Conclusion

Introduction

In this concluding chapter, the answers to the research questions posed in chapter 1 are presented. The main results are summarized and evaluated in a wider context.

In section 1.2, three environments were distinguished in which an anaptyxis took place beside **ɾ* and **l̥* as early as Proto-Greek:

- PIE **CrHC* / **Cl̥HC* > **CrəHC* / **CləHC* > **CrVC* / **ClVC*
(**gʷh₁tó-* > βλητός ‘hit’; **kṛh₂tér-* > κρατήρ ‘crater’; **ǵʰh₃ró-* > χλωρός ‘pale’);¹
- PIE **CrHV* / **Cl̥HV* > **CərHV* / **CəlHV* > **CarV* / **CalV*
(e.g. βαρύς ‘heavy’ < **gʷrHús*);²
- PIE **Cr̥iV* / **Cl̥iV* > **Cər̥iV* / **Cəl̥iV* > **Car̥iV* / **Cal̥iV*
(e.g. χαίρω ‘to feel good’ < **ǵʰr̥-je/o-*).

Leaving aside these environments and focusing on cases of **ɾ* and **l̥* that were retained until after Proto-Greek, my aim in this book was to answer the following three questions:

- What was the regular development of **ɾ* and **l̥* in the major Greek dialect groups?
- Which developments did forms with etymological **ɾ* undergo in Epic Greek?
- What can be inferred, from the vocalization of **ɾ* as an isogloss, about the genesis and prehistory of the four main dialect groups? And about that of Epic Greek?

12.1 Philological Results and New Etymologies

Many of the conclusions reached in this book were obtained as the result of a fresh examination of philological data. Since I consider these results to be

¹ A disyllabic reflex **CVrVC* / **CVlVC* is also found, e.g. in τράσσω ‘to agitate’, παλάσσω ‘to soil’, but the conditions (and partly the exact outcomes) are still debated: see section 1.2.1.

² Aeol. τόμοντες and χόλαισι, attested in the manuscript tradition of Alcaeus, do not warrant the reconstruction of a Proto-Greek *shwa*, which would have merged with either /a/ or /o/ depending on the dialect. See section 1.2.1.

no less important than the answers to the more general questions posed in chapter 1, I will summarize some of the main results here, partly in order to illustrate how I view the role of philology and etymology in linguistic arguments. In the end, historical language reconstruction depends heavily on etymology, and having a clean data set is of vital importance. Conversely, paying close attention to the actual use of words in their contexts usually leads to more sound etymological judgements as well as to more interesting readings of ancient texts. Perhaps, in this way we may contribute to re-establishing the long-lost connections between historical linguistics and classical philology.

New interpretations have been proposed for, among others:

- Myc. *ka-po*: it has been argued (section 2.2) that the interpretation ‘fruit’ (corresponding to *καρπός*) is highly uncertain, and that ‘plantation’ (corresponding to Class. *κήπος*) is at least as likely. This helped us eliminate a key example for the idea that Mycenaean has secondary ‘morphologically conditioned’ reflexes of **ǵ*.
- Myc. *to-ro-no-wo-ko*, which is usually interpreted as ‘chair-makers’ without further ado. It has been argued (section 2.5.2) that the connection with the Homeric *hapax* *θρόνα* is in fact much more attractive than that with Myc. *to-no* ‘chair’. I have shown that *θρόνα* probably referred to dyed fabrics, and that the same sense is presupposed by many compounds in *-θρονος*. As a consequence, it is quite plausible that the *to-ro-no-wo-ko* mentioned at Knossos were workers in the dye or textile industry.
- While considering the Homeric evidence, special attention has been devoted to an analysis of the metrical and prosodic behavior of words, and to the possibility to determine the antiquity of formulae. For instance, in evaluating the prosodic behavior of the onset of *Κρόνος* and *Κρονίων*, it was shown with new arguments that the formulaic phrase *Κρόνου πάϊς* (with or without *ἀγκυλομήτεω*) must be a replacement of *Κρονίων* before the bucolic dieresis (sections 7.3.5-6). Also, it has been shown that the prosodic behavior of *Κρονίων* is suggestive of a dual etymological origin. This conclusion, in turn, has been used to exclude *Κρόνος* from the compelling evidence for **ǵ* in Epic Greek.
- As for *Ἀφροδίτη*, it has been pointed out before that the *muta cum liquida* scansion of *-φρ-* is completely aberrant with respect to the normal syllabification rules of word-internal plosive plus liquid groups in Homeric Greek. Previously, this has been interpreted as implying that Aphrodite was a relatively recent introduction into the epic tradition (and into Greek generally) from an unidentified Near Eastern donor language. To this account, I have objected (section 7.2.8) that Aphrodite’s system of name-epithet formulae is deeply entrenched in the epic tradition. Modifying a proposal by Witczak

- (1993), I have tentatively proposed that the name of the goddess reflects the feminine form of a compound **ap^hṛ-dī-to-* ‘who appears forthwith’ (cf. ἄφαρ ‘suddenly’ < PIE **h₂eb^hṛ*, and PIE **dih₂-* ‘shine; appear’).
- ἀτραπός ~ ἀταρπός: starting from the actual use of this noun in Homer and classical authors, I have argued (section 9.6.3) that it does not refer to a well-trodden path, but rather to trails and shortcuts, i.e. to untrodden paths. As a result, it can be reconstructed as the substantivization of an adjective **ḡ-tp-o-* related to τραπέω ‘to tread (grapes)’.
 - προκείμενα ‘lying ready, served out’ (of comestibles) does not contain the preverb προ- ‘in front’. Since the meaning of προκείμενα suggests a connection with παρατίθημι ‘to serve out food’, the form has been reinterpreted in section 7.2.7 as the reflex of **pṛ-keimena*, with a relic preverb **pṛ-* that also underlies παρ-, παρα-.
 - στρατός ‘army; army camp’: it has been recognized before that this noun was not derived from the root of στόρνυμι, στρωτός (which ended in **h₃*), but from a different root **ster-* meaning ‘to lay low’. However, the formation of στρατός and the semantic development to ‘army’ were not well understood. I have argued (section 6.8.7) that στρατός is a regular verbal adjective in *-to-* meaning ‘brought into submission’, and that it originally referred to the body of subjects of a ruler.

New reconstructions or derivations have been proposed for, among others:

- ἄρχω ‘to be first; rule’, which in my view is related to Hitt. *šarku-* ‘pre-eminent, powerful’ and Toch. B *šärk-* ‘to surpass’ (section 9.6.2). It may reflect either a zero grade thematic present **srǵ^h-e/o-* (PGr. **h₃rk^{he}/o-*) or an inchoative present **srK-ske/o-* (PGr. **h₃rsKe/o-*).
- The root of γλαφυρός ‘hollow’ and the verb γλάφω ‘to scoop, dig out’ has been reconstructed as the zero grade of PIE **g^wleb^h-* ‘hollow; womb’, with a well-paralleled dissimilation of the initial labiovelar against the labial stop in the following syllable. In this way, the words obtain a semantically satisfactory etymology.
- For γράω ‘to eat’ and γαστήρ ‘stomach’ a root reconstruction **gr̥s-* has been advocated; in this way the dialectal *a*-reflexes can be accounted for.
- Concerning the aorist ptc. δραχείς attested in Pindar, I have argued that the widely accepted reconstruction as an inherited root aorist form cannot be maintained (section 8.5). Instead, the form is secondary for Homeric ἔδραχον. As a consequence, there is no reason to reconstruct an *e*-grade allomorph of the participle suffix *-(o)nt-* for PIE.
- In section 10.5.3 I have proposed that κάλλος ‘beauty’ and related ‘Caland’ forms derive from a lost present stem **kal̥lō* ‘to stand out, excel’, itself reflecting an inherited nasal present **kl-n-h₁-* related to Lat. *ex-cellere*.

- πέρθω ‘to raze, pillage’: noting that the verb is also used in the meaning ‘to cut off hair’, I have proposed in section 8.3.2 to derive it from a PIE root **b^her(s)d^h-* ‘to cut off, shear’ as also reflected in the word for ‘beard’, **b^hor(s)d^h-eh₂-* (Lith. *barzdà*, Ru. *borodá*, OHG *bart*).
- προτί, πρόσσω, πρόσσωπον: the pre-form of προτί is normally posited as PIE **proti* in view of the *o*-vocalism of πρόσ in Ionic-Attic. Against this, I have argued (section 7.2.5) that the prosodic behavior of προτί, πρόσσωπον and πρόσσω in Homer as well as the Cretan form πορτί speak in favor of a reconstruction **prti*.
- τράπεζα: it has been argued in section 2.3.1 that τράπεζα ‘table’ (Myc. *to-pe-za*) contains as its first member a relic form not of the numeral ‘four’, but of ‘three’. Thus, its pre-form was **tr₃-ped-ih₂*, not **k^wtu₃-ped-ih₂*. This reconstruction corresponds well to the *realia* as attested in the archeological record, and at the same helps us understand the reflex of the onset (**k^wtu₃-* would not yield **t₃-*).
- Paying close attention to its semantics, I have reconstructed φράσσω ‘to fortify, fence in’ as a denominative verb to the PIE root noun **b^herǵh₂-*, **b^hǵǵh₂-* ‘elevation, stronghold’ (section 9.2.3).

12.2 Regular Reflexes of PGr. **r* in Dialects Other Than Ionic and Attic

Table 27 (next page) presents my findings concerning the outcome of **r* per dialect group.

For the Aeolic dialects, the widely accepted claim that *o*-vocalism was regular (independent of the surrounding consonants) has been vindicated.³ In addition to this, a more specific conclusion has been reached: the only regular Aeolic reflex of **r* is -ρo-; whenever word-internal -ορ- < **r* occurs in Aeolic dialects, it can be analogical. In this respect, the Aeolic dialects differ from the other Greek dialect groups for which sufficient data are available, and also from most other Indo-European languages (with the exception of Proto-Celtic, where **r* yielded *ri* before stops and *m*).⁴ The development **r* > -ρo- is ascertained for Lesbian and Boeotian and also highly probable for Thessalian, and therefore must be a common Aeolic innovation. Thus, it becomes an even more important argument in favor of reconstructing Proto-Aeolic.

³ Pace Parker (2008).

⁴ Cf. OIr. *cride* < **k₃rd-jo-*, Mlr. *brí* ‘hill’ < PIE **b^hǵǵh₂-*.

TABLE 27 The reflexes of Proto-Greek word-internal **ɾ*

Dialect group	Sub-dialect	Regular reflex of word-internal * <i>ɾ</i>
'Achaean'	Mycenaean	⟨-Co-⟩, representing - <i>ɾ</i> - or - <i>or</i> - Possibly also ⟨-Ca-⟩, for - <i>ɾ</i> - or - <i>ar</i> -
	Arcadian	-oɸ-
	Cyprian	Uncertain whether - <i>ro</i> - or - <i>or</i> -
Aeolic	All varieties	-ɸo-
Ionic-Attic	All varieties	-αɸ-
West Greek	Cretan	-αɸ-, but -oɸ- after C _[+lab]
	Other varieties	Some evidence for both -αɸ- and -ɸα-
Epic Greek	Homer	-ɸα-, but -ɸo- after C _[+lab]

Another dialect group for which I have been able to draw novel conclusions is West Greek, and in particular Cretan. It is usually assumed that Cretan underwent a liquid metathesis of -ɸα- and -ɸo-. However, in section 3.1 I have argued that liquid metathesis does not account for the Cretan evidence, and proposed that the regular reflex of **ɾ* was -αɸ- as a default, but -oɸ- after labial consonants. Possible evidence for the same development is found on Thera (and in Cyrene, which was founded by Thera colonists), but the evidence in these two dialects consists mainly of personal names. The evidence from most other West Greek dialects shows that the reflex was *a*-colored, but the regular vowel slot seems to differ per dialect. For instance, in Elean and Syracusan there is lexicographical evidence for a regular reflex -ɸα-, but in Argolic there is some epigraphic evidence for a regular reflex -αɸ-. In general, the evidence in these dialects is not sufficiently numerous to draw clear conclusions.

In Mycenaean there is hardly any evidence in which the reflex of **ɾ* is written with signs of the shape ⟨Ca-⟩. A possible exception is the form *tu-ka-ta-ši* ‘daughters’ attested for Mycenae. Furthermore, the spelling of the Mycenaean evidence clearly excludes that **ɾ* developed to -*ro*- (except in cases where the reflex was analogically influenced): the regular reflex is spelled ⟨Co-⟩, never ⟨Co-ro-⟩. There are two possibilities to interpret this spelling ⟨Co-⟩ (and ⟨Ca-⟩):

- (1) spellings like *to-pe-za* represent /torpeddʲa/, with **ɾ* > *or*. Possibly, this reflex was conditioned by a preceding or following labial consonant, cf. *tu-ka-ta-ši*.
- (2) **ɾ* was preserved in Mycenaean, but the syllabary had no separate series to distinguish this type of nucleus from -*o*- (or -*a*-). Therefore, /trpeddʲa/ was rendered as *to-pe-za*.

In Arcadian the evidence is just sufficient to conclude that the unconditioned regular reflex of **ɾ* was -ορ-, as established before by Haug (2002). In Cypriot, it is likely that the reflex of **ɾ* was also *o*-colored (*ka-te-wo-ro-ko-ne*, *to-ro-su-ta-mo-se*), but no definite conclusions can be drawn concerning the regular vowel slot. The evidence for an *a*-outcome in Cypriot is weak. Finally, in Pamphylian there is some evidence for a reflex -ορ-, but it is so marginal that drawing conclusions is not feasible. Interestingly, syllabic liquids in words borrowed by Pamphylian from Lycian and related Anatolian languages are reflected as -ρε-, -λε- (cf. Pamph. ΠΝ Τρεμιλας beside Ion. Τερμίλαι (Hdt.) from Lyc. *trēmili-*; Pamph. Στλεγιυς corresponding to the toponym Ion. Σέλγη), suggesting that inherited syllabic liquids were vocalized before such words were borrowed.

In most dialects there is no reason to assume variation between the reflexes of **ɾ* and **ɭ*: for instance, Aeolic has **ɾ* > ρο, Arcadian has **ɾ* > ορ, and the Cypriot evidence does not allow for a conclusion. The problem of the double reflex (αρ versus ρα) is an issue only for Ionic-Attic.

12.3 Special Reflexes of Proto-Greek **ɾ*

12.3.1 Quality of the Anaptyctic Vowel

An unconditioned *o*-reflex of syllabic liquids is characteristic of two dialect groups, Aeolic and Arcado-Cypriot. Since Morpurgo Davies (1968), it has been repeatedly claimed that the *o*-reflex in Aeolic, Arcadian and Cypriot was conditioned by a neighboring *μ*. However, as argued in chapter 3, forms like Aeol. στρότος ‘army’, Arc. τετορτος ‘fourth’ and the Cypriot name *to-ro-su-ta-mo* show that the *o*-reflex in these dialects was regular also in a non-labial environment.

Evidence for a *conditioned o*-reflex is found in the following varieties of Greek:

- Cretan: ορ after labials, αρ elsewhere (section 3.1).
- Homer: artificially retained Epic **ɾ* > ρο after labials, ρα elsewhere (chapters 6 and 7).

Further possible evidence for a conditioned reflex could be seen in:

- Mycenaean: I have left open the possibility that the regular *o*-series spellings (as in *wo-ze* or *to-pe-za*) are notations of retained **ɾ* in a labial environment (i.e. followed or preceded by a labial consonant), while *tu-ka-ta-ši* would show the spelling in a non-labial environment (section 2.4). Clearly, more evidence is needed to decide this issue.
- Attic (i.e. Ionic-Attic): there is one possible instance of an *o*-reflex of **ɾ*, the adverb πόρρω (πόρσω) ‘further, forward’ < **pṛtiō*. The Ionic form πρόσω may

have been influenced by $\pi\rho\acute{o}$. If this is correct, this development $*j > \text{op}$ was conditioned by a preceding labial stop, an assumption to which there is no absolutely compelling counterevidence (section 9.3). However, unless more examples of this treatment are discovered, this proposal remains hypothetical.

There is no clear relation in any dialect between o -reflexes of $*j$ and the occurrence of o -reflexes of syllabic nasals.

Clear evidence for an u -reflex appeared to be hard to find (section 1.3.2), but there are two promising examples. First, I have suggested that the reflex $-\upsilon\rho- < *j$ is regular after a labiovelar in $\chi\rho\tau\acute{o}\varsigma$ ‘bulging; humped, hunchbacked’, for which I have proposed a new reconstruction $*k^w\eta\tau o-$ (PIE $*k^wer-$ ‘to cut off; amputate, mutilate’). Secondly, I have proposed that $\lambda\acute{\upsilon}\kappa\omicron\varsigma$ ‘wolf’ reflects PIE $*\mu l k^w o-$ via $*\mu l_\gamma k^w o-$, with a rounded reflex of the anaptyctic *shwa* between $*\mu l$ and a labiovelar. The different development seen in $\beta\rho\alpha\delta\acute{\upsilon}\varsigma$ ‘slow’ $< *g^w\eta d\acute{u}-$ must be ascribed to the fact that in this word, the anaptyctic vowel arose after the liquid (analogically). Other evidence previously adduced for the reflex $-\upsilon\rho- < \text{PGr. } *j$, such as the proper name Τυρταῖος , Att. $\sigma\acute{\upsilon}\rho\omega$ ‘to draw’, and dialectal $\sigma\acute{\upsilon}\rho\xi$ ‘meat’ for $\sigma\acute{\alpha}\rho\xi$, is less reliable.

12.3.2 Slot of the Anaptyctic Vowel

Some previous scholars dealing with the reflexes of $*j$ have made the (tacit or explicit) assumption that in each word, an anaptyctic vowel $[\text{ə}]$ was first fixed *in the same position* in all dialect groups (cf. Klingenschmitt 1974; Ruijgh 1976). Only later, this vowel would have been ‘colored’, i.e. merged with one of the vowels $/a/$ and $/o/$. The main evidence adduced for this view are pre-forms like $*k^wet\eta\tau o\varsigma$ and (alleged) $*t\eta\rho\text{ped}\acute{\iota}\alpha$, in which it is thought that an intermediate stage $*k^wet\eta\tau_\gamma o\varsigma$, $*t\eta\rho_\gamma\text{ped}\acute{\iota}\alpha$ is needed to account for the Common Greek simplification of $*t\eta$. Only later, the anaptyctic ə in $*k^wet\eta\tau o\varsigma$ would have merged with $/a/$ or $/o/$, depending on the dialect group (whence Hom. $\tau\acute{\epsilon}\tau\rho\alpha\tau\omicron\varsigma$, Thess. $\pi\epsilon\tau\rho\omicron\tau\omicron\varsigma$). Certain dialects would have analogically reshaped the form as $*k^wet\eta\tau o\varsigma$ before merging ə with $/a/$ or $/o/$, again depending on the dialect group (cf. Ion.-Att. $\tau\acute{\epsilon}\tau\rho\alpha\tau\omicron\varsigma$, Arc. $\tau\epsilon\tau\rho\omicron\tau\omicron\varsigma$).

In the present work, it has been shown that this view lacks foundation. First of all, it has been shown that a regular anaptyxis after the liquid cannot be assumed for dialects such as Mycenaean and Arcadian. Secondly, it was argued in chapter 2 that the reconstruction $*t\eta\rho\text{ped}\acute{\iota}\alpha$ ‘three-legged’ works better than $*k^wt\eta\rho\text{ped}\acute{\iota}\alpha$ ‘four-legged’, both from a linguistic and from an archaeological perspective. Finally, the assumed analogical reshaping of $*k^wet\eta\tau o\varsigma$ to $*k^wet\eta\tau o\varsigma$ cannot be motivated, whereas a secondary origin of forms like $\tau\acute{\epsilon}\tau\rho\alpha\tau\omicron\varsigma$, $\tau\epsilon\tau\rho\alpha$ is quite conceivable. This means that $\tau\acute{\epsilon}\tau\rho\alpha\tau\omicron\varsigma$ and Arc. $\tau\epsilon\tau\rho\omicron\tau\omicron\varsigma$ are the reg-

ular outcome of **k^wetȳrtos*. I have proposed that the simplification **k^wetȳrtos* > **k^wetȳrtos* took place in this word in a highly specific phonetic environment (**t_hȳr*), by dissimilation against the labiovelar onset of the preceding syllable.

Three environments for which a special Common Greek vocalization has been envisaged are word-initial **ȳ-*, word-final **-ȳ* and word-internal **ȳn*.

It has been observed that PGr. word-initial **ȳ-* occurred only as the result of secondary developments that took place between PIE and attested Greek. A plausible instance is the word for 'male', PGr. **ȳsen-* (reflected as Thess. ὀρσεν, Arc. ὀρ<ρ>εν and Hom. ἄρσῃν, Att. ἄρρῃν), probably from PIE **u_hȳsen-* from which initial **u-* was lost. The dialect forms just cited imply that the treatment of word-initial **ȳ-* was identical to that of word-internal **ȳ* in terms of vowel quality. They might also show that in Thessalian, the place in which the anaptyctic vowel developed was different in both contexts, ὀρ- versus -ρσ-. Unfortunately, it is difficult to utilize this word as reliable evidence in view of the existence of an *e*-grade form ἐρσῃν, ἔρρῃν in other dialects.

Secondly, there is no evidence for Haug's idea of an early (Proto-Greek) conditioned reflex **ȳ* > -αρ- before *n* (section 9.4). What is more, the present stem forms πορνάμεν· πωλεῖν 'to sell' and μορνάμενος· μαχόμενος 'fighting' (both Hsch.) speak against it: they prove that **ȳ* had an *o*-colored reflex in certain dialects. Even an early, Pan-Greek *shwa*-anaptyxis **ȳn* > **-arn-* is difficult to prove: since πορνάμεν and μορνάμενος have no indication of dialect, they could stem from Cretan or Arcadian, where ὀρ would be expected in any case. There is no clear evidence that **ȳn* yielded -ορν- in Aeolic (the only dialect group which certainly had **ȳ* > -ρσ-). Thus, the evidence is compatible with the claim that **ȳn* behaved just like other cases of word-internal **ȳ*. This means that an isolated form like μάρναμαι 'to fight' displays the regular word-internal development to -αρ- in Ionic-Attic. As regards **ȳn* (section 10.5) a Pan-Greek development to **-aln-* can be excluded on account of the adverb ἀφ' ἅπαντες 'all together' (Elis), ἀλλανέως· ὅλοσχερῶς, Ταρραντῖνοι (Hsch.), reflecting **ha-u_hneh-* 'all together'. In the Ionic-Attic forms βάλλω, θάλλω and κάλλος, all reflecting **-aln-*, the slot of the anaptyctic vowel may be due to analogy.

Establishing the development of word-final **ȳ* (section 9.5) is complicated by the scarcity of direct evidence. Concerning the quality of the vowel in the nom.-acc. sg. in -αρ of heteroclitic neuters, analogical influence of the weak cases in -ατ- is difficult to exclude. The reconstruction of most adverbs in -αρ is uncertain. Nevertheless, there is some evidence suggestive of an early, Pan-Greek development to word-final **-ar* that preceded the vocalization of word-internal **ȳ*:

- Cyprian *a-u-ta-ra* /autar/ (cf. Hom. αὐτάρ) < **-t_hȳ* (contrast *to-ro-su-ta-mo-se* < **t_hȳsu-*).

- Homeric ἦτορ ‘heart’ militates against a Common Greek change $*_f > -\alpha\rho$. The form is a vestige of some dialect with $*_f > -\sigma\rho$, probably some Aeolic dialect (Peters 1980: 237). Given that the regular word-internal reflex of $*_f$ in Aeolic is $-\rho\sigma-$, ἦτορ also suggests that the anaptyctic vowel was phonologized earlier before word-final $*_f$ than in word-internal position.

This conclusion is further corroborated by two Homeric forms.

- The disyllabic stem of ἔαρ (gen. ἔαρος) ‘spring’ was apparently generalized early on in the derivative ἡρινός ‘spring-’ (epic εἰαρινός with metrical lengthening). This suggests that PGr. $*_{mes}f$ became $*_{mes}\epsilon\alpha r$ early on.
- The Homeric phrase ὑπόδρα ἰδών ‘looking askance’ in which the adverb reflects PGr. $*_{upod}f k$. At first sight, this is an instance of word-final $*_f > -\rho\alpha$, but since ὑπόδρα had word-internal $*_f$ before the loss of word-final occlusives, it is better to interpret it as evidence for the word-internal reflex. I have argued that ὑπόδρα ἰδών is an instance of Epic $*_f$ being preserved in a formulaic phrase, and eventually developing to $-\rho\alpha-$. It follows that the word-final vocalization to $*_{-}\epsilon\alpha r$ predates the loss of word-final stops.

Note that there is no evidence for the claim that PGr. $*s$ was not lenited between $*_f$ and a full vowel. Forms like θρασύς may have restored σ from related forms, and the adjective τραυλός shows that lenition to h normally took place in this environment, too. Contrary to what I proposed in Van Beek 2013: 259–260, there is no compelling evidence for a special development $*_f > -\rho\alpha-$ conditioned by a following h : τραυλός may have an analogical reflex, given the recent proposal by Batisti (2017b) that its root is $*tres-$ ‘to be scared, tremble’.

There is no evidence for the place of the accent as a factor conditioning the placement of an anaptyctic vowel before or after the liquid. Counterexamples to the idea that $\alpha\rho < *_f$ is regular only when it (secondarily) carried a rising pitch include (Homeric) ταρφέες, ἀταρπός, δράκων and (Homeric and class.) καρτερός, καρπός, τέταρτος. An accentual conditioning does not help to explain the Mycenaean evidence either (cf. section 2.5.3).

There is no convincing evidence either for the idea that a preceding or following consonant cluster could influence the place of anaptyxis. Counterexamples again include καρτερός, ταρφέες ($\alpha\rho$ after a single onset consonant), but also στρατός and (for $*f$) σπλάγχνα ($\rho\alpha$ or $\lambda\alpha$ after an onset $sT-$).

Finally, there is no reason to explain cases of $\alpha\rho$ as a secondary morphologically conditioned zero grade to roots of the structure $*CeRC-$, as assumed by Kuryłowicz and García Ramón.

12.4 The Reflexes of Proto-Greek *ʎ

Concerning the reflex of *ʎ (chapter 10), it appeared to be rather difficult to find secure evidence for its reflexes in the different dialects. The regular Proto-Ionic outcome was -λα-, probably independent of the environment: compare βλαδεῖς ‘weak, porous’ < *mʎd-ú-, πλάτη ‘shoulder-blade; oar’, βλαστός ‘sprout’ (if from *mʎd-tó-), κλάδος ‘branch’ < *kʎd-o-, and πλάξ ‘flat surface’ < PIE *plok-, *pʎk-. A new piece of evidence adduced here is γλαφυρός ‘hollow’ (cf. γλάφω ‘to scoop out’) reflecting *gʷʎbʰ-u-ló- with delabialization of the labiovelar.

That the developments of *ʎ (-αρ-) and *ʎ (-λα-) should diverge in terms of their vowel slot is unexpected at first sight. However, for *ʎ this conclusion cannot be avoided: reliable evidence for a reflex -αλ- is absent, except before *n* (see below). The vowel slot of ἀμαλδύνω ‘to corrode’, which probably derives from an adjective reflecting *mʎd-ú- ‘soft, weak’, can be analogical after the verb μέλδομαι ‘to melt’. If *ʎ and *ʎ indeed had a different treatment, their vocalizations may have taken place at different chronological stages, i.e. the vocalization of *ʎ may have been earlier, at least in Ionic-Attic.

The development *ʎn > -αλλ- seems regular in the verbs βάλλω ‘to throw, hit’, θάλλω ‘to flourish’, perhaps also πάλλω ‘to toss’, as well as in κάλλος ‘beauty’ and related forms. For the last word, I have proposed a new etymology, positing a lost verb *κάλλω ‘to stand out’ reflecting Proto-Greek *kʎn-e/o-, ultimately from a nasal present to the root PIE *kelh₂- ‘to stick out, tower’. It might be supposed that the vocalization *ʎn > *əln in these nasal presents was influenced by the existence of related forms with the reflex of a full grade or prevocalic zero grade root (cf. below on Elean αφλανεός), but this is not certain. Moreover, we have found that *ʎn yields a geminate -λλ- in the forms just mentioned, in contrast with the loss of the nasal with compensatory lengthening in words where *ʎn was intervocalic at an earlier date (ὀφείλω ‘to owe’ < *opʰelne/o-, εἴλωμαι, εἰλέω ‘to throng’ < *uelne/o-).

For the other dialects, there is very little evidence to go by. Interesting forms are Elean αφλανεός and Cret. αβλοπια, which could show diverging treatments of *ʎ (both are post-labial). If this is correct, they suggest that the vocalization of *ʎ (like that of *ʎ) took place relatively late in the individual West Greek dialects. Furthermore, Elean αφλανεός is important because its reflex of *ʎn contrasts with that of its cognates in other dialects (Hom. ἀλλέες, Ion. ἀλής).

12.5 The Double Reflex $\alpha\rho$ versus $\rho\alpha$ in Ionic-Attic

Chapters 4 to 9 have dealt with the complicated question whether the regular outcome of $*\gamma$ in Ionic-Attic was $-\alpha\rho$ - or $-\rho\alpha$ -, or whether both reflexes were regular but subjected to some conditioning factor.⁵

There are instances of both $-\alpha\rho$ - and $-\rho\alpha$ - that cannot be explained as analogical vocalizations, either because the root has a different full grade slot (e.g. ἔδρακον) or because the form is isolated (e.g. στρατός). The evidence for $\rho\alpha$ is well-known and comprises the following items (accompanied by their Proto-Greek reconstruction and, if applicable, related full grade forms):

- δράκων ‘snake’ < $*d\gamma k\text{-ont-}$ (Il.+), cf. δέρκομαι ‘to look’;
- δρατός ‘flayed, skinned’ < $*d\gamma t\acute{o-}$ (Il.), cf. δέρω;
- ἔδρακον ‘saw, looked’ < $*e\text{-}d\gamma k\text{-e/o-}$ (Hom.+; poet.), aor. of δέρκομαι;
- ἔπραθον ‘pillaged, sacked’ < $*e\text{-}p\gamma t^h\text{-e/o-}$ (Hom.+; poet.), aor. of πέρθω;
- θρασύς ‘bold’ < $*t^h\gamma s\acute{u-}$ (Hom.+; Cl. Att.-Ion.), cf. Aeol. θέρσος;
- κραδίη ‘heart’ < $*k\gamma d\text{-i}\bar{a}$ (Hom.);
- στρατός ‘army’ (Hom.+) < $*st\gamma t\acute{o-}$, a verbal adjective to PIE $*ster$ - ‘to make subject’;
- τέτρατος ‘fourth’ < $*k^w\acute{e}t\gamma to$ - (Hom.+; poetic);
- τράπεζα ‘table’ (Hom.+) < PGr. $*t\gamma\text{-ped-ia}$ ‘three-legged’;
- τραπέομεν ‘let’s get satisfaction’ (Hom.) < $*t\gamma p\text{-}\bar{e}\text{-omen}$, cf. τέρπομαι ‘to enjoy’;
- τρasiά ‘drying rack’ (Att.) < $*t\gamma s\text{-i}\bar{a}$, cf. τέρσομαι (section 9.1.5).

At first sight, these cases seem to prove that $-\rho\alpha$ - was the regular, undisturbed reflex of $*\gamma$. However, there are also various clear instances of $-\alpha\rho$ - in Ionic-Attic reflecting $*\gamma$ that are either etymologically isolated or occur beside a full grade root of the structure $*CreC$ -. The following is an exhaustive list of the evidence:

- Ion.-Att. ἀμαρτεῖν ‘to miss’ < $*am\gamma te/o$ - (section 8.2.2);
- Ion.-Att. ἄρπη ‘sickle’ < $*s\gamma p\bar{a}$ -, PIE $*s\gamma p$ - (section 9.6.1);
- Ion.-Att. ἄρχω ‘to be first; rule’ < PGr. $*h\gamma k^he/o$ - (or $*h\gamma sk^{(h)}e/o$ -) < PIE $*s\gamma g^he/o$ - (or $*s\gamma K\text{-ske/o}$ -) ‘to be eminent’ (section 9.6.2);
- Hom. ἀταρπός ‘path, trail’ < $*n\text{-}t\gamma p\text{-o}$ - ‘untrodden’ (section 9.6.3);
- Att. καταδραθεῖν ‘to fall asleep’ < $*d\gamma t^he/o$ - (sections 8.2.1 and 8.4.2);
- Att. καρδία, Ion. καρδίη ‘heart’ < $*k\gamma d\text{-i}\bar{a}$ (section 6.1);
- Ion.-Att. καρπός ‘fruit, yield’ < $*k\gamma p\text{-}\acute{o}$ -, PIE $*kerp$ - ‘pluck’ (section 9.6.5);
- Ion.-Att. κάρτα ‘very’ < $*k\gamma\acute{r}ta$, cf. Aeol. κρέτος ‘force’ (chapter 5);
- Ion.-Att. καρτερός ‘steadfast, firm’ < $*k\gamma\acute{r}ter\acute{o}$ - (chapter 5);

5 The evidence for an o -colored reflex in Ionic-Attic is marginal: perhaps, πόρρω ‘further’ is an instance, if this directly reflects $*p\gamma\acute{r}t\bar{i}\bar{o}$ (section 9.3).

- Ion.-Att. *κάρφω* ‘to dry up; wrinkle’ < **k^hrp^h-e/o-*, with the zero grade of PIE **(s)g^hreb^h-* ‘to dry up’ as reflected in Baltic and Germanic (section 9.6.6);
- Hom. / poet. *μάρναι* ‘to battle’ < **mr^h-n-h₂-*, an inherited nasal-infix present cognate with Ved. *mrnáti* ‘to rob’ (section 9.4);
- Hom. *ταρβέω*, aor. *τάρβησα* ‘to fear, be frightened’ < **trg^w-ē-* (section 4.2.1);
- Ion.-Att. *ταρσός* ‘sole of the foot; blade of an oar’ < **trs-ó-* (section 9.1.5);
- Hom. *ταρφέες* ‘dense, frequent’ (*plurale tantum*) < **t^hrp^hh^éu-es* to the root of *τρέφομαι* ‘to become fat, coagulate’ (section 4.3.1);
- Ion.-Att. *τέταρτος* ‘fourth’ < **k^wétrto-* (section 2.6);
- Hom. *χάρμη* ‘fighting spirit, battle rage’ < **k^hrmā-*, a deverbal abstract PIE **g^hrm-eh₂-* to the root **g^hrem-* ‘to rage’ (section 9.6.7).

In what follows I will first list other forms that have been excluded from the evidence, indicating the reason for exclusion (analogy, unreliable etymology or reconstruction, dialectal provenance unknown, etc.). After that, I will summarize the arguments for considering the forms with *-αρ-* regular, and then discuss the benefits of the scenario accounting for *-ρα-* as the reflex of Epic **r₁*. This scenario itself (for which see section 1.5 and 6.7) will not be repeated here.

12.5.1 Evidence Excluded from Consideration

In the following words, *ρα* may continue the sequence **r_h*:

- *δράσσομαι* ‘to grasp with the hand’ < **dr^hng^h-ie/o-* (section 9.2.1);
- *γράω* ‘to devour’ < **gr^hns-e/o-*.

The following words may have an analogical vowel slot (for more forms and further discussion, see especially chapters 4 and 5):

- dative plural forms of stems in *-r-*, such as *ἀνδράσι* and *ἀστράσι* (section 7.3.3);
- Hom. *ἀρνείος* ‘ram’, Att. *ἀρνεώς* < **urn^hsn-ēu-ó-* (sections 9.1.6 and 9.1.7) may have been influenced by *ἄρσην* ‘male animal’;
- Class. *ἀτραπός* ‘path, trail’ < **n^h-trp^h-ó-* ‘untrodden’ (cf. *τραπέω* ‘to tread’, and ultimately PIE **trep-* ‘tread’, section 9.6.3);
- Hom. *βάρδιτος* ‘slowest’ is an artificial epic form replacing **βράδιτος* on the model of *κάρτιτος* ‘strongest’ for *κράτιτος*;
- *βραδύς* ‘slow’ < PIE **g^wrd-ú-* (Lith. *gurdūs* ‘weak, slow’), full grade uncertain;
- *βραχύς* ‘short’ < **mr^hg^h-ú-* and superl. *βράχιστος* << **mrég^h-isto-* (for PIE **mreg^h-*, cf. Lat. *brevis* ‘short’);
- *γράφω* ‘to write’ beside dialectal *o*-grade *γοφεύς*, *γοφίς*, etc. (section 9.2.2);
- *δραχμή* ‘drachm’ (cf. *δράσσομαι* ‘to grasp’, section 9.2.1);
- *ἐπικάρ* ‘cross-hill’ (Hom.) and the derived adjective *ἐπικάρσιος* ‘crosswise’ (Hom., Hdt.+), Att. *ἐγκάρσιος* ‘id.’ (Th.+), with the zero grade of **kers-* ‘cut off’ (section 9.6.4);

- θαρσέω ‘to hold on, keep the courage’ (Hom.+) may well have a direct reflex of an old stative verb **tʰys-ē-*, but influence of full grade forms (θέρσος >> θάρσος) cannot be excluded;
 - κάρτος, κάρτιστος, καρτύνω (Hom.+) are analogical, artificial epic forms beside κράτος, κράτιστος, κρατύνω: see chapter 5;
 - κρατύς ‘strong’ < **kʷrtu-* and κρατέω < **kʷrt-ē-* (PGr. **kret-*, cf. comp. Ion. κρέσσων, Aeol. κρέτος, cf. chapter 5);
 - σάρξ ‘meat’ < **tʰyʷrk-*, where influence of **tʰyʷork-* (cf. dialectal σύρξ) cannot be excluded;
 - τραυλός ‘stammering’ (Hdt.+) < **tʰys-u-ló-* (cf. PIE **tres-* ‘tremble’, τρέω ‘flee’, cf. section 9.1.6);
 - τραφερός ‘solid’ < **tʰyʷpʰ-eró-* (Hom.+, poetic), cf. τρέφω, ἐτράφην (section 4.3.2);
 - τράχηλος ‘neck, throat’ (Hdt.+) beside τρέχω ‘to run; turn’, perhaps to a lost verb **τραχάω* or **τραχέω* (section 9.7.2);
 - τρήρων ‘timorous’ (Hom.+) based on a reflex of **tʰys-ró-* (PIE **tres-* ‘tremble’);
- Forms attested in lexicographers without an identification of dialect cannot be used, for instance:

- πρακνόν· μέλανα ‘black’ (Hsch.) beside περκνός ‘dark’;
- δάρκες· δέσμαι ‘bundles; handfuls’ (Hsch.) beside δράξ f. ‘handful’ (Batr.).

For the following words, the reconstruction is unreliable or the etymology is uncertain:

- βραχίων m. ‘(upper) arm’ (Hom.+, section 6.9.5);
- καρπός ‘wrist’ (Hom.+) and καρπάλιμος ‘agile, swift’ (Hom.+, epic) might reflect zero grades of a PIE root **kʷerp-* ‘turn’, but this is not certain;
- κραδαίνω ‘to brandish’ (Hom.+) and κραδάω ‘id.’ (Hom.), section 6.9.2;
- κρίνεια ‘cornel tree’ (Hom.+) and κρίνον ‘id.’ (Thphr.), section 6.9.4;
- κρίνος n. ‘helmet’ (Att.), section 9.4;
- πραπίδες f. pl. ‘mind’ (Hom.+, poet.), section 9.7.1;
- πράσον n. ‘leek’ (Ion.-Att.), section 9.1.8;
- φάρσος n. ‘part (of a city)’ (Hdt.+, section 9.1.8);
- φράσσω, φράγνυμι / φάργνυμι, φράξαι / φάρξαι ‘to fence in’, probably a denominative to PIE **bʰrǵh-* ‘stronghold’ (section 9.2.3); the original distribution between ρα and αρ is not clear.

12.5.2 Arguments for Considering -αρ- Regular, -ρα- Analogical

In most previous attempts to tackle the problem of the twofold reflex in Ionic-Attic, it was assumed that -ρα- was the default reflex and that -αρ- was due to some special conditioning, such as accentuation, the avoidance of heavy consonant clusters, or morphological conditioning. I have criticized these attempts

in section 1.4; see also section 2.5 for a more detailed treatment of the Mycenaean evidence from this perspective. In addition, we have seen that viewing -ρα- as the regular reflex has led to the assumption of unlikely or unmotivated analogical developments for cases of -αρ- (cf. section 2.6 on τέταρτος, section 6.1 on καρδία, section 8.2.1 on κατέδαρθον).

Some scholars have resigned to the view that the original distribution between -ρα- and -αρ- cannot be fully recovered. In this book, the problematic 'double reflex' in Ionic-Attic has been attacked from a completely different angle. In my view, the key to the solution is to pay attention to the way doublet forms are distributed. Generally speaking, there are two main reasons to think that -αρ- < **r* was the regular vocalization in Proto-Ionic: genre distributions and metrical peculiarities.

Concerning genre distributions, in most forms which appear in true doublets, the distribution is such that only the form with -αρ- occurs in prose texts, whereas the variant with -ρα- is limited to poetry. This holds for:

- Ion.-Att. δαρτός beside Hom. δρατὰ σώματα, both < **drtō*- 'flayed';
- Att. καρδία, Ion. καρδίη beside Hom. καρδίη, all < **krdiā*- 'heart';
- Att.-Ion. καρτερός beside Hom./poet. κρατερός, both < **krtērō*- 'steadfast, firm';
- Att. κατέδαρθον beside Hom. κατέδαρθον, both < **drt^h-e/o*- 'sleep';
- Att.-Ion. τέταρτος beside Hom./poet. τέταρτος, both < **k^wétrto*- 'fourth';
- Att.-Ion. ἐτάρπην beside Hom. τραπέιμεν, both < **t^rp-ē*- 'get satisfaction'.

Interestingly, it is precisely for the vocalism of καρδία, τέταρτος and κατέδαρθον that implausible analogies have been proposed by previous scholars. In reality, for these lexemes the conclusion cannot be avoided that both doublet forms have a regular reflex. My proposal is that -αρ- < **r* is the regular Proto-Ionic vernacular reflex, and that -ρα- is the regular reflex of Epic **r*, i.e. of **r* that was retained longer in the epic tradition.

It is true that we also find forms with -αρ- < **r* that are limited to (epic) poetry, such as ἀταρπός 'path, trail', ταρφέες 'densely packed, frequent', χάρμη 'battle fury'. In the first word, classical prose even has the form ἀτραπός. However, in such instances we may assume that the epic tradition preserves an older Dark Age Ionic form that had disappeared from the vernacular in the 8th c. BCE (or which had been analogically reshaped, e.g. ἀτραπός after τραπέω). Considering other Ionic-Attic words with only -ρα- or -αρ-, we again find a number of words attested only with -ρα- that are virtually limited to Epic Greek, e.g. ἔδρακον, δράκων, ἔπραθον, κραταιός.

The second reason for thinking that -ρα- is a specifically epic reflex (and hence that -αρ- is the vernacular reflex) is that a fair number of typical epic words with -αρ- < **r* display metrical peculiarities. The most widespread pecu-

liarity is that re-syllabification of a plosive plus liquid (*PL*) onset, which is still the default sandhi treatment in Homeric verse, is not applied. That is, the words undergo epic correption, a phenomenon also known by the name *muta cum liquida* (*McL*). The same phenomenon is found in words with $-\rho\sigma- < *j$, a reflex that is normally viewed as Aeolic.

The phenomenon of *McL* in Homeric Greek has been subjected to a detailed analysis in chapters 6 and 7. I have concluded that *McL* strongly correlates with the presence of $*j$, and therefore that Wathelet (1966) was right in ascribing the rise of *McL* in Homer to a prehistoric vocalization of $*j$. This goes against a clear trend in recent scholarship to view *McL* scansion merely as the result of a shift in the syllabification of *PL*-clusters.

In Early Greek Epic, *McL* scansion is tolerated in a closed and small set of lexemes, most of which once contained $*j$ (e.g. $\tau\rho\acute{\alpha}\pi\epsilon\zeta\alpha$, $\kappa\rho\alpha\tau\alpha\acute{\iota}\omicron\varsigma$). That this syllabification was normally avoided is strongly suggested by the existence of artificial forms such as $\kappa\acute{\alpha}\rho\tau\iota\sigma\tau\omicron\varsigma$, $\acute{\epsilon}\beta\lambda\acute{\alpha}\phi\theta\eta\nu$, $\acute{\epsilon}\kappa\lambda\acute{\iota}\nu\theta\eta\nu$ (for expected $\kappa\rho\acute{\alpha}\tau\iota\sigma\tau\omicron\varsigma$, $\acute{\epsilon}\beta\lambda\acute{\alpha}\beta\eta\nu$, $\acute{\epsilon}\kappa\lambda\acute{\iota}\theta\eta\nu$). Therefore, the elimination of $*j$ from Epic Greek must have played a key role in the spread of *McL*. However, we also found that the synchronic use of *McL* in Homer cannot be ascribed solely to the vocalization of $*j$: the productivity of the license suggests that the syllabification of word-initial *PL* was already shifting in the vernacular of the *Iliad* poet. Moreover, we saw that the concrete scenario proposed by Wathelet is subject to chronological problems.

I have proposed that the epic tradition retained $*j$ in certain words during the time when the regular development $*j > -\alpha\rho-$ took place in Proto-Ionic, and that this retained $*j$ (called Epic $*j$) developed to $-\rho\alpha-$ only much later, probably a century or less before Homer. In other words, in doublets such as $\kappa\alpha\rho\delta\acute{\iota}\eta$ beside $\kappa\rho\alpha\delta\acute{\iota}\eta$, the variant with $-\rho\alpha-$ arose *within* the language of epic poetry. This explains why many words with $-\rho\alpha-$ are limited to Epic Greek, and at the same time why it is especially these words (and words with $-\rho\sigma- < *j$) that show a peculiar metrical behavior. It also proved possible to view $-\rho\sigma-$ as a conditioned outcome of Epic $*j$: leaving aside forms that may have undergone analogical reshaping, $-\rho\sigma-$ is found after labials, $-\rho\alpha-$ in other contexts.

Another metrical peculiarity of epic forms with $-\rho\alpha-$ and $-\rho\sigma- < *j$ is that in certain cases, a *PL* onset is not used to make position length. Hoenigswald (1991) had already adduced $\kappa\rho\alpha\delta\acute{\iota}\eta$ as an instance of this phenomenon. Similar distributions are found for case forms of $\beta\rho\omicron\tau\acute{\omicron}\varsigma$ 'human being' in Homer that need not undergo *McL* scansion.

At least two Homeric words with a reflex of Epic $*j$ are of such a shape that they are unlikely to have ever existed in a 'normal' (vernacular) linguistic context:

- *τραπείομεν* ‘let’s get satisfaction’ belongs to *τέρπομαι* ‘to enjoy’, but the normal aorist of this verb is *ἐτάρπην*, and the root shape *τραπ-* is otherwise associated with *τρέπω* ‘to turn’ (aor. *ἔτραπον*);
- *προκείμενα* ‘lying ready, having been served out’ was shown to belong to *παρατίθημι* ‘to serve food’. The form *προ-* of the preverb arose from **pʃ-* in a formulaic verse by vocalization of Epic **ʃ*, and would have been replaced by *παρ-*, *παρα-* in a normal linguistic context.

Finally, a clear advantage of the new scenario is that it allows us to account in a natural way for the irregular scansion of the famous verse ends *ἀνδροτῆτα καὶ ἦβην* and *Ἐνυαλίῳ ἀνδρεΐφόντῃ*. These phrases are clearly old, but they were not retained in a metrically irregular shape for seven or eight centuries, as is often assumed. On the contrary, if they were preserved in a form with Epic **ʃ*, they were metrically regular until not too long before the composition of the *Iliad*. What is more, I have argued that the *Iliad* poet may still have pronounced the words in question as **anratēta* and **anrapʰontēi*. It must be noted that these forms could not have been created by Homer, as word-internal *PL* remained heterosyllabic in the *Iliad* and *Odyssey*, with very few exceptions. For this reason, I have also argued that *Ἀφροδίτη* reflects a pre-form with Epic **ʃ*.

12.5.3 *Weighing the Pros and Cons*

The new scenario proposed here allows us to give a full account of the distribution of doublet forms with *-ρα-* ~ *-αρ-* and of their origin. Attic prose forms like *καρδία*, *καρτερός* and *κατέδαρθον* can now be explained as containing the unrestored reflex, while the counterparts *κραδίη*, *κρατερός* and *ἔδραθον* arose in Epic Greek. At the same time, the scenario illuminates why *McL* in Epic Greek is disproportionally frequent in words with **ʃ*, and why it even occurs in words with word-internal *PL*, like *Ἀφροδίτη*. Thirdly, it explains the completely irregular scansion of *ἀνδροτῆτα καὶ ἦβην* and *Ἐνυαλίῳ ἀνδρεΐφόντῃ*, and, for the first time, offers a realistic time frame for the genesis of such irregularities. Finally, a prolonged preservation of Epic **ʃ* may account for the rarity of position length before words like *κραδίη* and *βροτός*.

The cost of this scenario is that a couple of words with the reflex *-ρα-* are normal in Attic prose: *θρασύς* ‘bold’, *στρατός* ‘army’, *τράπεζα* ‘table’ and their derivatives. In chapter 6, I have argued that these forms should be viewed as early borrowings from the epic tradition (or, in the case of *στρατός*, possibly from West Greek). Naturally, given the fragmentary nature of our evidence these assumptions cannot be fully substantiated, but given the arguments provided in chapter 6 they cannot be excluded either. In my view, the benefits of the new scenario clearly outweigh this drawback.

This impression is strengthened by the fact that an alternative explanation could be found for most forms with ρα:

- analogy (e.g. τέτρατος; ἀνδράσι and other dative plural forms; βραχύς, βραδύς and similar ‘Caland’ adjectives; the Homeric thematic aorists ἔδρακον, ἔδραθον and ἔπραθον);
- the etymology is unknown (e.g. πράσον, κρίνεια, βραχίων, πρᾶπιδες);
- the dialect appurtenance is unknown (πρακνόν· μέλανα Hsch., δράξ, δάρκες· δέσμαι Hsch.), so that the words could stem from a non-Ionic-Attic (West Greek) dialect.

12.6 The Prehistory of the Epic Tradition

It is impossible to draw firm conclusions regarding this intricate topic (on which many different opinions exist) only on the basis of the reflexes of *ʔ. Nevertheless, our findings concerning Epic *ʔ allow us to draw a general picture and to discuss some interesting possibilities.

The linguistic evidence for *ʔ does not force us to posit the existence of an epic tradition in hexameters in the mid-second millennium. It is not impossible that certain features of material culture referred to in the *Iliad* are reminiscences of such a remote period, but there is no compelling *linguistic* evidence for this. The fact that Mycenaean has examples of the epenthesis of a homorganic stop (e.g. *a-di-ri-ja-te* ‘with a man’s figure’, class. ἀνδρίας ‘statue of a man’) is irrelevant, as none of the Mycenaean examples concerns *ʔ; also, the epenthesis may have taken place a second time after *ʔ had been vocalized.

The evidence does strongly suggest the existence of a tradition of heroic epic, composed in a verse form much like the hexameter, at a time when *ʔ still existed in one or more Greek dialects. Generally speaking, this implies a date in or before the late Mycenaean period (13th–12th c. BCE). Objections against the antiquity of the hexameter as a verse form are formalistic and counter-productive (see section 1.5.3).

In chapter 7, I have suggested that certain Homeric words may well have a Mycenaean origin, provided that this dialect preserved *ʔ when the Linear B tablets were recorded. Possible instances are **urdoʔent*- ‘rose-scented’ (Myc. *wo-do-we*, Hom. ῥοδόεντι), **trpedʔa* ‘table’ (Myc. *to-pe-za*, Hom. τράπεζα) and **anʔk^{wh}ontā*- ‘man-slayer’ (Myc. *a-no-qo-ta*, Hom. ἀνδρεϊφόντη for *ἀνδροφόντη). Regarding the last form, Mühlestein already noted that Myc. *a-no-qo-ta* seems incompatible with the vocalization presupposed by Hom. ἀνδρεϊφόντη, but he assumed that the Mycenaean reflex was *-or-*. Turning around this argument, I consider it likely that Mycenaean preserved *ʔ (as assumed by Heubeck 1972,

but with partly different arguments) and that the pre-form of Ἐνυαλίῳ ἀνδρεΐ-φόντῃ entered the tradition in a form with *ʔ in the last part of the Mycenaean period.⁶

At that time, the tradition need not have been an exclusively Mycenaean affair. Indeed, scholars like Hoekstra (1981) have convincingly argued for the existence of a poetic Koine at an this early date, comprising South Greek and Aeolic forms. It is possible that a number of typical epic forms in which the vocalization -ρα- causes position length (notably the thematic aorists ἔδρακον 'looked', ἔπραθον 'razed' and ἔδραθον 'fell asleep') entered the tradition from an Aeolic dialect at this early date in a form with -ρο-. In this case, we must assume that -ρο- in these forms was later reshaped into -ρα- when the Ionic forms ἔτραπον 'turned' and ἔδραμον 'ran' were introduced, replacing earlier Aeolic counterparts. This presupposes that the Aeolic dialects underwent (or had already undergone) a vocalization *ʔ > ρο in the late Mycenaean period.⁷

Apart from words preserving a metrical trace of *ʔ (e.g. δράκων 'snake') and words with an early anaptyxis after the liquid (e.g. ἔδρακον 'looked'), we find old epic words with -αρ- < *ʔ, which in all likelihood represents the Ionic reflex. Examples are ἀταρπός 'path', χάρμη 'fighting spirit', and καρτερός 'strong'. It is plausible that formulaic phrases containing these words were coined relatively early, by Ionic poets who had adopted the mixed Mycenaean-Aeolic poetic tradition in the early Dark Ages. These poets were also responsible for Ionicizing traditional forms such as ἔδρακον and for analogically extending the use of the root shape κρατ-.

If Epic *ʔ was replaced in certain words, we must also ask why it was retained in other cases if the vernaculars no longer knew this type of syllabic nucleus. In part of the instances, Epic *ʔ was retained in lexemes which also existed in the vernacular, but where introducing the vocalized vernacular form (with -αρ-, -ρα- or -ρο-) altered the traditional metrical structure of the epic word or formula. In such relic forms, Epic *ʔ developed into -ρα- or -ρο- only later. This happened, for instance, in the precursors of κραδίη, τραπέσθαι, θρασειάων, πρὸς, πρόσω, πρόσωπον, and τραπέιμεν (some of these exclusively in formulaic phrases).

Another set of epic lexemes was retained in a shape with *ʔ because they were no longer current in the Proto-Ionic vernacular after the vocalization *ʔ > -αρ- had taken place there: the precursors of ἀνδροτήτα, Ἀφροδίτη, βροτός (and

6 Whether one is prepared to accept this argument or not, the Mycenaean evidence for *ʔ is fully compatible with the retention of this sound.

7 On the other hand, I agree with Heubeck (1972) that the vocalization of *ʔ is best pushed forward in time as far as possible towards our first attestations.

derivatives), δράκων, κραταῖός and κραται-, ῥοδόεντι, τράπεζα, στρατός were part of the epic tradition early on. These lexemes may be of Mycenaean or (less likely, in most cases) of Proto-Aeolic origin. In this way we may explain why no by-forms with the Ionic reflex -αρ- exist for these words.

Finally, several typical epic words with the reflex -ρα- < **r* behave as if they had acquired a full *a*-vowel at an early date. I have proposed that some such words may have undergone analogical influence of related forms: for instance, κρατερός (where κρ- makes position very often) may have been influenced by κρατύς, just like κράτος (which replaced the older form κρέτος). The thematic aorists ἔδρακον, ἔδραθον, ἔπραθον may be early instances of this replacement, or they may recover Aeolic forms (as explained above).

The eventual vocalization of Epic **r* may have been part of the more general Ionicization of Epic Greek, when forms with the outcome of typical Ionic sound changes like the fronting of **ā* or Quantitative Metathesis were introduced on a large scale. As part of the same process, artificial mixed forms like ὀρόωντες (*diectasis*, for **horaontes*) or θείομεν (for **t^hēomen*) may have come into being. It must be stressed that there is no absolute criterion for dating the vocalization of Epic **r*, but a chronology in which (Eastern) Ionic started to exert stronger influence on the tradition only in the last few generations of poets before Homer would work well. In view of the presence of forms like χάρις and καρτερός in formulaic language, we must keep open the possibility that Ionic poets were prominently involved in the tradition already at an earlier period. However, at this early stage the full-scale Ionicization of Epic Greek had not yet started.

12.7 Relative Chronology and Subgrouping

The place of the anaptyctic vowel in the reflexes of PGr. **r* appears to be a significant dialectal trait. There were not two, but at least four different possible ways of vocalizing the syllabic liquids. Consequently, formulations such as “PGr. **r* > Ion.-Att. αρ/ρα, Myc. *or/ro*” must be given up.

As a result, the status of the vocalization of **r* as an isogloss must be reconsidered. If Proto-Aeolic (ρo) and Arcadian (ορ) have different outcomes of PGr. **r*, this also implies that the vocalization may have occurred at different times in different dialects. For most dialects there are reasons to assume a relatively late vocalization of **r*. The most important general objection against an early vocalization is the existence of traces of **r* in the epic tradition. It would be unwarranted and unnecessary to push the date of vocalization back too much, into the Mycenaean period. On the contrary, if Mycenaean still preserved **r*,

this could explain the appearance of typical Mycenaean-looking lexemes with Epic **j*, as in the pre-forms **urdovent-*, **tɣpedia*, **anrk^{wh}ontā-*.⁸ We might assume that the *o*-colored outcomes of Arcadian and Cypriot are innovations of the late or sub-Mycenaean period.

Furthermore, in chapter 11 we have seen that the vocalization of **j* postdates the lenition of word-initial *yod* in certain dialects contributing to the epic tradition. On the other hand, the vocalization in Proto-Ionic pre-dated the loss of intervocalic **h* (cf. τραυλός). The evidence of Linear B, where intervocalic *-h-* is preserved but initial *yod* has been lenited, suggests that the Proto-Ionic vocalization took place in the late Mycenaean or sub-Mycenaean period.

The Cretan development established in section 3.1 has two important consequences for the prehistory of the Greek dialects. First of all, **j* > *-αρ-* is not a general isogloss between West-Greek and Proto-Ionic. Secondly, the difference between the Cretan treatment and that of the dialects of Elis and Syracuse is best explained if the vocalization of the syllabic liquids took place after the Dorian tribes had settled in the Peloponnese and on Crete, i.e. probably in the early Dark Ages (11th c. BCE). Moreover, as argued in chapter 11, it would be attractive to align the *a*-colored reflexes found in Ionic-Attic and mainland West Greek, both geographically and chronologically.

In sum, the evidence suggests that the vocalization of **j* took place as late as the sub-Mycenaean period (early Dark Ages) in most dialect groups. A possible exception must be made for Proto-Aeolic, for which a relatively early vocalization (in the 13th c. or even earlier) deserves consideration. However, no conclusions can be drawn from the fact that Proto-Aeolic and Arcado-Cyprian both seem to have unconditioned *o*-reflexes: we are clearly dealing with two different developments. The unconditioned *a*-reflex that is common to Proto-Ionic and large parts of West Greek may be seen as a relatively late isogloss of these dialects in the early Dark Ages; it cannot be used either to connect these groups genetically.

8 As Heubeck suggested, a South Greek epic tradition may well have gained additional momentum after the collapse of the Mycenaean civilization.