

On the Chronology of the Attic Rückverwandlung

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A well-known feature of the Attic-Ionic dialect is the fronting and raising of Proto-Greek /*a:/ to /e:/. This change was accompanied by the development of a new /a:/ from compensatory lengthening and contractions. In Attic, there was a restriction: original /*a:/ apparently remained when preceded by *e*, *i*, or *r*; contrast Ionic *véη*, *βίη*, *τρηχός* with Attic *véa*, *βία*, *τραχός*, etc. But it is now widely recognized that /*a:/ did not simply remain unchanged in this environment in Attic. Rather, there was an intermediate stage in the prehistory of Attic where all instances of /*a:/ did change, as far as /æ:/, but this /æ:/ then reverted back to /a:/ after *e*, *i*, and *r* (the so-called Rückverwandlung). Those instances of /æ:/ which did not revert eventually merged with /e:/. The evidence for this intermediate stage with a distinct /æ:/ phoneme has been presented in several places, and there is no need to repeat it here¹). Precisely this intermediate vowel system is actually attested in the dialect area geographically intermediate between Attic and East Ionic, i.e. in inscriptions from Cycladic Ionic, notably the

hagen), M. L. West (London), G. L. Huxley (Belfast), Anna Morpurgo-Davies (Oxford), and H. Lloyd-Jones (Oxford), without whom many points would have remained unmentioned or inadequately explained. I add two very important contributions from scholars only known to me by correspondence: Mr. D. W. R. Ridgway (Edinburgh) sent me a copy of the facsimile which will appear in Pithekoussai 1 and put me in touch with Dr. G. Buchner (Ischia). Dr. Buchner read my final draft and sent me substantial corrections, additions, and suggestions.—This article deals with perhaps the most important single item in the material on which I am working (see my LGVI), and it is meet that I should finish by expressing my gratitude to the Danish Council for Research into the Humanities, which, by awarding me a research fellowship as from April 1975, saved me at a critical moment. I was thus enabled not only to continue my work, but also to carry it out under ideal conditions.

¹) O. Szemerényi, *Innsbrucker Beiträge zur Kulturwissenschaft* 14 (1968) (Gedenkschrift für W. Brandenstein) 139–157, gives a history of the question, together with convincing arguments in favor of reversion; see also C. J. Ruijgh, *Lingua* 21 (1968) 382–399. Perhaps the most satisfying argument for reversion is that it enormously simplifies the explanation of the development of the Attic front vowels, obviating numerous ad hoc hypotheses.

famous Nikandre inscription from Naxos. In Cycladic, there appears to have been a three-way orthographic (and presumably phonological) distinction: vowels from /*e:/ are spelled with *E*, those from /*a:/ with *H*, and new /a:/ (e.g. $\pi\tilde{\alpha}\zeta$) with *A* ²⁾.

There is some controversy on the date when /æ:/ merged in Attic with the vowel from original /*e:/ ³⁾, but this merger is clearly later than the period of the reversion, because an original /*e:/ does not become /a:/, regardless of the preceding sound. Forms such as $\delta\iota\alpha\nu\epsilon\kappa\eta\acute{\zeta}$ are late hyperatticisms ⁴⁾. Therefore, the precise date of this merger does not affect the arguments to be presented below. All words will be cited in the form they had just prior to this final merger.

Another change which occurred in prehistoric Attic was the disappearance of digamma in all environments. Now what is the relative chronology of the loss of *w* with respect to the changes mentioned above? The crucial forms, clearly, are those where *w* intervened between *e*, *i*, or *r* and a following /*a:/. If *w* was still present at the time of reversion, it should have prevented reversion in these words; on the other hand, if *w* had already disappeared, reversion should have occurred. In fact, after *r* the erstwhile *w* did prevent reversion: /korwa:/ became /koræ:/. But after *e* or *i*, *w* did not prevent reversion: /newa:/ became /nea:/, /oiwa:/ became /oia:/. Chronologically, it is therefore clear that digamma was lost after reversion in /koræ:/, but before reversion in /nea:/, and a moment's reflection will show that this is consistent with either of two possible chronologies. Either reversion after *r* occurred earlier than reversion after *e* and *i* (Hypothesis A):

	*korwa:	*newa:
fronting	korwæ:	newæ:
reversion after <i>r</i>	„	„
loss of <i>w</i> (all environments)	koræ:	nea:
reversion after <i>e</i> and <i>i</i>	„	nea:

²⁾ See e.g. Thumb-Scherer, pp. 251–252.

³⁾ A date in the fifth century or even later is suggested by R.W. Tucker, TAPhA 93 (1962) 490–501; likewise Szemerényi. This seems too late, however; see L. Threatte, TAPhA 100 (1969) 587–591, S.-T. Teodorsson, Glotta 51 (1973) 245–267. Teodorsson's data suggest that many of the phonological developments often ascribed to the Hellenistic period or even later were in fact well under way much earlier.

⁴⁾ E. Schwyzler, Griechische Grammatik I (1934–39), p. 190.

or digamma was lost earlier between vowels than after *r* (Hypothesis B)⁵):

	*korwa:	*newa:
fronting	korwæ:	newæ:
loss of intervocalic digamma	„	neæ:
all reversions	„	nea:
loss of digamma after <i>r</i>	koræ:	„

Each of these two chronologies can be defended with various a priori arguments, none of which is conclusive. In Arcadian, for example, *w* may have been lost earlier between vowels than after *r* (note, in the inscription Schwyzer 654, *οἷς* beside *καταρρον*), but the evidence is scanty, and in any case proves nothing about the relative chronology in Attic. The loss of digamma is common to Attic and Ionic, while the reversions are limited to Attic, but this does not prove that the loss of *w* is earlier than all the reversions, unless one accepts a strict Stammbaum model for Attic-Ionic, which is clearly inappropriate. The loss of *w* was a dialectal wave which eventually affected all Greek dialects, and which could have reached Attic at any time⁶). As I hope to show, neither of the two hypotheses given above will suffice as an adequate explanation of the facts, though the second turns out to be more nearly correct, as far as it goes.

The only way to decide the issue is to see how these changes fit into the whole system of changes in early Attic, looking especially at vowel contractions, and bearing in mind the important methodological principle that the chronological order of changes can be reliably deduced only from isolated forms which were not subject to analogical pressure: either non-paradigmatic, invariable forms, or words in whose paradigms the phonological conditions for an alternation do not happen to arise. By using this criterion as a foundation, we can establish the relative chronology of four changes in the vowel system of prehistoric Attic.

First, the contraction of /ea/ to /æ:/ was prior to the loss of intervocalic *w*, because this contraction did not regularly occur in words where *w* originally separated the vowels; the same is true of the contraction of /eo/ to /o:/'⁷). One fairly clear example is the un-

⁵) Cf. the chronologies given by Szemerényi, GSBrandenstein, pp. 140, 142.

⁶) The conclusion of Laroche (*Mélanges Chantraine*, p. 90) that the Attic and Ionic fronting of /*a:/ represent two independent phenomena is based on the assumption of a strict Stammbaum model.

⁷) I ignore the contracted second declension nouns and adjectives of the type *δσρα̃*. In these words, /ea/ contracts to /a:/ regardless of the preceding

inflected numeral *ἐννέα* (from *ἐννέφα*, whatever its ultimate etymology). Another example is *δέλεα*, together with its case forms, such as genitive *δελέατος*. Presumably, *w* was not still present in the synchronic underlying form of these words (no *w* appears anywhere in their inflection): they were simply marked lexically as exempt from contraction. On the other hand, in *δῆλος*, for example, where no *w* intervened, contraction has, as expected, occurred⁸⁾.

The situation is not quite as neat as it might be: contraction sometimes occurs where it is not expected, or fails to occur when it should. Schwyzler, indeed, is led to explicitly deny the priority of contraction to the loss of digamma⁹⁾. But the anomalous cases generally occur in derived forms, where there was structural pressure for or against contraction, and the evidential value of these forms is naturally less than that of the isolated forms cited above. To take one particularly interesting case, note the behavior of the word *ρομηνία*. This word is not supposed to contract, because of the original presence of *w* (**νεφο-μηνία*). But the adjective *νέος* fulfills both conditions for non-contraction: the vowels were once separated by *w* and it was disyllabic (cf. fn. 8). Consequently, *νέος* did not need to be lexically marked as exempt from contraction: the fact that it was disyllabic guaranteed non-contraction. In the compound *ρομηνία*, therefore, it behaved exactly as if *w* had never been present, and the vowels contracted.

Subsequent to the loss of intervocalic digamma occurred the change known as quantitative metathesis. The relative ordering seems fairly clear here, since the former presence of *w* between the vowels did not prevent this shift of quantities, not only in paradigmatic forms like *νέως*, but, more important, in isolated forms such as the conjunction *ἔως*. Ruijgh entertains the possibility that *w*, “*déjà faiblement articulée*” did not prevent metathesis of quantity, drawing a parallel with *h*, which does not prevent elision.¹⁰⁾ But this parallel seems inadequate: since quantitative metathesis is a

sound. This contraction results from an analogical process which has nothing to do with the problem under discussion here, as can be seen from the fact that /oa/ also gives /a:/ in such words (e.g., *διπλά*).

⁸⁾ A restriction on these contractions which must be borne in mind is that contraction does not ordinarily occur when the contracted word would be monosyllabic: nominative *ἔαρ* ‘spring’, for example, does not contract, even though no digamma intervened, but its genitive *ἤρος* does.

⁹⁾ Gr. Gr. I, p. 251.

¹⁰⁾ Op.cit., p. 388.

prosodic phenomenon, the prosodic behavior of consonants must be the prime consideration, and *h* behaved in an entirely different way from *w*; it did not, for example, lengthen a previous syllable by “position”.

The fourth change in the sequence is the reversion of /æ:/ to /a:/ after *r*. The crucial evidence for the priority of quantitative metathesis to this reversion is the word *παρεά* ‘cheek’. As has long been recognized, this word is in origin “the part of the body next to the ear”, a compound of *παρά* and *αὔς*-. In spite of its compound origin, the word is indeed isolated in Attic, since *αὔς*- ‘ear’ had long since been replaced by the stem *οὔς*-.¹¹⁾ In spite of the agreement about the ultimate etymology of *παρεά*, there are several possible ways in which the word could have been formed, and numerous variations on the stages of its development, since there is far from unanimous agreement on the history of continuant clusters in early Greek.¹²⁾ But the exact history of the word is not important for our purposes. All we are interested in is the quality and quantity of the vowel of the second syllable. The manuscripts are inconsistent and, as usual, unreliable witnesses for the niceties of orthography, but Attic inscriptions are more helpful. The word is spelled in two ways, *ΠΑΡΕΑ* and *ΠΑΡΕΙΑ*, and from the point of view of the practice of Attic engravers, this alternation in spelling is consistent with either /parea:/, with a short /e/ in the second syllable, or /paræ:ya:/, with /æ:/ there (i. e. *παρηά*).¹³⁾ But the latter possibility may be ruled out, since it would imply that the vowel of the second syllable never underwent reversion at all, in spite of standing directly after *r*; /æ:/ in this position would have yielded /a:/. The vowel in this syllable, therefore, must be short /e/, resulting from quantitative metathesis.¹⁴⁾ The form implies, moreover, that quantitative metathesis preceded reversion after *r*, since otherwise a vowel of *a*-quality would have resulted in the second syllable.¹⁵⁾

¹¹⁾ See O. Szemerényi, *SMEA* 3 (1967), 47–88.

¹²⁾ Various possible histories for the word are discussed by Szemerényi, *SMEA* 3 (1967), 64–65.

¹³⁾ See Meisterhans-Schwyzler, *Grammatik der attischen Inschriften* (Berlin, 1900), pp. 37, 45.

¹⁴⁾ The same conclusion is reached by Szemerényi, *SMEA* 3 (1967), p. 65, solely on orthographic evidence; the mere existence of doublets in E and EI, however, is not quite sufficient to prove that the vowel was in fact /e/.

¹⁵⁾ Whether this vowel would have been /a/ or /a:/ depends on whether quantitative metathesis was restricted to vowel sequences where the first vowel was front. In either case, it is likely that contraction would have occurred.

We can thus establish a chain of four changes, with the following chronological order:

- (a) contraction of /ea/ and /eo/
- (b) loss of intervocalic digamma
- (c) quantitative metathesis
- (d) reversion after *r*.¹⁶⁾

Reversion after *e* and *i* must have occurred after the loss of intervocalic *w* (cf. forms like *νέα*, mentioned above), and it seems reasonable that all the reversions occurred as parts of a single process. For the purposes of the discussion to follow, however, the exact chronological position of reversion after *e* and *i* is not important, except insofar as it occurred after stage (b) above, and hence, a fortiori, after (a).¹⁷⁾

Now an apparent paradox arises in forms where /ea/ contracted after *e*, *i*, or *r*. Forms such as *μέρη* imply that contraction is later than reversion after *r*, since reversion did not take place here, and this is clearly incompatible with the chronology established above. The solution to this dilemma is that the only forms which show *η* (i.e. /æ:/) from /ea/ after *r* are derived forms, in a relatively small number of categories: (1) nom.-acc. plural of *s*-stem neuter nouns, e.g., *μέρη*, (2) acc. singular of masc.-fem. *s*-stem nouns, e.g., *τριήρη*, (3) the corresponding adjective forms, e.g., *πλήρη*, (4) first and second person singular pluperfects of the type *ἐργηγόρη*, and (5) second singular medio-passives, e.g., *ἔρη*. The fact that /ea/ yields /æ:/ after *r* only in these five categories of derived forms is suspicious. I maintain that *μέρη*, etc., are the result of analogical change, manifesting itself in the form of synchronic rule reordering: (d), reversion after *r*, is now applying before (a), contraction. The reason for the change is apparent: the forms were analogically influenced by similar forms where a consonant other than *r* preceded the

¹⁶⁾ Which of these changes remained in the language as synchronic rules depends on how abstract a model of phonology one chooses. It seems reasonable that (a), (c), and (d) remained, since these rules determined phonological alternations. The status of (b) depends on whether or not paradigms like *γλυκός* — *γλυκέος* are to be analyzed as /glwkws/ ~ /glwkewos/; see D. G. Miller, *Papers in Linguistics* 5 (1972) 46–72.

¹⁷⁾ The disappearance of *w* after *r* must be later than reversion after *r*, because of forms like *κόρη*. If, as suggested above, all reversions were parts of a single process, the loss of *w* after *r* was later than any of the changes so far discussed.

vowels to be contracted (*γένη*, etc.). This is not a new assertion, but it has not met with favor, because of a serious stumbling block, pointed out by Szemerényi.¹⁸⁾ Namely, why didn't this analogical change affect those words where *e* or *i* preceded the contracted vowels (e.g., *Στρατοκλέα*), where this reordering did not occur? The answer is that analogy did affect some instances of /ea/ after *e* and *i*, namely precisely those where a reordering increased paradigm regularity. Forms which show /a:/ from /ea/ after *e* and *i* are special cases where analogical change would not have increased regularity.

Note, first of all, that the analogical change obviously did engulf category (5). These medio-passive forms show /æ:/ after *e* and *i* as well as after *r* (e.g., *οἴη*). Category (4) need not detain us, since, as it happens, there is no Attic verb with a stem in *e* or *i* which forms a pluperfect of this type.

The significant problems lie in the first three categories. Let us first consider case (1), where *χρέα* shows /a:/. *Χρέα* is a frequently cited form in this connection, and the reason it is frequently cited is that, to my knowledge, it is the only example of this contraction in this category. The data available are quite limited, since there are no *s*-stem nouns in *-ιος* attested in Attic, and while there are a number of nouns in *-εος*, only two of these seem to have plural forms attested. One of these is *χρέος*, with its plural *χρέα*; the other is *δέος*, attested in the plural at Lysias 6.20, but in the form *δέη*, at least according to the unanimous tradition of the manuscripts. *Δέος*, it would seem, was in fact engulfed by the same analogical pressure which affected *μέρη* and other nouns where *r* preceded the vowels to be contracted. Now why was *δέος* influenced by analogy, while *χρέος* was exempt? The reason appears to be that *χρέος* is not an ordinary *-s*-stem neuter. It is a highly irregular noun, derived by quantitative metathesis from **Χρηῆος*, with numerous heteroclitic forms (e.g., both *χρέος* and *χρέους* in genitive). The word is sui generis, and thus it is not surprising that it escaped influence from the standard pattern of *s*-stems. On the other hand, *δέος*, as a regular *-s*-stem neuter, was subject to the same analogical pressure as *μέρος*.

Let us turn next to category (2), mostly proper names. In general, vowels of similar quality will contract in Attic, regardless of whether or not *w* was once present between them. As a result, the paradigm of animate stems in *-ees-*, all of which (as far as their etymology is

¹⁸⁾ GSBrandenstein, p. 154. He concludes that /ea/ simply developed differently after *r* than after *e* and *i*.

known) derive from *-ewes-*, presents an entirely different structure from the paradigm of stems ending in *-es-* preceded by any consonant:

Στρατοκλής	τριήρης	Δημοσθένης
Στρατοκλέους	τριήρους	Δημοσθένους
Στρατοκλεῖ	τριήρει	Δημοσθένει
Στρατοκλέα	τριήρη	Δημοσθένη

The contractions in nominative and dative give the paradigm of, e.g., *Στρατοκλής* an entirely different surface structure from that of nouns where a consonant preceded the ending. The paradigm of *τριήρης*, however, is exactly parallel to that of *Δημοσθένης*, and the expected /a:/ is thus replaced by the analogical /æ:/.

Finally, what of category (3)? Again, we are dealing with a very restricted amount of data, since *ὕγις* is the only adjective attested in Attic with a stem in *-ies-*.¹⁹⁾ Note that *ὕγιῃ* is in fact the usual form in inscriptions: *ὕγιᾶ* is epigraphically attested only once: as it happens, on the earliest datable inscription containing the form in question.²⁰⁾ So this adjective did eventually succumb to the analogical pressure. Why did it succumb later than adjectives like *πλήρης*, which consistently show *-η*? The answer, apparently, is that *ὕγις*, like *χρέος*, is a special case, rather than an ordinary *-s*-stem. According to the most widely held etymology, *ὕγις* was originally an *-e:-*stem, built on the same root seen in *ζῆν*.²¹⁾ In the absence of other stems in *-e:-*, the word was reinterpreted as an *-s*-stem and gradually brought into the *-s*-stem paradigm. This reinterpretation seems to have occurred fairly late, however. The word is attested only once in Homer, and in the nominative singular form. It had not yet been fully brought into the *-s*-stem paradigm in the fifth century: the accusative plural *ὕγιᾶς*, attested in a fifth-century Attic inscription, clearly shows that the word is not felt to be a true *-s*-stem, since *-s*-stem adjectives form their accusative

¹⁹⁾ There are also a few adjectives in *-ees-* (e.g., *ἐνδεής*) which show *-εᾶ* in these forms, if the manuscript tradition is to be trusted. These adjectives usually do not contract in the nominative, but this non-contraction is probably secondary, like the occasional non-contraction of names in *-kles*. The restoration of the uncontracted nominative is presumably subsequent to the operation of the analogical change which replaced /a:/ with /æ:/ in *τριήρη*, etc.

²⁰⁾ See Meisterhans-Schwyzler, p. 150.

²¹⁾ H. Frisk, *Griechisches etymologisches Wörterbuch II*, p. 955, with literature.

plural masculine in *-εις*.²²⁾ The form *ὄγιῃ* could not be replaced by *ὄγιᾶ* until the anomalous nature of this adjective had been forgotten.

To sum up, an examination of isolated forms shows that the reversion of /æ:/ to /a:/ after *e*, *i*, and *r* in prehistoric Attic took place after the contraction of /ea/ to /æ:/. Evidence to the contrary (e. g., *μέρη*) comes from derived forms which were subject to analogical pressures, pressures which operated freely after *r*, but were interfered with by a variety of special circumstances after *e* and *i*.

Sappho fr. 31.9: A Defense of the Hiatus

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ἀλλὰ καὶ μὲν γλῶσσα ἔαγε, λέπτον

So Wilamowitz prints the line in *Sappho und Simonides*, p. 56, and translates: "sondern meine Zunge ist zerbrochen". There was disagreement among scholars whether the true lection was *Ἔαγε* or *Ἐέφαγε*, but few doubted that a digamma removed the hiatus which appeared in the manuscripts of Longinus, except for the stray followers of Cobet who removed the hiatus by reading *πέπαγε*, suggested by Catullus 51.9, *lingua sed torpet*.

In 1925 and 1927 Lobel published his researches into the dialect of Sappho and Alcaeus and concluded that the digamma survived only before the third person pronoun and adjective, before initial *ρ*, and in a few more, linguistically dubious places, i. e. between augment and stem in verbs and internally in a few nouns. (See the summary in Denys Page, *Sappho and Alcaeus*, p. 329.)

Lobel and Page crucified the verb in their standard edition of 1955¹⁾ and Page in *Sappho and Alcaeus*, pp. 24–25, presents the following objections:

²²⁾ IG 1².74.20.

¹⁾ Milman Parry (n.4 *infra*) gives a convenient summary of Lobel's evidence: the corpus of Sappho and Alcaeus provide 14 cases of elision before a word once beginning with the digamma; 17 cases in which the presence of the digamma would lengthen a syllable that should be short; 5 cases of traces of the digamma. (*Language* 10 (1934) 144 = *The Making of Homeric*