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The development of the Proto-Indo-European syllabic liquids in Greek

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11. Remarks on relative chronology

Let us review our previous findings with respect to the question of relative chronology, which is of such cardinal importance for the origin of the four Greek dialect groups: when did **r* vocalize in the Ionic-Attic vernacular, and when was Epic **r* eliminated?

11.1 A Proto-Ionic development

Attic and varieties of Ionic agree almost completely in their reflexes of **r*: we find -α*r*- in the same isolated forms (e.g. τέταρτος, ἡμάρτον, κάρτα), and all descendants of Proto-Ionic applied the same analogical replacements to yield -ρα- (e.g. leveled ἔδραμον after the relic perfect δέδρομε). More importantly, the replacements within “Caland system” formations have taken place in an identical way in all varieties of Ionic-Attic: *a*-vocalism was introduced in κράτος ‘power’, κράτιστος ‘best, superior’, θάρσος ‘courage’ (for *κρέτος, *κρέτιστος, *θέρσος), but the original root shape was retained in Ion. κρέσσων, Att. κρείττων (with a secondary lengthening of the root vowel). At the same time, it is possible to indicate some later changes, such as the productivity of the root allomorph θρασ- (where Attic has more innovations), or the replacement of κρατύς with σφοδρός (only in Attic). The verb καταδαρθεῖν has been replaced in the Ionic vernaculars, and has been retained only in Attic.

The general conclusion must be that the vocalization of **r* took place when Proto-Ionic was still a unity, prior to or during the Ionic migrations to Asia Minor. This takes us back to the 11-12th c. BC or earlier. The generalizations and levelings that occurred in spoken Ionic-Attic in κρατύς and related forms (see chapters 4 and 5) also presuppose the lapse of some time. In chronological order, the most important changes are (IA = Ion.-Att. vernacular; E = Epic Greek):

- (IA1) vocalization to -α*r*- in καρτερός < PIon. **kṛ*teró- and κάρτα < **kṛ*ta.
- (IA2) levelings in the *u*-stem adjective, yielding PIon. κρατύς.
- (IA3) spread of the allomorph κρατ- from κρατύς to Caland forms with original full grade, yielding κράτιστος, κράτος, -κρατής, κρατέω, κρατύνω.
- (E1) creation of καρτερός (replacing **kṛ*teró-) beside καρτερός and κρατύς in Epic Greek.¹²³²
- (IA4) loss of κρατύς as a current form: replacement by σφοδρός (Attic), perhaps by καρτερός (spoken Ionic).
- (E2) absorption of κρατύς by καρτερός ~ κρατερός in Epic Greek.
- (E3) spread of καρτ- within Epic Greek from καρτερός ~ κρατερός to κάρτος ~ κράτος and κάρτιστος (~ vernacular κράτιστος).
- (E4) creation of κρατύνω on the basis of κάρτος.

Of course, it is difficult to give a precise estimate for the time of the vernacular vocalization on this small basis. The leveling in the *u*-stem adjectives (IA2) may have been accomplished fairly quickly, but the elimination of ablaut in the Caland formations (IA3) may have been carried out in several steps, and is likely to have taken some time. If we depart from an 8th c. date for Homer, and allow some time for the analogies under (IA3) to take place, the data indeed seem to be compatible with a 11th or 12th century date for the vernacular vocalization.

There are no other compelling indications against a post-Mycenaean date. We have seen (section 7.3.1) that the chronological arguments based on *d*-epenthesis in Mycenaean

¹²³² Note that the analogy which gave rise to γλυκερός beside γλυκύς presupposes (1) the phonetic reality of -*ra*- in καρτερός, and (2) the simultaneous existence of κρατύς and κρατερός.

cannot be upheld: **r* may still have been present in Mycenaean. It would be quite attractive to view the Ionic-Attic vocalization to -αρ- and the West Greek *a*-colored vocalization as part of the same isogloss. It is difficult, however, to assume a common development of Proto-West Greek (if such an entity ever existed) and Proto-Ionic, because the vocalization in the dialects of Crete had a different conditioning (o-vocalism after a labial consonant). This suggests that the vocalization took place while the West Greek tribes were settling their historically attested habitats on the Peloponnese. The vocalization with general *a*-coloring may then be analyzed as a common innovation of Proto-Ionic and the mainland West Greek dialects. Again, a date somewhere in the 12th or 11th century would be quite fitting. Note that West Greek and Proto-Ionic share other isoglosses that can be dated to this period, such as the conditioned development of the labiovelars before front vowels and the completion of the first compensatory lengthening.

11.2 The late, but pre-Homeric elimination of Epic **r*

We have seen that κρατερός may have introduced the root allomorph of κρατός and replaced those cases of the original form **kr̥teró-* that had been preserved longer within Epic Greek. Other forms that introduced a reflex -ρα- at an early date were the thematic aorists δραθε/o-, δρακε/o-, and παθε/o-. This early introduction of -ρα- explains the difference in metrical behavior between κρατερός and κραδίη, as well as the absence of δρακών. Thus, the number of words in which Epic **r* was preserved was rather small.

For how long was this marginal sound, Epic **r*, retained? The peculiar metrical behavior of κραδίη suggests that its elimination was very recent. But is it possible to assume that Homer still retained *r*? The split between -ρα- and -ρο-, which was conditioned by the preceding consonant, seems to speak against such an idea. However, it cannot be excluded on forehand that this conditioned change first occurred in post-Homeric recitations, before the text was first written down.¹²³³ Viewed in this way, κραδίη and the cases where *McL* scansion could not be avoided do not teach us anything about the presence or absence of Epic **r*. There are, however, two decisive pieces of evidence, plus one highly suggestive one, to prove that the author of the *Iliad* did not pronounce **r* anymore:

1. On 4 occasions out of 41 (of which two in the *Iliad*, 5.361 and 19.22), Homer demonstrably uses the βρ- of βροτός to generate length by position. Moreover, he avoids *McL* scansion in the simplex βροτός in all case forms where this is possible. The same distribution is found in compounds: ἄμβροτος, τερψίμβροτος, φαεσίμβροτος have no *McL* scansion, and only the verse-initial formula ἄσπιδος ἀμφιβρότης and the hapax ἄβρότη preserve the older scansion. This proves that the pre-form was no longer **m̥rtó-* when the *Iliad* was composed. For the details, see section 7.2.
2. The spread of *McL* scansions as an incidental licence, already in the *Iliad*, suggests that the vocalization had already been completed before the final composition of that epic. See e.g. verse-final μεγάλοιο Κρόνοιο (4x), Κρόνου πάϊς ἀγκυλομήτεω (7x), and cases like εἰνὶ θρόνῳ |_p (2x).
3. if we depart from the attractive identification of ῥοδόεντι with Myc. *wo-do-we*, the *o*-coloring in ῥοδόεντι (and in ῥόδον) presupposes the preservation of word-initial digamma when Epic **r* was vocalized.

In the *Odyssey*, there are more indications for the vocalization of Epic **r* than in the *Iliad*:

¹²³³ Similarly, as remarked in chapter 7, it is hard to exclude that Ἐνναλίῳ ἀνδρεϊφόντῃ and ἀνδροτήτα first reached their final shape in the post-Homeric tradition. Moreover, it is all but certain that Homer did not yet have epenthetic -β- in the sequence -μρ- < *-*m̥r*-.

4. The adjective θρασύς is used in the Ns. θρασύς after the definite article ὁ, whereas the *Iliad* only has the As. θρασύν, never after a short vowel,¹²³⁴ and the formulaic Gp. θρασεῖων.
5. The productivity of plural forms of θρόνος with *McL* scansion, and the larger acceptability of the *McL* licence generally (cf. the use of κλιθῆναι, ἐκλίθη).

If our explanation of the formula ὑπόδρα ἰδών (section 9.2) is correct, this would corroborate the picture suggested by ῥοδόεντι and provide an important *terminus ante quem*: the vocalization of Epic **r* took place prior to the loss of word-initial digamma. But the value of this example depends on the question whether Homer and his immediate successors still pronounced digamma in traditional Epic words like ἰδών < **widōn*. It is normally assumed that the only traces of digamma in Homer are metrical, because such traces are more frequent in hiatus than after a final consonant (when digamma is used to make position). But in the light of the principles advanced in section 6.6, it seems quite attractive to assume that **w-* was still sung by Homer in traditional Epic words, and only absent from words which had later been introduced from the Ionic vernacular. In that case, ὑπόδρα ἰδών and ῥοδόεντι lose some of their probative value for the question of chronology.

It is not possible, then, to give a *terminus ante quem*. But the longer we assume that **r* was preserved in Epic Greek, the easier it is to explain the metrical behavior of κραδίη discovered by Hoenigswald, and the contrast with the behavior of other forms like κρατερός. On that basis, I tentatively conclude that **r* continued to be present in Epic Greek until one generation of poets before the composition of the *Iliad*.¹²³⁵

After the elimination of **r* from spoken Proto-Ionic, in the early Dark Ages, the number of Epic words where **r* was retained gradually decreased, thanks to replacements such as **kr̥terós* → κρατερός and **ed̥rkon* → ἔδρακον. It could not be replaced in words like **d̥rkont-* ‘snake’, which turn up in Homer with *McL* scansion (δράκων). This is precisely why most of the words where we have to assume Epic **r* undergo *McL* scansion, the only exceptions being κραδίη, στρατός, certain case forms of βροτός, and some compounds in -βροτος). In other words, *McL* scansion became acceptable due to the fact that **r* was eliminated from Epic speech. Initially, this type of scansion was all but avoided, as follows from the avoidance of certain case forms of βροτός. Only those case forms where *McL* scansion could not be avoided at all (Gp. and Dp.) allow the aberrant scansion, and in large numbers. The entire singular and the Np. simply behaved according to the new phonological surface structure of the stem, *CroCo-*. In a similar way, ἄμβροτος was ‘sealed’ in its dactylic form, whereas anapestic ἄβροτος (with *McL*, from earlier **ám̥rto-*) is a hapax.

But how could *McL* scansion become acceptable and even productive as a licence? In my view, at least part of the answer must be sought in two forms which were preserved with **r* in Epic Greek, and which in the vernacular form had -ρο- or -ρα-: the middle aorist τραπέσθαι (only verse-final in Homer), and the much more frequent preposition and preverb πρός, προσ-. The use of *McL* scansion in verse-final position was promoted by τραπέσθαι and especially προσηύδα, and may have led to the introduction of forms like Κρόνοιο, κρίνεια. The use of *McL* scansion after the trochaic caesura, on the other hand, may have been promoted by the use of προσ- and πρός in this position. It is also possible that a form like τράπεζα, after it had been borrowed into spoken Ionic, fed the productivity of the licence. How *McL* became productive in the case of stop plus *l* is a different question, but there is only a handful of cases. Again, it must be stressed that the innovative scansion hardly absorbed any

¹²³⁴ In *Il.* 8.126, it is possible to assume the original presence of ephelecytic -ν in μέθεπε θρασύν.

¹²³⁵ In other words, if the *Iliad* is the work of an older poet, the vocalization will have taken place in his early career or in his youth.

new lexemes: leaving aside the structural cases, we are still dealing with a rare poetic licence, even in the *Odyssey*.¹²³⁶

11.3 Relative chronology: other sound changes

It is difficult to date the vocalization of **r* in the vernacular relative to other sound changes. We have seen (section 9.3) that ὑπόδρα cannot be used as an argument for dating the vernacular vocalization of **r* before the loss of word-final stops. On the contrary, ὑπόδρα seems to prove that word-final *-*r* > -αϛ preceded the loss of word-final stops, and that word-internal **r* vocalized after the last-mentioned development. It is further possible, in view of τρήρων, that the vocalization of **r* took place before the disappearance of -*h*- in clusters which took part in the first compensatory lengthening. Similarly, if τραυλός derives from **trh-u-ló-*, it would follow that **r* vocalized before the loss of intervocalic **h*, which in South Greek can probably be dated to the early Dark Ages. But it must be stressed that τρήρων and τραυλός are difficult cases, and the only examples for their respective environments.

It is not easy either to relate the vocalization of **r* to accentual developments. Wheeler's Law prescribes that an oxytone word of dactylic metrical structure withdraws the accent to the penultimate. It seems that Wheeler's Law did not operate in ἀνδρακάς, whereas it did operate in ἀνδράσι. However, ἀνδράσι may have generalized the accent of the other plural case forms, just like its stem form ἀνδρ- may be analogical in spoken Ionic. Since ἀνδρακάς probably contains Epic **r*, does it prove that Wheeler's Law preceded the vocalization of Epic **r*? Not necessarily, because all Greek adverbs in -άς are oxytone, which means that the accent may have been generalized. Likewise, καρτερός < **krteró-* could be an indication that Wheeler's Law operated before the vocalization **r* > -αϛ in spoken Proto-Ionic. But again, it cannot be excluded that other adjectives in -ρός influenced the accentuation of καρτερός.

Fortunately, two of the Epic formulae discussed in chapters 6 and 7 contain more definite indications for dating the vocalization of **r* in relation to other sound changes, and seem to provide a valuable *terminus post quem*. First of all, φιλότῃτι |_T τραπέιομεν εὐνηθέντε can be used as evidence once we have clarified the etymology of εὐνηθέντε, a denominative deriving from εὐνή 'bed'.

11.3.1 φιλότῃτι τραπέιομεν εὐνηθέντε and the etymology of εὐνή

The substantive εὐνή is poetic and "rare in early prose" (*LSJ* s.v.).¹²³⁷ Furthermore, it is noteworthy that the verb εὐνησ- 'to put to sleep', εὐνηθη- 'to go to bed (with)', with which we are dealing in our formula, is unproductive already in Homer.¹²³⁸ As a present form, Homer uses εὐνάζομαι (only *Od.*), with a metrically induced suffix interchange in Epic Greek that looks traditional (cf. ἀτιμάζω beside ἀτιμάω, ἡτίμησε). As we have already seen (section 8.2.3), within Homeric Greek εὐνάω is to be compared primarily with its synonym κοιμάω (41x as a simplex, 3x with κατα-). The latter is clearly the productive variant in Homer,

¹²³⁶ Note that the poet of the *Odyssey* uses both ἐκλίνθη, ὑπεκλίνθη and ἐκλίθη, κλιθῆναι. This means that he knows the traditional way to avoid the problem posed by ἐκλίθη, but on the other hand does not entirely avoid the latter form anymore, as the poet of the *Iliad* did.

¹²³⁷ Cf. also Chantraine (*DELG* s.v. εὐνή): "Cet ensemble est caractérisé par sa couleur poétique et non attique, par le sens général de εὐνή 'couche, gîte' distinct de λέχος (...)" In Classical prose, the word is reasonably frequent only in X. and Hp., authors who are reputed for their use of poetic or Homeric words. According to *LSJ*, εὐνή means: "1. bed, 2. bedding, as distinct from λέχος, 3. abode of nymphs, lair of animals, nest of a bird, etc., 4. marital bed, 5. grave, resting place". In the meaning II. 'anchoring place of a ship', εὐναί (only plur.) is better left aside, because it may have nothing to do with the word for 'bed'. Note, too, that εὐνις 'bereft person' (Hom.+) is probably unrelated to εὐνή.

¹²³⁸ It occurs 13x as a simplex, always aor., of which 11x εὐνηθη-. Further only in παρευνάξεσθε (only *Od.* 22.37), κατευνάω, -άζω 'to put to sleep' (5x).

because it is used without exception when the onset consonant is metrically irrelevant (i.e. in verse-initial position or after final syllables that are long by nature). Moreover, contracted present forms in -ᾱται, -ᾱτο are never formed from εὐνάω (the present is εὐνάζομαι), but 6x from κοιμάω.¹²³⁹ It seems, then, that εὐνή and derivatives are poetic relic words.

There is currently no consensus about the etymology of εὐνή, as appears from the review of previous proposals by Balles (2007). Early on, Brugmann (see Lidén 1906: 320) compared εὐνή to OIr. *úam* ‘cave, boar’s lair, den’ (f. *ā*).¹²⁴⁰ To this Graeco-Hibernian isogloss, Lidén proposed to add YAv. *unā* ‘cleft, split’, which was judged “relativ plausibel” by Peters (1980: 50). There are, however, some problems. Both Brugmann and Peters reckon with a root **h₁eu-*, to which different suffixes in *-m-* and *-n-* are supposed to have been added in the daughter languages.¹²⁴¹ But since there is no clear verbal root, all we are left with is a root etymology. Moreover, as Balles remarks, the connection with YAv. *unā-* is “much less attractive semantically”.¹²⁴²

On the other hand, Klingenschmitt (1981) proposed that the root of εὐνή is to be found in Alb. *vë*, aor. *un-* ‘to put, place’, and proposed to explain εὐνή by a laryngeal metathesis ** $\text{unh}_1\text{-eh}_2$ -* > “**E₁un-eh₂-*”. This etymology was adopted by the *LIV*², and Ziegler (2004) subsequently proposed to recognize **uenh₁-* in the Iranian root *van-* ‘to cover’. But the Iranian material is rather ambiguous, and Balles rightly remains somewhat sceptical about the etymology as far as εὐνή is concerned.¹²⁴³ In my view, the assumed laryngeal metathesis does not have much to recommend itself either, and Balles rightly points out that it conflicts with ἄρην ‘lamb’ < **urh₁-en-*.¹²⁴⁴

Thus, there is no commonly accepted etymology for εὐνή at the moment. Let us reconsider the old comparison with OIr. *úam* ‘cave, boar’s lair, den’. From a semantic point of view, the comparison is impeccable, given that the meaning ‘lair, den’ (of wild animals and swine) is attested in Homer (*Il.* 11.115, *Od.* 4.338, 4.438, 14.4, also of the lair or cave where Typhoeus sleeps, *Il.* 2.783).¹²⁴⁵ The Greek and Celtic forms could be derived from the same pre-form if the suffixal difference is due to the reduction of PIE **-mneh₂-*. A phonetic reason for this reduction is not hard to find: the labial nasal may have been assimilated to the preceding labial glide in Greek. A possible Indo-European reconstruction would be **h₁eu-mn-*

¹²³⁹ The origin of κοιμάω is disputed: does it derive from a substantive **kōimo-* or **kōimā-* related to Gothic *haims* ‘village’, Lith. *šeimà*, *šeimýna* ‘family’, etc. (cf. Frisk s.v. κεῖμαι)?

¹²⁴⁰ Other stem forms attested in Irish are *úaim* (f. *i*), and *úama* (f. *d*), in the same or similar meanings as *úam*.

¹²⁴¹ Moreover, the difference in ablaut between the various formations **h₁eu-neh₂* (Greek), **h₁u-neh₂* (Avestan *unā-*), and **h₁eu-meh₂* (Irish) would require an explanation.

¹²⁴² Vegas Sansalvador (1992) interprets Χαμόνη, epithet of Demeter, as ‘who has the earth as a bed’. She assumes that the regular outcome of a PIE compound **d^hg^hm-unh₁-eh₂* or **d^hg^hm-h₁un-eh₂* is reflected only in Χαμόνη, and that it was replaced by χαμαιευνάς, χαμαιεύνης, χαμεύνης in Homer and Classical Greek. She does not, however, address the metrical problem with χαμαιευνάς to be discussed below. Moreover, Χαμόνη itself is only attested at a late date as Χαμυναιας in Olympia (*IvO* 485.3, 3rd c. AD), and in Pausanias, who mentions Demeter Χαμόνη twice (6.20.8-9 and 6.21.1). Vegas Sansalvador excludes that Χαμόνη is due to a change *eu* > *u*, but for reasons that are unclear to me (note the late date of the attestations: not much is known about the Elean sound changes in the intermediary period). The etymology of εὐνή cannot be based on a weakly attested name.

¹²⁴³ “the evidence for our root becomes rather meagre” (Balles 2007: 17). She concludes that εὐνή is “to be judged only as a possible [example]” for the supposed laryngeal metathesis.

¹²⁴⁴ The laryngeal metathesis was first proposed by Rix in order to explain εὐρύς beside Ved. *urú-* ‘broad’ from **urh₁-u-*, and subsequently adopted by Peters (1980), who used it to explain εὖρον ‘found’ from **e-urh₁-e/o-* and εὐλή ‘maggot’ from **ulh₁-eh₂-*. However, the development is phonetically unexpected and remains without clear parallels in other IE languages. Moreover, most of the supposed examples are unconvincing, as appears from the discussion by Balles, who retains only εὐρύς, εὖρον, and εὐλή. To her otherwise careful discussion, I would add that ἔλμυς, -ινθος looks like a substrate word in view of its suffix (see Beekes *EDG*, s.v.), and that a full grade **h₁eur-u-* cannot be entirely excluded for εὐρύς (see section 11.1 on the ablaut of *u*-stem adjectives).

¹²⁴⁵ Boisacq (s.v. εὐνή) accepts Brugmann’s idea and posits a “sens premier de ‘cavité servant de gîte à l’homme et aux animaux’, cf. pour le sens got. *badi* (...)”.

*eh*₂, but if we assume that the poetic form εὐνή underwent psilosis, **(H)ieu-mn-eh*₂ would be equally possible.¹²⁴⁶

Starting from this idea of an old word for ‘resting place, lair, abode’, I propose to directly compare εὐνή with Ved. *yóni-* (m.) ‘seat, place, home, residence’, also ‘womb, lap’. Again, this comparison is highly attractive from a semantic point of view: both in Homer and in later Greek poetry, εὐνή often has sexual connotations (the bed as the place of lovemaking or the marital bed), and the same is true of the Indic word. There is, however, a formal difference which needs to be explained. The Greek word is an oxytone feminine *ā*-stem, whereas the *Rigveda* has a barytone masculine *i*-stem.¹²⁴⁷ I can see two ways to explain the difference in stem formation. First, in compounds Vedic has **su-yoná-* > *syoná-* ‘agreeable’ (vel sim.) and *dur-yoná-* ‘(place) bad to live in’. The thematic formation of these compounds is matched in Avestan *hu-iiāona-*, *huuā-iiāona-*, *pərəθu-iiāona-*. It could be assumed, then, that the thematic formation is older, and that Ved. *yóni-* obtained its *i*-stem inflection and barytone accent from the semantically close *śróṇi-* ‘hip, buttocks’.¹²⁴⁸ Note, especially, the parallelism in phraseology between Av. *pərəθu-iiāona-* ‘having a broad lap’ (cf. Ved. *prthúm yónim*, RV 10.99.2) and *pərəθu-sraoni-* ‘having broad hips’ (Ved. *prthú- śróṇi-* ŚB+).¹²⁴⁹ A second alternative would be that both the *i*-stem of Indic and the *ā*-stem of Greek and Irish are old, because Irish also attests a feminine *i*-stem *úaim* ‘lair’. It may be speculated, finally, that εὐνις, -δος ‘wife’ (trag.), which is probably related to εὐνή within Greek (Chantraine, *DELG* s.v. εὐνή), contains the same *i*-stem, but this remains uncertain.

It remains to explain the absence of aspiration in εὐνή. If the word is indeed poetic and was preserved in the form εὐνή in Epic Greek, it could be explained as a psilotic form. The presence and origin of psilotic lexemes in Homer is an intricate question: is the psilosis simply due to Ionic provenance, and was the *spiritus asper* introduced in an Attic redaction, as famously argued by Wackernagel (1916)? However this may be, it is sufficient to note, for present purposes, that εἰνατέρες ‘wives of the husband’s brothers, *ianitricēs*’ < PGr. **jenateres* (with metrical lengthening of the first syllable) furnishes a good parallel for a psilotic Epic lexeme εὐνή < PGr. **jeunā*.

Another indication that εὐνή was originally not vowel-initial are the Epic compounds χαμαιευνάδες ‘having their lair on the earth’ (of swine, *Od.* 10.243 and 14.15), and χαμαιεῦναι ‘id.’ (of the Selloi or perhaps Helloi, priests of Dodonaean Zeus at *Il.* 16.235). In both compounds, -αι- undergoes epic correption at the morpheme boundary, a procedure for which there are no good parallels in Homer. Chantraine (1942: 168) only mentions οἶός ἐσσι (*Il.* 13.275, cf. 18.105, *Od.* 7.312, cf. 20.89), the frequent scansion of οἶός as an iamb, and ἔμπαιον (*Od.* 20.379). Thus, the licence is extremely rare in word-internal position in Homer, and χαμαιεῦνης, χαμαιευνάδες are the only instances where it allegedly took place in composition.¹²⁵⁰

¹²⁴⁶ Probably **Hieu-mn-eh*₂ rather than **ieu-mn-eh*₂, see below on the further etymology.

¹²⁴⁷ In the *Rigveda*, *yóni-* is always masculine, but in the *Atharvaveda*, it also occurs as a feminine.

¹²⁴⁸ The *i*-stem inflection of this word in PIE is confirmed by Lat. *clūnis* ‘buttocks, tail bone’, MW. *clun* ‘haunch’, pl. *cluniau* (note the homonymous word for ‘meadow’, OIr. *clúain*, OW. *clun*, etc. < PCelt. **klowni-*), and not contradicted by Lith. *šlaunīs* ‘hip, thigh’, ON *hlaun* ‘buttocks, loin’. Taken together, these forms point to a reconstruction PIE **klouni-* ‘hip, buttocks, loin’.

¹²⁴⁹ Unfortunately, the precise formation of the simplex in Avestan is not entirely clear. There are two attestations, As. *yaonəm* and Ls. *yaona*. If *yaonəm* can be from *-im*, as Mayrhofer (*EWAia* s.v. *yóni-*) seems to assume, the Iranian evidence could also point to an *i*-stem *yaoni-* ‘place’ (Ls. *yaona* < *-ā*).

¹²⁵⁰ The iambic scansion of οἶός may be due to prevocalic shortening in the expected outcome **hū(i)us* of PIE **suH-iu-s*, a form which was replaced with οἶός either in Homer or in the ms. tradition. At any rate, the Homeric paradigm of ‘son’ contains many other unexplained irregularities, so it would not be wise to base anything of the scansion of the Ns. οἶός. Furthermore, in οἶός ἐσσι the localization of οἶός in the biceps deviates from the normal metrical behavior of this word. In my view, it could well be a transformation of other formulaic material containing this pronoun. Hesiod also uses the licence to inflect the formula Ποσειδάων γαίηοχος ἐννοσίγαιος,

It is implausible to assume that the word-internal correption in *χμαιειυνάδες* and *χμαιεύνης* is original. If the diphthong *-αι-* were old, *χμαιεύνης* could have been easily used in Epic Greek, and we would expect to find a trace of its preservation, rather than two instances of correption. Moreover, the suffix *-άδ-* in combination with the localization of *χμαιειυνάδες* (after |_P) suggests that *-άδες* is an artificial *Streckform* for the Np. *-αι*, of a kind typically encountered in the fourth foot of the hexameter (cf. Meister 1921: 22-7). In other words, *χμαιειυνάδες* itself looks like a metrical archaism, but it presupposes the correption in *χμαιειῦναι*. It follows that the original form underlying *χμαιεύνης* was **k^hama-eunās* with hiatus, and that the attested form *χμαιεύνης* was designed to heal this hiatus.¹²⁵¹

In fact, there are various other reasons to think that the older form of the directional adverb *χαμαί* ‘to the ground, on the ground’ (24x Homer, of which 19x after |_T) was **χαμά*. Its metrical variant *χαμάδης* ‘id.’ (14x, 13x after |_P) must have been based on this form by adding the relic allative suffix *-δης* (cf. Hom. ἄλλυδης ‘to elsewhere’). Moreover, the accentuation of *χαμᾶζε* suggests a pre-form **χαμά-αζε*, based on **χαμά* by adding the suffix of ἔραζε ‘id.’. This suggests that *χαμαί* replaces earlier **χαμά*, perhaps in analogy to *παρά* : *παράι* (in the same metrical slot). Thus, it seems likely that *χμαιειυνάδες* and *χμαιεύνης* continue a pre-form **k^hama-(i)eunā-* and that the preserved hiatus is an indirect trace of original intervocalic *yod*. In post-Homeric Greek, the same pre-form yielded *χαμεῦνι*, *χάμευνα* ‘bed on the ground’ (trag.), with a productive elision of *-α* following the loss of *yod*.¹²⁵²

Greek *εὐνή* and OIr. *úam* are a perfect formal and semantic match if we assume that a pre-form **(H)ieu-mn-eh₂-* was simplified in different ways after the split-up of PIE. The same applies to the inclusion of Ved. *yóni-* (plus *syoná-*, Av. *-iiaona-*), if it is accepted that the Indo-Iranian simplex may have been influenced by *śróṇi-*. To be sure, the details of the much-discussed reduction of clusters containing PIE **-mn-* still await a definite solution,¹²⁵³ but in any case, the assumed reduction of **-eumn-* to **-eun-* in the ancestor(s) of Greek and Indo-Iranian is phonetically natural.

As for the further etymology of **(H)ieu-mn-eh₂-*, it is hard to connect **(H)ieu-* with one of the canonical roots thus reconstructed (Ved. *yav-* ‘to separate’ or *yav-* ‘to hold, connect’) for semantic reasons. From a semantic point of view, however, it is attractive to assume that **Hieu-* was the outcome of **h₃ieb^h-* ‘to enter’, with a special phonetic development of **-b^h-* to **-w-* in front of the cluster **-mn-*.¹²⁵⁴ The outcome of **h₃ieb^h-* means ‘to copulate’ in Vedic, Greek, and Slavic, but ‘to enter’ (e.g. a house) in Tocharian B *yäp-*. Moreover, Tocharian B has a substantive *yenme* ‘gate, entry, portal’ which derives from **yemne* by a regular metathesis, and can be directly derived from a pre-form **h₃ie/ob^h-mn-o-*. If this is correct, we may reconstruct a PIE derivative **h₃ieb^h-mn-o-* denoting ‘that into which one penetrates’, hence **h₃ieumnéh₂-* ‘cave, lair’ underlying Greek *εὐνή*.

11.3.2 The formula φιλότῃ |_T τραπέιομεν εὐνηθέντε

As we have seen in chapter 6, the root shape *τραπ-* in the 1p. aor. subj. *τραπέιομεν* is due to the vocalization of Epic **ǵ* to *-ρα-*. Let me repeat why the formula *φιλότῃ |_T τραπέιομεν εὐνηθέντε* ‘let us go to bed and satisfy ourselves’ must be old. Since it would be unclear why a T₂-formula was preferred over a P₂-formula starting with ⁺⁺*ταρπέιομεν*, the whole formula

frequent in Homer, as an accusative Ποσειδάωνα γαίηοχον ἐννοσίγαιος (*Th.* 15, see West ad loc.). This is a clear innovation.

¹²⁵¹ It cannot be determined whether this had already happened when the *Iliad* was created, or later on in the tradition.

¹²⁵² I hope to further elaborate the reconstruction of *χαμαί* in the near future.

¹²⁵³ It seems likely to me that *-mn-* was originally retained after a short vowel in Greek, cf. Hom. νόνημις (later ἀνώνυμος) and ἀπάλαμις (later παλάμη).

¹²⁵⁴ I owe this suggestion to Karl Praust (p.c.).

(including φιλότῃτι) must have existed before the elimination of Epic **r*, and possibly much earlier. This is confirmed by Latacz's analysis of the formula (1966: 185), according to which the locative (ἐν) φιλότῃτι is a complement to εὐνηθέντε, with hyperbaton. The presence of (ἐν) φιλότῃτι in the formula explains why **trpēomen* was preserved as an artificial aorist form of τέρπομαι, and why the vernacular reflex **tarpēomen* was never introduced in front of εὐνηθέντε.

If the etymology proposed here for εὐνή is correct, the original formula must be reconstructed as **p^hilotāti trpēomen (i)ēunāt^hente*. It now becomes clear that the formula cannot have been coined before the loss of initial *yod*, because with **ēunāt^hente* the formula would not scan in any proposed predecessor of the Homeric hexameter.¹²⁵⁵ In this way, we arrive at the following chronology:

1. loss of initial *yod* (**ēunāt^hente* > **eunāt^hente*)
2. Creation of the formula **p^hilotāti trpēomen eunāt^hente*
3. Development of Epic *r* to -ρα-, raising of **ā* to **ē*, and quantitative metathesis plus epic restoration to -ειο-, yielding φιλότῃτι |_T τραπέομεν εὐνηθέντε

A final question of considerable importance is whether the formula **p^hilotāti trpēomen eunāt^hente* was created before the Proto-Ionic vernacular vocalization **r* > -αρ-, or whether **trpēomen* was originally retained with Epic **r* in other environments too (in its metrical slot following |_T). The first option seems much more likely to me, because the form only appears in this specific formula, and because the relic phoneme **r* will not have been very productive unless metrical necessity was at work. Such metrical necessity is, in the present case, provided only by the fact that *trpēomen* occurred in this specific formula. Thus, although a slightly later date of creation of the formula **p^hilotāti trpēomen eunāt^hente* cannot be completely ruled out, it seems reasonable to assume that it was created before the vernacular vocalization **r* > -αρ-.

If this is correct, it can be concluded that Proto-Ionic retained **r* until after the Mycenaean period, because initial *yod* is still regularly written on the Mycenaean tablets.¹²⁵⁶ Again, it appears to be unnecessary to assume that certain formulae date back to the mid-second millennium merely because they contain an indirect reflex of **r*.

11.3.3 The creation of ἀνδροτήτα καὶ ἥβην

In section 7.3.1, we have seen that the formula |_H ἀνδροτήτα καὶ ἥβην 'masculine and youthful vigor' is best analyzed as containing the reflex of an Ionic pre-form **anṛtāta*. After the vernacular sound change **r* > αρ, **anṛtāta* was preserved with Epic **r* in this particular formula, and perhaps also more generally. When **anṛtāta* subsequently developed to **anratāta*, the latter form was replaced by ἀνδροτήτα by analogy with forms containing a first member ἀνδρο-.

As many previous scholars have remarked, it cannot be doubted that the expression ἀνδροτήτα καὶ ἥβην is monumental and archaic, because it is used on two key moments in the story of Achilles and his wrath. An examination of formulaic material from the *Iliad* shows that there were plenty of other ways to sing the death of a hero. Why would the poets sing the

¹²⁵⁵ The only way to avoid this conclusion is to assume that the first plural (or dual) ending was still *-*me* (cf. Ved. -*ma*) when the formula was coined. But this would be gratuitous, because there are no further traces of the retention of *-*me* in Epic Greek. In general, I am skeptical of the possibility to reconstruct older stages of the hexameter from the comparison with Aeolic meters, even if the idea that Epic verse originated from traditional Indo-European metres could be basically correct. In any case, there is no reconstructed proto-hexameter in which the fourth foot could end in an iambic sequence.

¹²⁵⁶ My default assumption, here as elsewhere, is that the two South Greek dialects, Proto-Ionic and Mycenaean, did not undergo any different phonological or morphological developments unless there is a specific indication to think so.

deaths of Patroklos and Hektor with an unmetrical verse? Therefore, the synchronically aberrant scansion of the Homeric formula confirms the impression that ἀνδροτῆτα καὶ ἥβην is an archaism: this formula is fitting in its synchronic Homeric contexts only if we assume that it was traditionally fitting.

Let us now consider in more detail when the formula may have come into being. The first question to answer is: what was the original form of the formula when was it coined? Ruijgh has taken great trouble to show that ἀνδροτῆτα καὶ ἥβην is ultimately of Achaeian origin. This would require, however, that the Homeric formula is a transformation of a different, older Mycenaean prototype. One of his latest attempts to solve the problems involved deserves to be quoted in full:

“L’expression ἀνδροτῆτα καὶ ἥβην ne peut pas remonter à la phase mycénienne: myc. *ἀ(ν)δροτᾱτα κασῑ ἡγῳ̄ (ou γῳ̄) comporterait une suite de trois brèves. En outre, la valeur mycénienne de κασῑ était probablement ‘(et) aussi’ (Ruijgh 1967: 329-333), valeur emphatique qui ne convient pas à l’expression homérique. Autrefois, nous avons songé à la possibilité d’une expression originelle *ἀνρτᾱτ’ ἰδέ γῳ̄ avec la particule homérique ἰδέ ‘et’. Maintenant, nous la rejetons: en chypriote, cette particule sans doute achéenne conserve encore la valeur originelle ‘et alors’ (Ruijgh 1957: 55-57), qui ne convient pas elle non plus à l’expression homérique. En outre, ἰδέ figure chez Homère presque toujours après la césure trochaïque. (...) En Mycénien, la particule normale à valeur ‘et’ est -qe κῳ̄. Elle figure chez Homère dans des coordinations comme μάχη πόλεμός τε et πόλεμόν τε μάχην τε. L’expression ἀνδροτῆτά τε καὶ μένος ἥν ne peut pas elle non plus remonter à la phase mycénienne à cause de la présence de καὶ ‘et’. Dans ces conditions, nous sommes amené[s] à postuler une formule proto-mycénienne *ἀνρτᾱτα μένος κῳ̄ ‘la force de l’âge et l’élan’ (...) comparer (...) λύθη ψυχὴ τε μένος τε, expression qui figure également dans le contexte de la mort d’un héros.” (1997: 43-44).

There are good reasons to doubt a Mycenaean origin of ἀνδροτῆτα καὶ ἥβην. First of all, there is a problem of scansion: as it stands, the formula with καὶ cannot be projected back to the Mycenaean period because of the initial consonant to be reconstructed for ἥβην. Moreover, as Ruijgh remarks, -qe rather than καὶ is used as a simple connector in the Mycenaean tablets. Contrary to Ruijgh, however, I see no sufficient reason to analyze ἀνδροτῆτα καὶ ἥβην as the transformation of a formula that had become unmetrical. Ruijgh’s attempt to reconstruct *ἀνρτᾱτα μένος κῳ̄ fails for a simple reason: if this was indeed the pre-form, there would have been no reason to modify it to ἀνδροτῆτα καὶ ἥβην. Ruijgh speculated that Epic singers used καὶ ἥβην to replace the reconstructed *μέμος τε because they wished to underline the idea of a premature death (“pour souligner davantage l’idée de la mort prématurée”, 1997: 44). But this idea does not work, because Homer did in fact preserve ἀνδροτῆτά τε καὶ μένος ἥν (*Il.* 24.6), which is clearly equivalent to ἀνδροτῆτα καὶ ἥβην and underlines Patroklos’ premature death just as well.

I conclude that the pre-form of ἀνδροτῆτα καὶ ἥβην, including the conjunction καὶ, was coined as a verse-final formula within Ionic Epic. For the present investigation, it is important that this creation can be dated *after* the loss of the initial consonant of ἥβην, i.e. that the original shape of the formula was already *ανρτᾱτα kai ḥēbān, where h- does not make position any longer.¹²⁵⁷ The salient form ἥβην ‘(youthful) vigor’ is generally considered to be etymologically related to Lithuanian *jėgà* ‘vigor, strength’, Latvian *jēga* ‘strength, sense’ and Lith. *jėgti, jėgia* ‘to be able or strong’. A comparison of the various attested Greek forms

¹²⁵⁷ There is no unambiguous metrical trace of *j- in Homer: πότνια Ἥβη (*Il.* 4.2) may well have been coined on πότνια Ἥρη (frequent verse-final formula).

points to a Proto-Greek substantive **jēg^wā* ‘vigor’,¹²⁵⁸ and the Baltic forms can be derived from PIE **(H)ieh₁g^w-eh₂* or **(H)iēg^w-eh₂*.¹²⁵⁹

Returning to our formula, if this etymology is correct, it implies that **r* remained intact, at least in Epic Greek, until after the loss of word-initial *yod*. It is well-known that Mycenaean preserves initial *yod*, even if there are signs that this phoneme was in the process of being eliminated already in the tablets, i.e. in the 14th-12th c. If we depart from the assumption that Proto-Ionic lost this phoneme around the same time, it follows that the formula **anṛtāta kai^h ēbān* was created in the early Dark Ages. This is a few centuries later than scholars have hitherto assumed. The formula may theoretically have been taken from Mycenaean Epic, but this would presuppose that the conjunction **kai* existed in Mycenaean, which is hard to prove. Since a Mycenaean origin would only complicate matters, it is better to assume that **anṛtāta kai^h ēbān* is a creation of Ionic Epic in or before the Early Dark Ages. It is also likely that the formula was coined when **anṛtāta* was still a normal vernacular form, but it cannot be entirely excluded that **anṛtāta* remained in more general use in Epic Greek after the vernacular vocalization.

In conclusion, **anṛtāta kai^h ēbān* points in the same direction as **p^hilotāti trpēomen eunā^hente*, but strictly speaking, only the latter formula provides proof that the vocalization of **r* in the Ionic vernacular took place after the lenition of word-initial *yod*. This is because the retention of **trpēomen* could not be motivated outside the formula where it occurs.

11.4 The prehistory of Epic Greek

We have seen that certain formulae enjoyed an uninterrupted presence in Epic Greek, from the vocalization of **r* in the Proto-Ionic vernacular until the vocalization of Epic **r*, not too long before the *Iliad*. In my view, this allows us to conclude that Ionic was the language of Epic Greek all along, throughout the Dark Ages. At first sight, this conclusion does not seem to impose itself, because the formulae with **r* may theoretically have been preserved in an “Aeolic phase” after the vocalization of **r* in the Proto-Aeolic vernacular. There are, however, two decisive arguments against an Aeolic phase.

First of all, a number of forms with *-pa-* must have been created artificially not long after the vocalization of **r* in the Ionic vernacular, notably κρατερός and thematic aorists of the type ἔδρακον. These forms must have been substituted for forms with **r* when Ionic was the language of Epic, for otherwise one would expect to find Aeolic artificial forms like ⁺⁺κροτερός or ⁺⁺⁺ἔδρακον. If one assumes an Aeolic phase that lasted until two generations before Homer, the introduction of κρατερός for **krteró-* and ἔδρακον for **édṛkon* would be too late to explain the different metrical behavior of κρατερός as opposed to κραδίη, or δράκων as opposed to unattested δρακών (see section 8.4).

Secondly, the extensive evidence for analogical creations that took place in the roots θαρσ- and κρατ- within Epic Greek (replacement of **krteró-* with κρατερός, semantic influence of κρατύς on κρατερός, creation of new doublets like κράτος ~ κάρτος, etc.) presupposes an uninterrupted Ionic Epic tradition in which these analogies could take place. All such artificial creations bear the stamp of Ionic, and they took place between the vocalization of vernacular **r* and that of Epic **r*.

Finally, there is no reason to assume an Aeolic phase anymore as far as the forms with *-po-* are concerned: they can now all be explained by the labial-conditioned development of Epic **r*. In section 6.6, when discussing a possible scenario for the retention of Epic **r*, I have

¹²⁵⁸ Pindar has ἦβα, and West Greek and Aeolic inscriptions have it too (Lex Gortyn ἦβω, Locr. ἦβατας IG 9(1) 334, Thess. εἰβατας, etc.). This ensures that the Proto-Greek form had **ē*. The form ἄβα in Alcaeus (fr. 101) and Callimachus (*Id.* 1.44 and 30.20) is probably a hyper-Aeolicism.

¹²⁵⁹ It deserves to be noted, however, that Lith. *jēgti*, *jēgia* and *jėgà* (accent paradigm 4) have a circumflex root. This could be a case of *metatone douce* in a deverbal Lithuanian *ā*-stem, on which see Derksen (1996: 141-43).

suggested that other alleged Aeolic characteristics of Epic Greek (e.g. retained long $\bar{a}$, non-palatalized labiovelar reflexes in front of e) can also be explained in the same way. I have to limit myself to an outline of this idea here, and hope to discuss it more elaborately in the near future.

11.5 Conclusions

I arrive at the following relative chronology for the developments that took place between Proto-Greek and Ionic-Attic (PI = Proto-Ionic, E = Epic Greek):

1. vocalization of word-final $*_r$ (PGr.)
2. loss of word-final stops (PGr.)
3. d -epenthesis in intervocalic $-nr-$ (Pan-Gr.)
4. lenition of word-initial $*_i-$ (PI)
5. vocalization of $*_r$ (PI)
6. loss of $-h-$ (intervocalic and, in front of a resonant, with CL1) (PI)

To be dated before 5. is the reduction $*-tw- > *-t-$ in front of $*_r$. Then, Epic Greek underwent the following additional changes:

7. substitution of $-pa-$ for some cases of Epic $*_r$ (E, not long after 5.)
8. vocalization of Epic $*_r$ (E)
9. loss of Epic $*_w$ (E)
10. d -epenthesis in $*anratēta$ or $*anrotēta$, b -epenthesis in $*amrotos$ (etc.).

Note that the relative chronology obtained on the basis of the evidence for $*_r$ is confirmed by the Mycenaean evidence. In Mycenaean, word-initial yod is disappearing under our eyes in the Linear B tablets (cf. variant spellings like $ja-ke-te-re \sim a-ke-te-re$), whereas word-initial and intervocalic h still function as a normal consonant. Again, there appears to be no reason to make a distinction between Mycenaean and Proto-Ionic prior to the Linear B tablets. The assumed post-Mycenaean date for the vocalization of $*_r$ in Proto-Ionic has the following advantages:

1. it yields a more realistic time frame for the preservation of $*_r$ in Epic Greek.
2. it offers the possibility to derive Epic words like ἀβροτάζομεν and τράπεζα directly from Mycenaean, assuming that this dialect retained $*_r$.
3. it allows us to explain how the formulae φιλότιτι |_T τραπέιομεν εὐνηθέντε and |_H ἀνδροτήτα καὶ ἥβην came into being, assuming that they were created when $*_r$ was still present in the Ionic vernacular.