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The Status of [æ:] in Attic Greek

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One of the best known features of Attic-Ionic is the sound change by which inherited long \bar{a} was raised to long open \bar{e} . This change took place in all environments in Ionic. In Attic, it either did not take place after the sounds written EIP or, according to others, it did take place there too but was later reversed in this special environment. C. D. Buck describes the change as having occurred gradually and adds: "There was once a period, still reflected in some inscriptions of the Ionic islands, when the new vowel was not yet fully identical with the general Greek H, that is, it was even more open. But in general, the H in both syllables of Attic-Ionic $\mu\eta\tau\eta\rho$ had the same sound."¹

The new and more open vowel to which Buck refers is [æ:], which is usually assumed as a necessary first stage of the change from long \bar{a} and which subsequently became identified with the long open \bar{e} derived from inherited long \bar{e} . Buck wisely does not venture to say how long a period this intermediate stage lasted. W. Sidney Allen is even more cautious,² observing only that the development of \bar{a} to [ε:] probably proceeded via a stage [æ:], which in turn may be represented by some Ionic inscriptions of the Cyclades. Here the sign H was at first used only to stand for the vowel arising from original long \bar{a} , whereas the sign E continued to be used for the vowel derived from original long \bar{e} . This graphic device is found, for example, in a famous archaic inscription in meter from Naxos, beginning with the words NIKANΔPH M'ANEΘĒKEN, "Nikandre dedicated me."³

¹ *Comparative Grammar of Greek and Latin*, 10th impression, Chicago, University of Chicago Press, 1966, pp. 85–86.

² *Vox Graeca, The Pronunciation of Classical Greek*, Cambridge, Cambridge University Press, 1968, p. 70.

³ IG XII.V.2; see C. D. Buck, *Greek Dialects*, Chicago, University of Chicago Press, 1955, pp. 189–190.

The last vowel of the name Nikandrē is written with H as originally from long \bar{a} ; the third vowel of *anethēken* is written with E as originally from \bar{e} . This handy graphic distinction, unfortunately for the thesis of the present article, was not observed in Attica, although the sign H occurs occasionally in Attic inscriptions prior to the official adoption of the Ionic alphabet in Athens in 403 B.C. Before that date the sign E represented both short and long e .

Is it possible to define more closely than Buck has done the period in which [æ:] had not yet merged with [ɛ:]? The attempt has been made in several recent publications to which I shall presently turn. To anticipate, it seems to me that the most reasonable hypothesis is that [æ:] emerged in Attic-Ionic around 900 B.C. and was retained in Attic until about 400 B.C. The main scope of this paper is to defend this assumption against two counterarguments: (1) that a five-level scheme for Attic long front vowels cannot have existed by reason of phonological impossibility and (2) that there is no epigraphic evidence for the sound [æ:] in Attic inscriptions. I should further note that I am accepting provisionally the special argument of Oswald Szemerényi,⁴ based on what seem to me to be very sound proofs that \bar{a} moved to [æ:] in all environments, but that when following the sounds written EIP it later moved back to \bar{a} . This is referred to in the literature as the Attic "Rückverwandlung," and it is important but not essential to my own argument.

Logically, whether the stage [æ:] existed for centuries or for only a short period, if it was ever found in the inventory of sounds, there would be every reason to include it as a member in good standing among the sounds of Attic-Ionic. Buck prefers not to do so. Many recent authorities do posit a specific change from \bar{a} to [æ:], which Michel Lejeune⁵ puts as early as the end of the second millennium and the beginning of the first millennium B.C. E. Risch⁶ suggests the tenth to ninth century B.C. Antonín Bartoněk comments gracefully that "the contemporary investigators often seem to favor very early chronological estimates, chiefly those among them, we may say, who belong to the most outstanding experts in Greek phon-

⁴ "The Attic 'Rückverwandlung,' or Atomism and Structuralism in Action," in *Studien zur Sprachwissenschaft und Kulturkunde, Gedenkschrift für Wilhelm Brandenstein*, herausgegeben von Manfred Mayrhofer et al. (Innsbrucker Beiträge zur Kulturwissenschaft, 14), Innsbruck, 1968, pp. 139-157.

⁵ *Traité de phonétique grecque*, Paris, Klincksieck, 1946, p. 17. In the latest revision of this book, now called *Phonétique historique du mycénien et du grec ancien*, Paris, Klincksieck, 1972, p. 235, n. 2, he claims that the change is earlier than the eighth century.

⁶ "Die Gliederung der griechischen Dialekte in neuer Sicht," *Museum Helveticum*, 12 (1955), pp. 61-76; esp. p. 65.

ology."⁷ The issue involved here is the requirement that the change of \bar{a} to [æ:] must antedate the reemergence of Attic long \bar{a} by compensatory lengthening; such compensatory lengthening itself is hard to date. On the other hand, the earliest Attic-Ionic evidence to document the sound change is the genitive singular form, Ἀφροδίτης from $-\bar{a}s$, in an inscription dated about 700 B.C. from the Euboian colony of Pithekoussai.⁸ Eduard Schwyzer, therefore, to be on the safe side, sets the date for the change as late as the eighth to seventh century.⁹ I prefer here to follow Risch and Bartoněk in setting the date earlier than Schwyzer allows, and specifically at around 900 B.C., but again this is not essential to my argument.

W. Sidney Allen will have none of this. He claims¹⁰ that the maintenance of a distinction involving [ɑ:], [æ:], and [ɛ:] is improbable on general phonological grounds. While a system with five long front vowel phonemes is not impossible transitionally, he maintains that this is exceedingly rare and unlikely to have survived for long. Trubetzkoy, he adds, found this in only one Swiss and one African dialect. But as Bartoněk pointed out,¹¹ the system can be equally well pictured as a four-level system, with [ɑ:] and [æ:] placed on the same level, as shown in Diagram 4.

In this connection, the prior development of the long vowels has been displayed in Diagrams 1 through 3. The long vowels of Common Greek are shown in Diagram 1, representing the inherited Indo-European long vowels. Diagram 2, the post-Mycenean long vowels, displays a further differentiation of \bar{e} and \bar{o} into more open and more closed varieties. Diagram 3 shows the shift on which we are concentrating of [ɑ:] to [æ:] on the assumption that it was affected in all environments.

To get back to Allen's theoretical objections, I might say that the three-way contrast which he considers a fine distinction, [ɑ], [æ:], and [ɛ], occurs in short vowels in many languages, including English. Even in the long vowels, I have turned up a curious analogy with the Attic-Ionic long vowels, as shown in Diagram 4, in a language not noticed by Allen. According to a recent analysis by John S. Austin,¹² the Danish long vowels show four heights:

<i>hvide</i> , "white,"	[vi:ðə]
<i>hvede</i> , "wheat,"	[ve:ðə]
<i>væde</i> , "wet,"	[vɛ:ðə]
<i>vade</i> , "wade,"	[væ:ðə]

⁷ *Development of the Long-Vowel System in Ancient Greek Dialects*, Prague, Státní Pedagogické Nakladatelství, 1966, p. 99.

⁸ SEG XIV 6043.

⁹ *Griechische Grammatik*, I-II, Munich, 1939-1950, C. H. Beck, I, p. 233.

¹⁰ *Op. cit.*, p. 70, n. 2.

¹¹ *Op. cit.*, p. 105.

¹² *Topics in Danish Phonology* (unpublished Cornell University Ph.D. dissertation), 1971.

Diagrams to Illustrate the Evolution of the Long Vowels

1. Common Greek long vowels.

ī ū
 ē ō
 ā

2. Post-Mycenean long vowels.

ī ū
 ē̄ ō̄
 ē̄ ō̄
 ā

3. Attic-Ionic long vowels, about 900 B.C.

ī u
 ē̄ ō̄
 ē̄ ō̄
 ā̄

4. Attic-Ionic long vowels, about 800 B.C.

ī ū
 ē̄ ō̄
 ē̄ ō̄
 ā̄ā̄

5. Attic long vowels, about 600 B.C.

īū
 ē̄ ō̄
 ē̄ ō̄
 ā̄ā̄

6. Attic long vowels, about 400 B.C.

īū
 ē̄ ō̄
 ē̄ ō̄
 ā

It is also interesting to see that long *ā* alternates with [æ:] in this system but only in the environment of an *r* sound. The arguments drawn from phonological probability work both ways, and Allen's examples, like my counterexamples, really are no more than suggestive parallels.

Leslie L. Threatte's argument is weightier.¹³ He calls attention to the absence in Attic of any epigraphic evidence for [æ:], but this absence is by no means the crushing proof he believes it to be. All he has really established is that there is no distinctive grapheme for [æ:], something quite different. As linguists well know, many important phonetic and phonemic distinctions are not represented in spelling, whether in ancient or modern alphabets. It happens that in modern English we use the symbol *a* to cover both the sound of [a] in *father* and that of [æ:] in *man*. According to Björn Collinder, the short *e* symbol in Hungarian covers two distinct sounds not differentiated in the writing system except in that used by linguists like himself: one sound is short [ɛ]; the other is short [æ:]. This is a dialect feature, since in a large northeastern area and in Budapest the [ɛ] has been lost.¹⁴ Both these situations, the English and the Hungarian, to be sure are only casual parallels to the Greek one, but the similarity is striking and they suggest a somewhat similar explanation for the Attic phenomena.

Reference to Diagram 3 shows that once all long *ā*'s had been shifted to [æ:], there would have been no need to create a new grapheme for [æ:], because then there was no contrast between [æ:] and [ɑ:]. At this point the *a*-grapheme would have been sufficient, although in fact there is no evidence for literacy at this period. I am assuming here, as I mentioned before, that Szemerényi is correct in postulating this shift even when *ā* followed the sounds represented by EIP.

About 800 B.C., although that date also is admittedly subject to some caviling, a new long *ā* appeared in the Attic-Ionic long vowel system, as shown in Diagram 4. This was the result of the loss of a nasal following a short *a* sound with subsequent lengthening. Thus the feminine nominative singular adjective *pansa*, "all," became *pāsa*, the accusative plural of the feminine demonstrative, later to become the definite article, *tans*, became *tās*. There was now a contrast between the new long *ā* and the [æ:], which had developed from the earlier long *ā*, and the way was now open for the [æ:] to move further in the direction of [ɛ:]. William F. Wyatt, Jr., speaks of the new long *ā* as triggering this development,¹⁵ although he notes, as I must also note, that Risch dates the emergence of the new long *ā* as posterior to the merger of [æ:] and [ɛ:].

Szemerényi suggests¹⁶ that with the emergence of new long *ā*, the more

¹³ "A Second Look at the Dual Pronunciation of *Eta*," *TAPA*, 100 (1969), 587-591.

¹⁴ *Survey of the Uralic Languages*, 2nd ed., Stockholm, Almqvist & Wiksell, 1969, p. 367.

¹⁵ "The Prehistory of the Greek Dialects," *TAPA*, 101 (1970), 557-632; esp. p. 602; for Risch's view, see the article cited in note 6 above, p. 64.

¹⁶ *Op. cit.*, p. 154.

open allophones of [æ:] in Attic, by which he means those that followed the sounds represented by EIP, moved toward [ɑ:] and merged with it, as already described. If he is right, the stage then would have been set, as the use of writing was disseminated, for subsequent use of the *a*-grapheme to cover the new long \bar{a} , plus the further new long \bar{a} 's resulting from this Rückverwandlung. If he is wrong, the *a*-grapheme in any case would cover the new long \bar{a} and, on this hypothesis, the unchanged long \bar{a} 's which followed EIP. By like reasoning, the grapheme E, and later H, was available both for long [æ:] and inherited [ɛ:] until both sounds were completely merged in the latter.

When this change was completed is a matter of further controversy. While few scholars would disagree with Diagram 6 as a representation of the Attic long vowels around 400 B.C., Diagram 5 as of 200 years earlier is subject to challenge. Bartoněk, quite to the contrary, thinks [æ:] had become [ɛ:] by 700 B.C.¹⁷ Here I prefer to follow Szemerényi's lead¹⁸ and set the date for the completion of this change much later, namely, during the fifth century. Like Szemerényi, I am impressed by the arguments advanced by R. Whitney Tucker¹⁹ and drawn from the usage of Attic playwrights. Up to the end of the fifth century, they displayed complete competence in substituting a non-Attic long \bar{a} for Attic long [æ:] in choral lyric and choral passages of tragedy. To put it this way is somewhat to beg the question. A more cogent version of the argument would be that the tragic poets had no lexica of non-Attic forms to consult, and yet their success cannot be mere chance. No doubt the stage tradition counted for something, but the most reliable explanation is that the poets still in their own speech differentiated between [æ:] and [ɛ:], that is, that contrary to what Buck states they regularly said not [mé:tɛr] but [mǎ:tɛr], even if the writing system was not capable of rendering this important distinction.

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¹⁷ *Op. cit.*, pp. 139-140.

¹⁸ *Op. cit.*, p. 148.

¹⁹ "On the Dual Pronunciation of *Eta*," *TAPA*, 93 (1962), 490-501.