).
po-ti-ni-ja-we-jo PY Jn 310+, po-ti-ni-ja-we-i-jo KN X 7742: potniaweios 'subject to the goddess $\pi \dot{\prime} \tau v L a$ ' ? Docs., but * $\pi 0 \tau v a l o c$ would be expected.
suza KN F 74i + may $=$ sukyai $<$ sukiai $<$ ouxéal 'fig-trees', but may represent oũxa 'figs' (v. Palmer BFCS II, $1955[=L P 4]$ p.41, 7 C 7 p. 85 , Docs.).

See also proper names ( $\mathrm{F}_{1}, 17,18$; G 2, 3, 4, 24, 26; H 2, 3, 16, 18, 19, 22, 23, 25-28, 31).

Against the general confusion which the above seems to suggest may be set the many women's occupational names in $-i-j a$ which sbow no such confusion (-eja only from assumed masculines in -eus).
3. The -ti-ri-ja /-ti-ra $a_{2}$ suffix was in Evid. transcribed either - $\tau \rho \iota \alpha$ or $-\tau \varepsilon \rho \alpha$, but the former is now accepted by Docs. in all cases, so no question of an alternation arises. o-ti-ri-ja PY Aa 313 , o-ti-ra $a_{2}$ PY Ab 417 seem unlikely to be connected with o-te-ra MY Oe 106 (suggested by Chantraine (Et. Myc. $\left[=P C_{4}\right.$ ] p. 99): Georgiev ( $V G 4$ ) reads the last as ${ }^{*} \Omega \tau(\varepsilon) i \lambda(\lambda) \alpha$ as $-r a$ is not equivalent to $-r i-j a$, nor is there any reason to link $a-k e-t i-r a_{2}$ PY Ab $564+$, $a-k e-t i-r i-j a$ KN Ai $739+$ (root uncertain: for suggestions v. Voc., Chantraine, PC 4 p. ioo) with $a$-ke-te-re PY Jn 832 (askētēres? Docs.), $a_{\mathrm{g}}$-ke-te-re KN V 118 (see below 4) or ja-ka-te-re PY Mn in.
4. Chantraine (loc. cit.) tentatively proposes $\dot{\alpha} x \varepsilon \sigma \tau \rho i s$ as a reading of $a_{2}-$ $k e-t e-r e \mathrm{KN} \mathrm{V}_{118}$, and Georgiev suggests reading the proper names me-za-ne PY Fn 50 as Meooavis, pa-re KN L 469 as $\Phi \alpha \rho^{\prime} i_{c}(\Phi \dot{\alpha} \lambda \eta \xi$ Docs.): none of these suggestions is put forward with any confidence, and together they cannot establish a probability that the -ţ suffix (common in Mycenaean in women's names, e. g. mu-ti-ri PY Ep $212=$ Muptidic Docs.) is ever written -e.
5. Adjectives in $-w e-t a=-$ Fevta, $-w e s a=-$ Feooa are fairly common in My cenaean (e. g. to-qi-de-we-sa PY Ta $71 \mathrm{I}, 0-d a-k u-w e-t a \mathrm{KN}$ So 0435): Georgiev proposes to read wa-ra-wi-ta KN So o443 as wäl(l)āwinta $={ }^{*} \dot{\eta} \lambda \eta \dot{\eta} \varepsilon \nu \tau \alpha$; alternatives are wlâwista Lejeune (ML 2 p. 169); cf. áppatotos, or a man's name,

Docs., and here too a prima facie case does not seem to have been made out.
6. Spellings with $a-e,-a-i$ : for a general discussion see Lejeune (ML 5 p . 41 ff .): he suggests that -a-e- may represent $a i$ in $a-e-s e-w a$ PY Fn 79 (personal name, Ais-?), a-ta-e-mu KN Vd 1.37, ka-e-sa-me-no PY An 656 (man's name: Georgiev, VG 5, suggests Gazuèsamenos cf. $\gamma \alpha i \omega v$ ), and za-e-to-ro PY An 616 (Mühlestein $H M 2$ р. $130=$ ócaitopos 'Truchsesse' etc., Georgiev, $V G_{4},=\zeta \eta \tau \rho o ́ s$ ?), but his attempt to show that $-a-,-a-e$ - and $-a-i$ - alternate in $n a-s i-j o$ KN B $8 o o$ (man's name: Georgiev $=$ Näsios), na-e-si-jo KN V $147+($ also a man's name) and na-i-se-wi jo PY Jn $692+$ (ethnic ? Georgiev, $V G 5=* \mathrm{~N} \alpha$ atotoc) is unconvincing as being based entirely on proper names, po-si-da-e-jo ijo v. E 2 above. Final examples: $e-q e-t a-e \mathrm{KN}$ As 82 I may be a dual (e-qe-ta-i PY An 607 being a dative plural): Docs. compares we-ka-ta-e KN X 1044, mi-to-we-sa-e KN Sd 0404 (nom. plur. fem.), to-e PY Eb 842 (dat. sing. $=\tau \tilde{\omega}$ ? cf. toiqe PY Na 520 which is probably dative plural: Georgiev ( $V G 5$ ) suggests to-e is thöen cf. $\theta \tilde{\omega} \circ \theta a \iota$ but the cases are so few and so various that the possibility of scribal error (which may of course, be significant in itself) cannot be ruled out.
7. Docs. suggests possible vowel dissimilation in $a-p e-e[s i$ PY An 614, ] $a-p e-e-$ si PY Xn 86/a-pe-i-si KN Od 666 (apeensi =ä $\pi \varepsilon \iota \iota$ 'are away') and $a-p e-e-k e$ PY An 724 /a-pi-e-ke PY Un 2 (á $\mu \varphi t \varepsilon ́ \chi \varepsilon t$ Furumark, $A F I$, p. 42) if both $=\dot{\alpha} \varphi \dot{q} \eta \chi \varepsilon$ (they may possibly both $=\dot{\alpha} \mu \varphi t \varepsilon ́ \chi \varepsilon t$, in which case we would have assimilation in the former). The latter case is too uncertain to be of value as evidence: the former is more plausible, though neither the readings nor the assignment of both verbs to the root «to be" is certain. The spelling $a$-pe-i-si would not be normal either from this root or «to go* and cannot of course represent the Attic spurious diphthong. Cf. also the -s-stem datives, for which v. i above.
F. There remain the proper names: I shall summarize the various couplings and interpretations without commenting on their plausibilities, which is largely a matter of individual opinion. Cases which show both $e$ and $i$ forms are:

1. $a$-da-ra-te-ja PY Ab 60 'A $\delta \rho \alpha \dot{\alpha} \sigma \varepsilon \iota \alpha$ Voc., cf. a-da-ra-ti-jo PY An $65^{6}$ perhaps the ethnic derived from it, Docs.
2. ai-ke-wa-to KN Dd $1295^{-}+$, ai-ki-wa-to KN Uf 987 - both men's names
 comparing also a-ke-zwa-to PY An 661 (Docs. 'A $\mathrm{A} x$ éraotoç'), $a$ - $k i$-wa-ta KN B 80 (Georgiev 'Apxcráozac) and $a-k e-w a-t a \operatorname{PY} \mathrm{Jn} 43 \mathrm{I}$ : these last three are also coupled by Meriggi (Glossario miceneo [= PM 5]).
3. a-ke-re-u PY Cn $44 \mathrm{I}+$ compared by Ruipérez (MR3p. 117) with $a$-ki$r e-w e$ PY Fn 79 (dative of 'Axi $\lambda \lambda \varepsilon \varepsilon^{\prime} \leqslant$ Voc.: add $a-k i-r e-u$ KN Vc 106) and $a-k e-r e-w a$
 'AүpéFa? v. 14 below.
4. a-te-mi-to PY Es 650, a-ti-mi-te PY Un 219 : respectively gen. and dat. of "Aprequc Andrews, cited Docs.
5. de-ko-to PY Cn 600, di-ko-to KN X 57: men's names: comparison in Docs., queried.
6. e-do-me-ne-u PY En 60 man's name ( $=$ 'Ioopevej́s Voc., as Georgiev - or compare "I $\delta \mu \omega \nu$, 'I $\delta \mu \circ v i o \partial \eta \zeta$ ) cf. $i-d o-m e-n e-j a$ PY Ep 212 woman's name ('I $\delta o \mu \varepsilon ́ v e \tau a$ Voc.).
7. $e$-pa-sa-na-ti, $i$-pa-sa-na-ti women's names PY Eo 247, where the former (read by Georgiev as ${ }^{*} \mathrm{E} \phi a v \tilde{\eta} \tau i c$ ) is erased and replaced by the latter.
8. e-te-wa-jo-jo PI Sa 769 compared with e-te-tea-no KNC 913+(*'Ezerávop Georgiev) and e-ti-zo-ju PY Va 15 by Lejeune ( $M L \sigma$ ) - all men's names. Georgiev (VG 4) compares e-te-wa-jo PY Xa 639, e-ti-wa KN Fs i9 (='Etéfac?) and e-ti-wa-ja KN Ap 639 (Eबzıаiov?).
 Na 547 (a derivative? for -etwo?); for suffix cf. $\not u_{2}-r a_{2}-a-k i-r i-j o$ below 14.

1o. na-e-si-jo etc. v. above E 6.
11. $p a_{2}-m e-s i-j o \mathrm{KN}$ As $1516, p a_{2}-m i-s i-j o \mathrm{KN} \mathrm{Sc} 135$ (ethnic from Пáplooc Palmer, $L P \not{ }_{4}$ p. 40) are probably the same name (Docs.): Georgiev VG 7 p. 53 also suggests this, or alternatively reads the former as $\Pi \alpha \mu \mu \eta \tau i \omega v ;$, he cites further pa 34 so [KN X $328, p a] 37$ so KN Dn 1239 (reading 34 as $m e_{2}$ ).
12. pe-re-qo-ta PY Eb $159+$, pe-ri-qo-ta-o KN Dn $42+$ (men's names) are probably not the same word: Docs. suggests Tทis甲óvins and Пepe甲octac respectively.
13. pe-we-ri-jo KN As 1517 man's name *Пeréploç Georgiev, comparing pi-we-

14. $p u_{2}-r a_{2}-a-k e-r e-u$ PY Un 228, cf. $p u_{2}-r a_{2}-a-k i-r i-j o$ PY Na 425 (v. kereteu above 9): probably place-name (Пú $\lambda \iota \alpha$ Lejeune, Minos IV, $1956[=M L$ 3], Фи̃ $\alpha$ Palmer, $L P_{4}$ p. 41) + personal name, in which case cf. a-ke-re-u above 3 ;
 respectively.
15. te-mi-ti-ja etc, v. above B 2.
16. te-pa $a_{2}-j a \mathrm{KN}$ Ap 586 woman's name, $t i$ - $p a_{2}-j o \mathrm{KN}$ As 1517 man's name probably different roots: Georgiev suggests $\Theta_{\eta} \mathrm{i} \alpha i \alpha$ and $\Theta_{t} \beta$ aioz (or $\Sigma_{\tau \iota} \lambda \beta a i o c$ Docr.) respectively.
17. to-te-ja KN Ak $611=$ to-ti-ja MY Fo 101 (women's names) $=\Delta$ órta Georgiev ( $V G 4$; with assimilation of initial consonant).
18. we-ra-te-ja KN Ap 618, we-ra-ti-ja KN A 784: the former has been emended to we-ra-ti-ja.
(9. Single cases of $e=$ Greek 1 are:

1. $a-e-s e-w a$ v. above E 6 .
2. ai-ki-de-o PY Na 529: man's name dat.: cf. Aifiôlov: Georgiev (VG 4).
3. a-me-ja-to PY Sa $834+$ : man's name: cf. 'A $\mu$ iavtoc 'A $\mu \mu \varepsilon ́ \alpha c$ ? Georgiev (VG 5).
4. a-ta-ma-ne-we PY C'n 131: man's name dat. cf. 'A0 $\alpha \mu \dot{v} v \alpha$ Georgiev: dat. of $a$-ta-ma-ne-u PY Cn $655^{\text {'A }}$ - $\alpha \mu \alpha \nu \varepsilon u^{\prime}$ Docs.
 man's name.
5. de?]-ke-se-ra-wo KN As 1516: man's name: $\Delta \varepsilon \xi i \lambda \alpha \log ^{\prime}$ Docs.
6. de-wi-jo PY An $218+$ : man's name $=\Delta$ iflos Mühlestein (HM 1 p. 3).
7. e-u-we-to nom., e-u-z'e-to-ヶo geu. PY In $750=$ *EuFiotwp Georgiev (VG 5), Euëtor or Euestor ? Docs.
8. e-zo-ze v. above B 1 .
9. i-pe-me-de-ja PY Jn 316: a goddess? cf. Iẹturiosıa Evid. (not from fịt), ipermedeja Gallavotti ( $C G$ I p. 146): cf. following.
10. i-pe-se-zva PY Gn 1184 man's name dat. $={ }^{*} \mathrm{I} \phi u(\sigma) \sigma \varepsilon \Delta \alpha(\sigma)$ Georgiev (VG 5), *'l $\downarrow$ eráa Docs.
11. kà-e-sa-me-no, v. above E6.

12. *35-ki-no-o v. above C 6 .
13. me-no-e-ja PY Ta 642: Palmer (Minos V, 1957, p. 63) very tentatively compares Mívas.
14. me-nu-wa KN V 6o + man's name == Mıvóac? Docs. Mevóaç Georgiev.
15. me-za-ne v. above $\mathrm{E}_{4}$.
16. *34-zo v. above C 6 .
17. neqeu PY Sn 64: man's name Nëqeus ( $>$ *Nexxeús $>$ *Nexeús) ? Voc., but cf. N'j$\pi \varepsilon \iota \alpha$ Docs.
18. $0-p e-p a_{2}$ PY Cn 570: man's name dat. O-pi-qa-i Georgiev (VG 4).

19. pa-re v. above $\mathrm{E}_{4}$.
 II入síctag Docs.

20. sametijo KN Ap 639: woman's name * $\Sigma \alpha \mu i \nu \theta$ loc Georgiev, but the new Knossos Tablets reads samatijo: v. H 14 .
21. sa-pa $a_{2}-r e-j 0$ KN D 1412+: place-name $\Sigma \varphi \alpha i p t a$ : Georgiev (VG5).
22. se-to-i-ja KN L 654+: place name $\Sigma$ ítzta? Meriggi (PM 5), but $\sum \eta$ roía Docs.
23. we-da-ne-we PY Es $646+$ : man's name dat. cf. io avós Georgiev (VG 5); cf. also aec-u-da-ne-ze PY Cn 4 I 8.
H. Single cases of $i=$ Greek $\varepsilon$ are:
24. $a-65-m a-n a-k e \mathrm{KNFs} 3:$ dat. of. *'Aveqúvaүes Georgiev VG 4 (reading $\sigma_{5}$ as $\left.n i_{2}\right)$ cf. $\alpha \nu \dot{\gamma} \gamma \omega$ or $\alpha ้ \nu \alpha \xi$.
25. a-si-ja-ti-ja PY Ae 134+: place-name, Docs. p. 147 compares "Acra, 'Aocátac but Voc. *'Aotavtía.
 Knossos Tablets reads di-du-me-o-[.
26. di-65-pa-ta KN L I 568: man's name? = * $\Delta \ell v e \pi \alpha v \tau \alpha(5)$ Georgiev (VG 4, reading 65 as $n i_{2}$ ).
27. e-wi-ku-wo-te v. above B 3 .
28. i-ma-di-ja PY En 816: man's name, *'Epuaòtac Georgiev (VG.5).
29. i-ma-di-jo PY Cn 436+: man's name *Epú́ótos Georgiev.
30. i-mi-ri-jo KN Db 1 186: man's name 'I $\mu$ éploc? Docs.
31. i-na-ni-ja v. above B3.
32. i-65-qe v. above B 3 .
33. i-ra-ta PY En $659+$ : woman's name ? "Ep $\alpha \tau \alpha$ Georgiev (VG 5).
34. ko-pi-na PY Ep 617: woman's name Kúnevva? Georgiev, but *Kúpıva Docs.
35. mi-ru-ro KN Ap $482+$ : man's name Mépu入hos Georgiev (VG 4).
 the new Knossos Tablets reads sa-me-ti-jo: v. above G 25 .
36. o-kirra PY Cn 285: man's name cf. 'Qxé $\lambda \lambda \alpha{ }^{\prime}$ Georgiev (VG 4).
37. $p a_{2}-m i-j a$ PY Ea $543+$ place-name or ethnic: *Фaprea? Georgiev.
38. pa-wi-no KN B 799: man's name Phawīnos $=\varphi \alpha \varepsilon \nu \vee o ́ s ~ G e o r g i e v . ~$
39. pi-82 PY Ma $225+$ : place-name, $\Phi \varepsilon i \alpha$ or $\Phi$ qaí? Docs., reading 82 as $j a_{2}$ : Carratelli, Attie Memorie dell'Accademia Toscana p. 5, suggests Míoa.
40. pi-ri-u-wo-no KN B 8o3: man's name $=\Phi \iota \lambda$ é $\omega v$ ? Georgiev ( $V G 4$ 4).
41. pi-sa-vea-ta KN B 1055: man's name $=$ *Пsioafacas Georgiev (VG 4).
42. po-mi-ni-jo KN V 503 +: man's name $=$ Поч $\mu$ évoç, Поц $\mu$ évaov Meriggi (PM 5), but Пot $\mu \nu i(\omega \nu$ Georgiev.
 Die oka-Tafeln von Pylos, Basel 1956, p. 13; cf. nos. 2 and 22 above.
43. qe-ri-jo KN Ag 1654: man's name Tńpsıo૬? Meriggi (PM 5), but Өnpíwv Georgiev.

 place-name Docs.
44. re-pi-ri-jo PY Eq 146: man's name Docs., cf. $\Lambda \varepsilon ́ \pi \rho \varepsilon о \nu, \Lambda \varepsilon \pi \rho \varepsilon u ́ c$.
45. ri-jo-no KN Ap 629: man's name gen. $\Lambda$ éc $\omega v$ or place-name locative

 ( $V G_{4}$ ).
46. $t i-m i-z a \mathrm{~V}$. above B 2 .
 but cf. Eproṍs (place-name) Docs
47. tu-ri-ja-ti PY En 659.5: place-name, @up\&ãtı¢, Mühlestein (cf. nos. 2 and 22 above).
I. The evidence summarized above permits the following conclusions:
I. The contention ${ }^{1}$ that most of the certain examples of Mycenaean $e=$ Greek $\iota$ are in proper names or words not of Greek origin seems correct as far as roots are concerned, and to apply also to $i$ $=$ Greek $\varepsilon$ which is rare: in the roots of $I$. E. origin for which an alternation has been postulated the evidence is very inconclusive. The fact that in one root (ix<os) the I. E. position is anomalous, and in another ( $\bar{\varepsilon} v, i \nu$ ) the Greek dialects differ, is probably largely responsible for the interpretations, which thus lose much of their weight
as evidence for an alternation: in a third root ( $\theta$ ź $\mu c$ c $)$ Chadwick has suggested to me that the generally accepted assignation to the root *dhē- 'put, place' may possibly be incorrect, but I find this unconvincing: for the suffix cf. סóvaucs.
48. It may be argued from the above that the frequent occurrence of an $i / e$ alternation in I. E. suffixes is probably due to the independent causes discussed above. Risch ${ }^{1}$ suggests that the origin is phonetic except in the $-e-j o /-e-o /-i-j o$ suffixes and the $-e /-i$ dativelocatives.
49. If the above statements are correct, it follows that proper names which show an i/e alternation in the root are unlikely to be of I. E. origin: in connection with Georgiev's statement ${ }^{2}$ that $70 \%$ of the proper names in the tablets are of I. E. origin, this throws doubt on many of his own interpretations cited above. These names are too uncertain to allow argument in the opposite direction (i. e. that the appearance of an alternation in proper names of I. E. origin is an argument for its occurrence in vocabulary words): further, it is to be noted that Mycenaean $i=$ Greek $\varepsilon$ seems as common as $e=$ Greek $\ell$, which is not in accordance whith the pattern of vocabulary words.
50. The fact that many words appear in one form onlys is an argument against the general phonetic (or graphic) confusion of $i$ and $e$ suggested by Risch ${ }^{4}$ and Ruipérez ${ }^{5}$ : furthermore, even in words of supposedly foreign origin it seems difficult to explain how confusion could occur both ways if these words are all from the same language (for example, if $e$ in that language was a closer vowel than Mycenaean $e$ and was represented in Mycenaean by either $e$ or $i$, surely $i$ would always appear as $i$ ): the possibilities that we have to deal with two languages, or one language which did not distinguish $i$ and $e$, are purely hypothetical.
51. Notwithstanding this, there are enough certain or almost cer-

[^1]tain cases of an $i / e$ alternation in the roots of words which have no certain I. E. derivation to show that fluctuation does exist and may have an influence on words of I. E. origin: note especially $d i-p a=$ $\delta \varepsilon ́ \pi \alpha \varsigma, k u$-te-so $=x u ́ \tau \iota \sigma o s, q e-t o=\pi i \theta o l$ and the proper names $e$-do$m e-n e-u / i-d o-m e-n e-j a, ~ e-p a-s a-n a-t i \mid i-p a-s a-n a-t i$ which are fairly certain because their length reduces the possibilities of coincidence.
6. It remains to compare various special cases of $i / e$ alternation in classical Greek (as done by Chadwick ${ }^{1}$ ) to see if these provide explanations in whole or in part for the phenomena listed above. Unexplained are the proper names e-ta-li-o-ne $=1 \delta \dot{\alpha} \lambda c o v$ and $k e-t i-e-$
 on the tripod-stand, which may be from the same source as some of the Mycenaean examples, Arcado-Cyprian $i \nu=$ others $\varepsilon \nu \nu,-\mu \nu \nu \circ=$ $-\mu \varepsilon \nu \circ G$ and similar cases are apparently due solely to the position before a nasal ${ }^{3}$ : even in this position Mycenaean parallels are dubious (v. B3, E5, H2I) and the mediopassive participle invariably shows -me-na, -me-no. Partial parallels are perhaps provided by the Arcadian datives of ${ }^{*}-s$-stems in $-\ell$ if, as Risch ${ }^{4}$ suggests, these are a «hyperurbanism»- $\varepsilon i>-\varepsilon i$ and thence $>i$ by analogy of the change of *$\pi о \iota \mu \varepsilon \varepsilon \varepsilon$ to $\pi o c \mu \varepsilon \varepsilon^{\nu} c:$ but the accepted explanation is $-\varepsilon i>-i t>i$ ) for the Mycenaean dative/locatives in $-e / i$ : the Lesbian and Thessalian adjectives of material in $-t 0 \varsigma$ and the change of $-\varepsilon->-t$ before $\alpha$ or 0 in various dialects, for Mycenaean adjectives of material: and an occasional vowel fluctuation in forming compounds (e. g. 'Apxiлохоя / 'A $\rho \chi \varepsilon ́ \lambda о \chi 0 \varsigma, ~ T \eta \lambda i ́ \mu \alpha \chi 0 \varsigma / T \eta \lambda \varepsilon ́ \mu \alpha \chi \circ \varsigma)$ for ai-ke-zua-to etc. F2, de?]$k e$-se-ra-wo G6, di-65-pa-ta H4. Other cases (e. g. -pt->-pe-Lesbian etc., $-\iota \rho->-\varepsilon \rho-$ Elean, $-\iota--\imath->-\varepsilon--t$ Attic $\dot{\varepsilon} \sigma \tau i \alpha \alpha=$ others $i \sigma \tau i \alpha$ etc., and I. E. 'reduced' grades in Aeolic $\pi i \neq 0 \rho \varepsilon \varsigma=$ Attic $\tau \varepsilon ́ \tau \tau \alpha \rho \varepsilon \varsigma$, Attic $\pi i ́ \tau \nu \eta \mu \iota)$ seem totally irrelevant.

1 FC 3, p. 16.
2 Schwyzer, Delectus 679.
3 Examples before other consonants are very uncertain, e. g.: xaté $\theta$ coav Schwyzer 683.4 is a scriptio inversa for $-t \alpha \nu$ as $-\varepsilon \in \varepsilon \sigma \alpha \nu$ would not be the Arcadian
 very dubious interpretations. Pamphilian is ibid. 686 is from *èvc (also in Cretan) and $\Delta \eta \mu \tau \rho i \alpha$ ibid. is presumably the xocv $\dot{\eta}$ confusion of $\eta / \bar{c}$.

4 Et. Myc. (=ER2), p. 172.
7. To summarize: an i/e alternance has been shown to exist in Mycenaean, but it is very tenuous in words of I. E. etymology: when parallels are quotable from classical Greek, these can usually be explained as special cases ${ }^{1}$.

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[^0]:    1 E. g. «Evidence» '7ournal of Hell. Studies LXXIII (1953) (= Evid.), p. oo' M. Lejeune, Etudées Mycéniennes ( $=M L$ 5), p. 41 ; J. Chadwick, Trans. Phil. Soc. 1954 (= 7C 3), p. 4; M. S. Ruipérez, Et. Myc. (= MR 3), p. 119; Ventris and Chadwick, Documents in Mycenaean Greek ( $=$ Docs.), p. 76 ff .

    2 But note the classical Greek alternation $\varepsilon$ elc shown in po-se-da-o-ni PY Un 718, Attic Пoठ̀siõavc/ po-si-da-i-jo PY Tn 316 Attic Пoocóáiov or some similar form derived from the adjective, and see I 2 below.

    3 V. Georgiev, Et. Myc. (VG 8) p. 182, thinks diphthongal -i is never writ-
     see also on ee-jo below E2.

[^1]:    1 Et. Myc. (=ER 3), p. 253.
    $2 V G 8$.
    ${ }^{3}$ e. g. i-qi-ja, women's occupational names in -i-ja, e-ke, e-qe-ta.
    4 ER 3, p. 253.

    - $M R_{4,}$ p. 18 .

