# The development of the Proto-Indo-European syllabic liquids in Greek
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# 3. Reflexes of *r̥ in the Alphabetic Greek dialects

## 3.1 Introduction
This chapter discusses the outcome of *r̥ in the dialects of Alphabetic Greek except for Ionic-Attic. It must be stressed that the epigraphic evidence is sometimes too scanty to allow for a sharp conclusion. In many dialects, much depends on the interpretation of lexicographical glosses (Cyprian, Elis) or on the literary evidence (Lesbian). Let us again focus on the two questions mentioned in chapter 1.

First of all, we have to determine whether the *o*-colored reflex in various dialects was regular, and under which conditions. As was remarked in section 1.1.1, there is currently no consensus on this matter. However, the evidence for *a*-vocalism should not be overestimated. As discussed in section 1.2, some previous discussions of the dialectal reflexes of the syllabic liquids were hampered by a lack of insight in the developments that yielded -αρ- in all Greek dialects.[180] This issue has been clarified by e.g. García Ramón (1985) and Haug (2002), and we do not need to discuss it in detail here.

The second main issue concerns the regular vowel slot in the outcome of *r̥. Surprisingly few previous discussions have paid attention to this question, as they almost exclusively focused on the color of the vowel. This is due to the dogma which supposes that all Greek dialects show the same hesitation between -αρ- and -ρα- as found in Ionic-Attic, where -ρα- is somehow thought to be the normal, regular reflex. However: (1) We have already seen examples where the dialects behave differently (cf. section 2.5). (2) It appeared that the regular Mycenaean reflex of *r̥ was either *-or-* or preserved -r̥-: it can be definitely excluded that the regular outcome was *-ro-*. (3) In the following chapters, we will find that the regular reflex of *r̥ in Proto-Ionic was -αρ-, rather than -ρα-. The evidence for the vowel slot in the other dialect groups (West Greek, Aeolic, Arcado-Cyprian) will have to be reconsidered in this light. I will now first discuss the common assumption that Cretan -αρ- is due to liquid metathesis.[181]

## 3.2 The alleged Cretan liquid metathesis
It is normally assumed that *r̥ yielded -αρ-/-ρα- in West Greek, with -ρα- as the normal, regular reflex. On Crete, however, a large number of forms with -αρ- appear. Since Hirt (1901: 232-38) and Bechtel (1921-24, II: 710ff.), the standard view has been that Cretan underwent a metathesis of -ρα- to -αρ-. The examples given by Bechtel are:[182]

- δαρχμα, δαρχνα 'drachme' (Ion.-Att. δραχμή)
- καρτος 'violence' (Ion.-Att. κράτος) and related words: PNs with -καρτης, Καρται- (Ion.-Att. -κρατης, Κραται-), καρταιποδ- 'cattle' (Pi. κραταίποδ-), καρτερος (Ion.-Att.

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[180] E.g. Morpurgo Davies (1968).

[181] The epigraphic evidence from Ionic-Attic hardly adds anything to the picture obtained from literary sources, and will therefore not be treated separately in this chapter. Note that Threatte (1980) has no separate treatment of the syllabic liquids. Even so, the following points deserve to be noted. One of the few cases where Attic inscriptions add to the literary evidence is φαρχσαι (inscr.) beside φράξαι (literary mss.). This case will be discussed in section 9.2. In Western Ionic (Euboea), the development of the syllabic liquids was identical to that in the rest of Ionic-Attic (see del Barrio 1991). The Euboean colonies in Italy add one interesting form to the evidence: αγαρρις (Naples) probably contains the expected zero grade root, whereas the literary form ἄγερσις 'mustering of an army' (Hdt.) introduced the full grade of the synchronic verbal root. See the discussion of Arc. παναγορσις in section 3.5 below.

[182] Bechtel does not include Cret. καρπος, which could be the regular reflex of its pre-form PGr. *kr̥pó-. But it must also be noted that the word has -αρ- in all dialects where it is attested.

καρτερός, Hom. κρατερός)[183]
- σταρτος 'band, clan', also in proper names (Ion.-Att. στρατός 'army')
- πορτι 'towards, against' (Ion.-Att. πρός, Hom. προτί)
- Αφορδιτα (Ion.-Att. Ἀφροδίτη)

That we are dealing with a metathesis, rather than with -αρ- as the outcome of $*r̥$, is supposed to be proven by -ορ- in πορτι and Αφορδιτα, forms which are thought not to have contained $*r̥$. To these forms, we definitely have to add the compounded names in -μορτος, which are well-attested in Cretan. Bechtel did not discuss Cretan forms with -ρα-, which also exist but where the liquid metathesis apparently did not take place. As appears from his own words, he did not actually try to establish the conditions of a regular sound change: "In einigen Wörtern und Wortfamilien werden die Lautgruppen ρα, ρο zu αρ, ορ umgestellt. Wie weit dieser Vorgang rein lautlicher Natur sei, wie weit analogische Wirkungen ihn begünstigt haben, kann nicht immer entschieden werden" (l.c.).

In a more recent discussion of the supposed Cretan liquid metathesis, Bile (1988: 125), citing the same examples as Bechtel, does attempt to explain the distribution between -ρα- and -αρ-.[184] She proposes that the metathesis took place only in open syllables, and that -ρα- was preserved in closed syllables.[185] Indeed, -αρ- or -ορ- is followed by a single consonant in most of the forms cited by Bechtel, and the idea is phonetically plausible.[186] It is contradicted, however, by δαρχμα / δαρχνα, as well as the following material:[187]

- Four Cretan verbs have *a*-vocalism in tense stems where Ionic-Attic has an *e*-grade.[188] The attestations are (see Bile 1988: 124):
  PN Στραψιμενης (Pyloros, 2nd c.), cf. Class. στρέφω 'to turn around'
  pres. αποτραχεν (Olous, 3rd c.), cf. Class. τρέχειν 'to run'
  τραποι (Eleutherna, 6th c., = Class. τρέφοι 'may feed'), τραπεν (*Lex Gortyn* III.49, = Class. τρέφειν), pres. τραφοντων (3rd c.)
  fut. [ε]πιτραψιω (Lyttos, = Class. -τρεψέω), cf. Class. τρέπω 'to turn, direct'.[189]
- γραφω 'to write' (= Class. γράφω)
- κρονος 'time' (Class. χρόνος)
- τετραποδ- 'cattle' (*IC* IV 41, III 8-9) and other compounds with τετρα-
- τετραδ- 'fourth day' (Class. τετράς)
- δρομος 'course, race track', whence δρομευς 'young adult' (Class. δρόμος)

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[183] Bechtel comments: "wo καρτ- entsprungen ist, lässt sich nicht erkennen". On this question, see chapter 5.

[184] In some cases, Bile gives additional attestations from more recently discovered inscriptions, e.g. καρτει (1988, No. 12, A 3-4) and Νοθοκαρτης (1988, No. 13).

[185] Bile remarks that the adverb προθα (for Ion.-Att. πρόσθεν) is merely a simplified spelling of an original form with geminate: προθθα < προσθα. For this reason, she excludes it from the counterevidence against the distribution she proposes. Since προθθα (πρόσθεν) does not derive from a pre-form with $*r̥$, it fits in with the distribution to be proposed below: -ορ- < $*r̥$ is regular in Cretan after a labial consonant.

[186] On the other hand, the solution proposed by O'Neil (1971: 43-44) is phonetically unlikely and factually impossible. He posits a liquid metathesis in Central Cretan only in front of dental or velar stops, but not in front of labial or (original) labiovelar stops. His evidence consists of the presents τραπεν and γραφεν, but the idea is refuted by τραχεν.

[187] I collected these forms by searching Bile's index.

[188] The phenomenon seen in τράφω etc. is often supposed to be a general West Greek trait. However, the only epigraphic form in another West Greek dialect that I have been able to trace is the aor. αποστραψαι (Delphi, *CID* 2:34, col. II, 31; 4th c. BC, for Ion. ἀποστρέψαι). This form could owe its vocalism to a present *στράφω, but note that the original locus of the *a*-vocalism may also have been the passive aorist or the middle perfect.

[189] Note that Herodotus attests both τράπε/ο- and τρέπε/ο- as present stems. The situation is hard to judge, because in a number of places the evidence of the mss. has both variants (see further Rosén 1962: 56, with literature). As long as the augmented forms of the present stem kept the *e*-vocalism, there was no danger of confusion with the thematic aorist forms.

The present-stem forms with *a*-vocalism could be explained as secondary (see below), but the forms κρονος, τετραποδ-, τετραδ-, and δρομος cannot be easily explained away. Since these four forms contain -ρα- or -ρο- in an open syllable, they contradict Bile's distribution. It will not do to merely call these counterexamples "exceptions" (Bile 1988: 125): for that, they are too numerous.

In my view, the liquid metathesis assumed since Hirt was designed merely to save the idea of a regular Proto-West-Greek development *$\mathring{r}$ > -ρα-, parallel to the supposed Ionic-Attic development. Instead, I propose that -αρ- and -ορ- represent the regular development of *$\mathring{r}$ in Cretan, where -ορ- is conditioned by a preceding labial consonant. This means that we will have to explain the origin of all Cretan forms with -ρα-.

### 3.2.1 Cretan -αρ- < *$\mathring{r}$: evidence and counterevidence

A regular Cretan development *$\mathring{r}$ > -αρ- immediately explains καρτερος < *$k\mathring{r}ter\acute{o}$- and related forms, σταρτος < *$st\mathring{r}t\acute{o}$-, and δαρχμα, δαρχνα (if from *$d\mathring{r}k^hmn\bar{a}$). It would also explain καρπος < *$k\mathring{r}p\acute{o}$-, but here it must be noted that all dialects where this word is attested have the form καρπός, like Homer and Ionic-Attic. The forms with -ρα- have various different origins. As for τετρα-, the compositional form also behaves differently from the ordinal in Classical Ionic-Attic τέταρτος. In section 2.6, I have proposed that Ion.-Att. τετρα- is analogical after δεκα-, ἐννεα-, ἑπτα-, and this explanation could also be invoked for Cretan. The collective numerals in -άδ- probably derive from a form with syllabic nasal, and originated in δεκάδ-, which continues PIE *$dek\mathring{m}$-t- (although the origin of -δ- is debated).

It remains to explain how the "Doric presents" of the type τράχω came into being. In Cretan, the only directly attested present formations are τραφω, τραχω, and γραφω. Let us stress again that their reflex -ρα- presents counterevidence to the assumed liquid metathesis, and that neither Bile nor Bechtel gives an explanation for this. The *a*-vocalism attested epigraphically in Cretan could be older within West Greek, because there is also evidence for it in literary sources.[190] In Aristophanes, τράφω for τρέφω is reputed to be Megarean, and the form is also attested in Pindar and perhaps in Theocritus.[191] Corresponding to Ion. τρέχω, we find τράχον (Pi. *Pyth.* 8.32; but also τρέχων *Ol.* 10.65) and ἔτραχον (Theoc. 2.147, v.l. ἔτρεχον). Even if the aspectual status of some of the literary forms is unclear, the Cretan forms τραφω, τραχω, and γραφω are certainly genuine present formations.[192]

The Pan-Greek *a*-vocalism of γράφω is problematic for any account which derives this form from PIE *$grb^h$-e/o-. It could be explained from a pre-form PGr. *$gr\mathring{m}p^h$-e/o-, a suggestion which will be further elaborated in section 9.2.[193] Again, the fact that γράφω is non-ablauting in all Greek dialects makes it a strong counterexample to the liquid metathesis assumed for Cretan.

The present stem τραφε/ο- cannot have been the result of influence of a coexisting thematic aorist, because in this way the characteristic distinction in root vocalism between e.g. the aorist ἔτραφον and the impf. ἔτρεφον would have been blurred.[194] Moreover, as we will

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[190] For this reason, these forms are known as "Doric presents". Note, however, that almost all epigraphic evidence for this formation comes from Crete.

[191] Megar. inf. τράφεν (Ar. *Ach.* 788), ἔτραφε (Theoc. 3.16, with v.l.). From Pindar, e.g. τράφει (*Isthm.* 1.48, with v.l. τρέφει), τράφειν (*Isthm.* 8(7).44), τράφοισα (*Pyth.* 2.44), etc.

[192] See Letoublon & de Lamberterie (1980: 324-5), who draw attention to examples of aspectually uncertain forms of τρέφω in Homer, as well as to the variation between ἔτρεφε and ἔτραφε in the ms. tradition at *Il.* 23.91. Moreover, τράφε seems to be an aorist in Pi. *Nem.* 3.53, even if the same author uses the present τράφω (see the examples listed in the previous note).

[193] The *o*-vocalism of the nominal form γροφεύς is probably analogical (see section 9.2.2).

[194] Beside the attestations of the pres. τράφω in Pindar, there is one case of a thematic aorist τράφε (*Nem.* 3.53). Further, we only find the sigmatic aorist θρέψαι and the intr. aor. τραφῆναι. It seems possible to me that the aorist τράφε is a Homerism in Pindar.

see in chapter 8, the Homeric aorist ἔτραφον is an artificial creation. Therefore, the West Greek present τράφω must have replaced τρέφω by taking over the vocalism of the intransitive aorist τραφῆναι. Such a leveling of *a*-vocalism through the entire verbal paradigm is paralleled by the Cretan forms with στραψ- (which are also found in Delphi) and τραψ-.

The origin of the Cretan present τραχω is more complicated. Letoublon & de Lamberterie (1980: 316, 326) assume that a thematic aorist $*t^hr̥k^h$-*e/o*- existed earlier in Greek.[195] If one follows this idea and assumes that $*t^hr̥k^h$-*e/o*- became Cretan τραχε/ο- by influence of the present τρεχε/ο-, it is not clear how the aorist eventually came to replace the older present τρεχε/ο-. If one would assume, on the other hand, that a PGr. $*t^hr̥k^h$-*e/o*- was aspectually ambiguous between present and aorist in Proto-Greek, both the Cretan vocalization -ρα- and the Ionic-Attic form τρέχω are difficult to explain. It does not help to invoke the influence of τροχός 'wheel', because this form would also have to be subject to the assumed metathesis. Possibly, the root vocalism of Cretan τραχω was influenced by that of δραμεῖν, its regular suppletive aorist.

We may conclude that Cretan τραφω, τραχω, and γραφω do not contain a reflex of *r̥. Their *a*-vocalism is of a different origin: τραφω and τραχω must have replaced an older form with *e*-grade, and γραφω may derive from a pre-form $*gr̥np^h$-*e/o*-. In this way, these forms can be reconciled with a regular development *r̥ > αρ in Cretan.

### 3.2.2 Cretan -oρ- < *r̥ after a labial consonant

This leaves us with three cases of -oρ- (found in πορτι, Αφορδιτα, and -μορτος) versus -ρο- (in δρομος and κρονος = χρόνος). Clearly, the two examples of -ρο- never contained *r̥. If a pre-form with *r̥ can be made plausible for the three forms with -oρ-, a distribution can be set up for the reflexes of *r̥: -oρ- is found after a labial consonant, while -αρ- is regular in all other positions. This distribution makes sense from a phonetic point of view.[196]

Before Cretan πορτι 'towards' can be compared with forms in other IE languages, the Greek dialectal forms of this preposition must be taken into account. A full discussion of the material will be provided in section 7.2.5. As Wyatt (1978: 119-20) remarks, the only evidence for the supposed pre-form PGr. *proti consists of Ion.-Att. (plus Lesb.) πρός, Hom. προτί, and Cretan πορτι. The latter form can be included only if it is supposed to be due to liquid metathesis. Since Wyatt is able to show that Hom. προτί is an artficial form, he explains Ion.-Att. πρός from *poti contaminated with the -r- of πρό, παρά, περί (o.c. 122). He also shows that the Cretan form πορτι only occurs in Central Cretan: the rest of Crete has ποτι. This means that Central Cretan is the only West Greek dialect which does not point to *poti, from which Wyatt (o.c. 121 n. 78) concludes that πορτι is a conflation of ποτι and περι.

Wyatt's idea that Proto-Greek only knew *poti is an attractive reduction in itself, but in my view ultimately incorrect: for PGr. we have to reconstruct *poti beside *pr̥ti. The pre-form *pr̥ti may underlie not only Cretan πορτι, but also Myc. *po-si* and especially Hom. πρός, which would explain the regular *muta cum liquida* scansion of this form in a natural way (see chapter 7). This means that Hitt. *parza* '-wards', which Kloekhorst (*EDHIL*, q.v.) has recently reconstructed as continuing PIE *pr̥ti, can be directly compared with Cretan πορτι.[197]

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[195] Letoublon & de Lamberterie (1980: 316, 326) posit the earlier existence in Greek of an aorist $*t^hr̥k^h$-*e/o*- on account of the Armenian aorist *darjay* 'to (re)turn, change' < $*d^hr̥ǵ^h$-*e/o*- (with derived present *daṙnam* < *darjnam*). Hsch. attests the gloss θραξεῖται· πορεύσεται 'will go' (a so-called "Doric future"), but this must be a secondary sigmatic formation based on the "Doric" present τράχω.

[196] Note that a similar distribution has been proposed for Mycenaean and Arcado-Cyprian (e.g. Morpurgo Davies 1968, see section 3.5 below).

[197] For the zero grade presupposed by Hittite *parza*, Kloekhorst refers to Cretan πορτι as deriving from PIE *pr̥ti. Although Kloekhorst does not mention the normal explanation of πορτι (viz., liquid metathesis), the present analysis may vindicate his suggestion.

The assumption that Aphrodite contained *ŗ is more hypothetical. Although the name has no etymology, a pre-form with *ŗ is implied by its Homeric *muta cum liquida* scansion, and perhaps also by the Pamphylian forms Αφορδισιυς, Φορδισιυς (see section 3.6).

A third instance of Cretan -ορ- < *ŗ after a labial consonant are the personal names in -μορτος. They appear not only in Cretan, but also in Theran and Lesbian. A simplex is attested only in post-classical sources: (1) a gloss μόρτος· ἄνθρωπος. θνητός. μέλας, φαιός. οἱ δὲ μορτόν φασι (Hsch., with internally conflicting accentual evidence). (2) This gloss is confirmed by a fragment (No. 467) of Callimachus, taken from Ammonius' (5th c. AD) commentary to Aristotle's *De interpretatione* (38.16): διὸ καὶ τὸ "ἐδείμαμεν ἄστεα μορτοί" φησιν ὁ Κυρηναῖος.[198]

Is it possible to assume that both βροτός and μορτός continue PGr. *mŗtó-? This depends on the evaluation of the second member -μορτος in onomastic material, which has been collected and discussed by Masson (1963). Being unable to explain -μορτος in West Greek proper names from *-mŗtó-, Masson reconstructs a pre-form *mórto- beside *mŗtó- for Proto-Greek.[199] This would imply that Greek, like Indo-Iranian, preserved more than one inherited word for 'mortal' from this root.[200]

The PIE words for 'mortal' and 'dead' are notoriously hard to reconstruct, but Masson's identification of μορτός and Ved. *márta-* is problematic. In his view, the pair *mórto- beside *mŗtó- would be a retention from PIE times. But since root ablaut is hard to motivate in a thematic stem, one suspects that one of these forms (*mŗtó-) is secondary, and the other (*mórto-) inherited. The accentual mismatch between μορτός and Vedic *márta-* could in principle be explained as due to a secondary Greek development,[201] but it is quite possible that Ved. *márta-* derives not from *mórto-, but from *mérto-.[202]

But the main problem with Masson's analysis is the lack of unambiguous evidence for PGr. *mórto- (or *mortó-). He claims that the names in -μορτος are general Aeolic and Doric-NW Greek, but all secure examples of these names are attested in Lesbian, Cretan, and Theran.[203] In the present context, it is possible to assume that μορτο- is the regular outcome of

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[198] The grammarian Orion (5th c. AD) cites the fragment as ἐδείμαμεν ἀστία μορτοί. If the *lectio difficilior* ἀστία is the genuine form, it would have to come from a dialect with ε > ι before a vowel (a common dialectal change in Greek) and preserve a different accent (*ἀστέα).

[199] Masson concludes (1963: 221): "… on ne saurait plus affirmer comme jadis que μορτός est une forme exclusivement éolienne, soit chez Callimaque, soit dans l'onomastique. En effet, l'existence des formes de noms propres en dorien et au nord-ouest assure que μορτός n'est pas un simple doublet de *μ(β)ροτός, βροτός, qui comporterait lui aussi un traitement éolien à partir d'un modèle i.-e. *mŗtó-, mais avec ορ au lieu de ρο. La forme correspond plutôt à un i.-e. *mórto-, avec vocalisme o de la racine *mer-." Masson's judgment is followed by *DELG* (s.v. μορτός) and was already anticipated in the earlier etymological dictionaries (Boisacq and Frisk s.v. βροτός).

[200] Indo-Iranian has three forms for 'mortal': Ved. *márta-*, OAv. (hapax) *maša-* < PIIr. *márta-*, OAv. *marəta-* < PIIr. *martá-*, and Ved. *mártya-*, Av. *mašiia-*, OP *martiya-* < PIIr. *mártia-* (cf. *EWAia* s.vv. *MAR* and *márta-*). Furthermore, Ved. *mŗtá-* and Av. *mərəta-* mean 'dead', not 'mortal'. Since Indo-Iranian preserves the verbal root *mar-* 'to die', it cannot be excluded that at least some of these formations are secondary creations.

[201] That is, the accent of *mŗtó- may have influenced that of *mórto-. It would be imprudent, however, to attach any value to the barytone accentuation of μόρτος in Hesychius, because the form might stem from a dialect with recessive accent.

[202] The Greek evidence adduced by Masson for a PIE form *mórto- can be contrasted with the Uralic evidence adduced by Katz (1983) for a PIE pre-form *mérto- (see e.g. Mayrhofer's discussion in *EWAia* s.v. *márta-*). Katz argues, among other things, that Finno-Ugric borrowings point to a pre-form (early) PIIr. *mértə- (where PIIr. *ə notes the outcome of PIE *o in closed syllables), to be equated with (later) PIIr. *márta-. This would imply that PIIr. *márta- cannot be directly compared with a putative Proto-Greek *mórto-.

[203] The first attestation of Αγε-μορτος in the Aeolis is in the 4th c. (but this case is only attested secondarily in Diogenes Laertius). The only "Aetolian" attestation cited by Masson (1963: 220) is found in an inscription from Egypt, and refers to an officer serving under Ptolemy Philopator (reigned 221-205 BC). The same person is mentioned by Strabo and Polybius. If this name is considered compelling evidence at all, one wonders whether

*mr̥tó-* in Cretan and Theran. A pre-form *mr̥tó-* could also explain the Callimachean simplex μορτός if that form stems from his native dialect, Cyrenaean.[204]

This means that only the names with -μορτος in Lesbian remain as a basis for Masson's reconstruction *mórto-*. Here, it must be noted that an *o*-vocalic reflex of *r̥* would need no further explanation in Lesbian. But the vowel slot is awkward: one expects -ρο-. In this context, the gloss ἔμορτεν· ἀπέθανεν (Hsch. ε 2399) deserves attention, because it shows that a reflex of the verbal root *mer-* may have existed in some Greek dialects.[205] If the name Ἀγεμορτος is indeed genuinely Lesbian, we may have to assume influence of the verbal root *mer-* on the vocalization to -μορτος for a pre-stage of this dialect.[206]

In sum, the onomastic evidence does not offer a sufficient reason to reconstruct an additional form *mórto-*, with the same lexical meaning as *mr̥tó-*, for Proto-Greek. As for Cretan, we have found a distribution between forms with -αρ- and -ορ- (deriving from *r̥*) and forms with -ρα- and -ρο- (not from *r̥*, or of analogical origin). The difference between -αρ- and -ορ- can be explained as conditioned by the preceding labial consonant.[207]

## 3.3 Other West Greek dialects

In this section, I will pay attention to Laconian and its colonies (especially Theran and Cyrenaean, 3.3.1), then consider the evidence from Literary Doric (3.3.2), and finally make some remarks on the dialect of Elis (3.3.3). I do not intend to give a complete overview of all West Greek dialects, but merely to give an idea of the precarious nature of the evidence. Among the other West Greek dialects, I have found no noteworthy details for the dialects of Megara (and colonies), for Rhodos, Karpathos and the other Doric-speaking islands in the Dodekanesos, nor for Messenia. For other regions (Achaea, Sicily, North West Greek), the details are not very interesting either, as appears from the respective dialectal grammars.[208]

## 3.3.1 Laconian and colonies

The dialect of Sparta itself is not very well documented in the (pre-)classical period, but its colonies have produced quite a lot of inscriptions. In Magna Graecia, Heraclea and Tarente are important colonies, while in the Eastern Mediterranean, Thera and thence Cyrene were founded from Sparta.

The evidence for Theran consists mainly of personal names. As far as names are trustworthy evidence, they provide evidence for the vocalization to -αρ- (and -ορ- after a labial consonant) that we just established for Cretan:

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enough is known about the syllabic liquids in Aetolian to accept Masson's conclusion that PGr. knew a separate form *mórto-*.

[204] It is, of course, impossible to establish the dialectal provenance of μορτός in Callimachus with certainty. It is also difficult to draw a conclusion from the gloss μορτοβάτιν· ἀνθρωποβάτιν ναῦν (Hsch.), in view of the absence of a dialect identification.

[205] According to Klingenschmitt (apud *LIV*[2] s.v. *mer-*), this is an older middle in *-to* which was reshaped as an active form.

[206] For analogical -ορ- in Lesbian, cf. Alc. ἐμμόρμενον 'having as a share' beside Hom. ἔμμορε, εἵμαρται.

[207] On the vocalization of *l̥* in Cretan, see section 10.6. The conditioning of the distribution between *a*- and *o*-vocalism in Cretan could be challenged by the PNs Θορσυς (*IC* II, 23.37, 23.53, Polyrhenia, dated between the 3rd and 1st c. BC) and Θορυσταρτω (*IC* II, 13.7, Elyros, 2nd c. BC). But in Masson's view (1972: 292, accepted by Leukart 1994: 191), the names with Θορσυ- are an "élément … du substrat pré-dorien ou "achéen" en Crète".

[208] For North-West Greek, see Méndez Dosuna (1985); for the colonies in Magna Graecia, see the various grammars by Arena and Dubois. The Argolic evidence is potentially interesting, but I have not separately discussed it for the admittedly poor reason that the material was not accessible in a convenient way (e.g. in a dialect grammar). Note that Argolic has forms with -αρ- (such as φαρξις 'fence', see section 9.2.3), as against -ρα- in γραθμα 'letter' < *grapʰma*. It would be worthwhile to check the evidence for this dialect more thoroughly.

- Θαρυπτολεμος (*IG* XII.3 787) and Θαρρυ[μαχ (*IG* XII.3 814), both from the archaic period.[209]
- Καρτι- is attested in Καρτιδαμας (*passim*) and in Καρτινικος (*IG* XII.3 419, 3rd c.), see Bechtel (1917: 256).[210]
- Σταρτο- in Σταρτοφος (*IG* XII.3 330, 2nd c.).
- Μορτο- as a first member in Μορτονασος (*IG* XII.3 Supp. 697, early 5th c.). Masson (1963: 220) takes this as the outcome of PGr. *morto-, but in view of reasons given above, it seems more likely that PGr. had only *mr̥to-.

Since Θαρρυ- looks like the form of the simple adjective, it may theoretically be the levelled outcome *$t^harsu$- of ablauting *$t^hérs$-$u$-, *$t^hr̥s$-$éw$-, rather than the direct outcome of *$t^hr̥su$-. The form is therefore not really probative. But the forms with Καρτι-, Σταρτο-, and Μορτο- are not found in most other Greek dialects. The fact that these forms are concentrated in Cretan and Theran, and especially the existence of a conditioned reflex with *o*-vocalism, could suggest a common development of these dialects. But again, it must be stressed that we are dealing with names: their bearers could originally be from a different dialect. In the present case, influence of Cretan on Theran would be geographically possible.

The inscriptions from Cyrene, which was founded by Theran settlers, have recently been edited by Dobias-Lalou (2000). She discusses the outcome of the syllabic liquids on pages 34-35. Not too much can be deduced from the evidence for appellatives. The noun καρπος 'harvest, yield' (frequent from the 5th c. onwards, Dobias-Lalou 2000: 195) has the same form in all other dialects, so that a Koine form cannot be entirely excluded. A genuine dialectal form may be καρφος 'chaff', in view of its special meaning in Cyrenaean (Dobias-Lalou 2000: 195-6). However, the reconstruction of *r̥ in this word is not quite certain (see section 9.4). The form γροφευς 'secretary' (*SEG* 9.13, 16) is peculiar to the Peloponnesus and Crete, but it probably does not derive from a pre-form with *r̥ (see section 9.2.2). The verbal root is γραφ- in Cyrenaean, like in all other Greek dialects. The title στραταγος and the denominative verb στραταγεω have the same form as elsewhere in West Greek, with the exception of Theran and Cretan.

Many of the personal names attested in Cyrenaean may be due to the influence of Koine or Epic Greek.[211] This does not apply, however, to the first member Καρτι- (Dobias-Lalou 2000: 34) in Καρτισθενης (frequent from the 4th BC – 2nd CE; earlier on, Bechtel 1917: 256 could only ascribe it to the Imperial period), Κarταγορας (*SEG* 9.45, 48, 5th c. BC, and *SECir.* 244, 4th c. BC), and Καρτιμαχος (three times in two lists of temple servants, around the beginning of the CE).[212]

With the exception of Theran, names with Καρτι- are not found in other Greek dialects, not even in Cretan.[213] They therefore seem to contain information about the regular Theran and Cyrenaean development of *r̥, and they outweigh στραταγος, because that form

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[209] These forms show that Theran underwent a development -ρσ- > -ρρ-. The form Θαρσι-κρατης in another Theran inscription is probably a Koine form. Generally speaking, forms with Θαρσι- may replace older forms with *Θερσι-, as in Hom. Θερσίλοχος.

[210] As a second member, -καρτ- is perhaps found in Λακ[α]ρτως (*IG* XII.3 1324).

[211] Κρατης (2x, 3rd c. BC and later), -κρατης, (frequent in all periods), Θρασυ- (frequent from the middle of the 4th c. BC, Dobias-Lalou p. 35), as a simplex Θρασων and Θαρσων (both 3rd c. BC and later), Στρατο- (*SEG* 20.735, Dobias-Lalou p. 14) and -στρατος, Ἁρπαλέα (4th-3rd c., *CIG* 5155 and 3rd c., *SEG* 9.92).

[212] -αρ- is also found in the festival name Καρνεια, as attested in the PNs Καρνηιαδας (4th-3rd c.), Καρνηαδας (4th c.), and Καρνηδας (highly frequent from the 4th c. onwards); for attestations see Dobias-Lalou (2000: 49). The name belongs to the Laconian heritage of Cyrenaean, but it is unclear whether its pre-form contained a syllabic liquid.

[213] In other dialects, names with Κρατι- are attested sporadically: Κρατιππιδας (*IG* V.1 1385.22, Thuria, 2nd c. BC), Κρατι-δημος (Erythrae, No. 57, 5th-4th c. and No. 60, early 3rd c. BC, cited from McCabe, *Erythrai inscriptions, text and list*, see PHI).

could be due to Koine influence.[214] Even if evidence gained from personal names must be used with caution, it is likely that the names in Καρτι- constitute an archaism, as opposed to Καρται-, Κραται- with Epic influence.[215] Since Cyrene is a colony of Thera, it is probable that the vocalization $*r̥ >$ -αρ- took place before the colonization of Cyrene. Cyrenaean provides no further counterevidence to this assumption.

### 3.3.2 The literary Doric evidence
How to evaluate the outcome -αρ- (with a conditioned reflex -ορ-) in Cretan and Theran with regard to the vocalization in other West Greek dialects? Unfortunately, it is difficult even to reconstruct scraps of the situation in most West Greek dialects. The main question is whether there is any evidence at all for the outcome -ρα- in the West Greek dialects.

For Laconian, the closest relative to Theran, the epigraphic material is sparse, but the literary evidence may perhaps offer some clues about the dialectal outcome. In Alcman (worked in Sparta), Epicharmus (worked in Syracuse, colony of Corinth), Sophron (Syracuse, 5th c.) and some other literary sources, we find the comparative κάρρων 'better', from an earlier $*kr̥ti̯ōn$.[216] In Cretan, this comparative has been restored as καρτον-.[217] Apparently, the zero grade of the positive καρτερος has been introduced into the comparative both in Cretan and in the dialect(s) underlying κάρρων. But from which dialect was κάρρων taken?

It is quite possible that κάρρων was not the regular outcome in all Doric vernaculars. Beside κάρρων $< *kr̥ti̯ōn$, the Syracusan mimographer Sophron used the middle perfect forms ἐμβραμένα· εἱμαρμένα (fr. 119, acc. to *EM* 334.10), ἔμβραται· εἵμαρται, and the aorist ἔπραδες 'farted' (fr. 144 Kaibel, and only there; Attic comedy has ἔπαρδον). This could suggest that Syracusan has a regular reflex $*r̥ >$ -ρα-, and that κάρρων belonged to a general literary Doric Koine, into which it penetrated from one specific dialect. This dialect may have been Laconian, given that the oldest literary attestation of κάρρων is in Alcman. A Laconian context is further suggested by two other sources for κάρρονες (*carm. pop.* 870.3, Plut. *Pyrrh.* 26.24), see Hinge (2006: 38).

If this is correct, Laconian would agree with its colony Theran (and with Cretan) in having the vocalization -αρ-, and differ in this respect from at least Syracusan (Corinthian).[218] The occurrence of κάρρων in the two Syracusan poets Epicharmus and Sophron is not decisive for the development in that dialect. In the gloss ἐμβραμένα, -ρα- may well be the genuine Syracusan (and perhaps even Corinthian) reflex.[219] Let me repeat once again that this is quite uncertain in view of the limited evidence.[220]

### 3.3.3 Elis
Apart from Syracusan, there is slight evidence for $*r̥ >$ -ρα- in one other West Greek dialect: that of Elis. Most of the evidence in the recent dialectal grammar by Minon (2007) cannot be used to determine the reflexes of $*r̥$. For instance, it is impossible to determine whether

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[214] That -αρ- was regular in Theran was already suggested by Bechtel (1921-24, II: 534 and 556).

[215] As I will propose in section 5.2.10, the first member Καρτι- continues a Caland variant of καρτερός $< *ḱr̥th_1$-ró- and can be reconstructed as PGr. $*kr̥ti$- < PIE $*ḱr̥th_1$-i-. A first member Κραται- is attested in Epic Greek and in Ionic inscriptions, e.g. Κραταιμένης (Ionic, plus an early example [6th c.] from an Achaean colony in Magna Graecia), Κραταιβιος (Delos). As expected, Cretan has Καρταιδαμας (Bile 1988: 183 n. 133; cf. Theran Καρτιδαμας). The form with -αι- is due to a specifically Epic metrical lengthening, see section 5.2.10.

[216] For further attestations of κάρρων, see *LSJ* s.v. and Forssman (1980: 194 n. 77).

[217] See section 5.2.1.

[218] The reflex -αρ- was probably also regular in Argolic, given forms like φαρξις (on which see section 9.2.3).

[219] I did not check the evidence from non-Attic vase inscriptions in Wachter (2001).

[220] Interestingly, another gloss from Tarente is ἀλανέως· ὁλοσχερῶς. Ταραντῖνοι ('entirely, completely', Hsch.). This is probably an old West Greek form, in view of the cognate αϝλανεος 'completely, all together' attested in Elis. Since Tarente was founded from Sparta, we are perhaps dealing with diverging treatments $*r̥ >$ αρ and $*l̥ >$ λα in Proto-Laconian.

θαρρεν (Minon 20.1) derives from *$t^hers$- or from *$t^hrs$-, because -αρ- may derive from *-ερ- in Elis. As in other dialects, the verb γράφω and its derivatives are non-ablauting and may contain the reflex of a syllabic nasal (section 9.2.2). Likewise, the value of most Elean glosses in Hsch. (discussion in Minon 2007: 549-60) is unclear.[221] But there is one good pair of candidates to show the regular dialectal reflex. The gloss βρατάναν· τορύνην. Ἠλεῖοι ('stirring ladle', Hsch.) must be an instrument noun in -άνη derived from a root *wrat-.[222] In view of the meaning 'stirring spoon', a derivation from the root *uert- 'to turn' immediately suggests itself: a derived instrument noun would have a meaning 'turner, stirrer'. The same root is attested in another Elean gloss: βρατάνει· ῥαΐζει ἀπὸ νόσου. Ἠλεῖοι ('recovers from illness', Hsch.), if we suppose that the meaning developed from "turns better" (Minon 2007: 554). This present formation in -άνω presupposes the existence of a thematic aorist *wrate/o- (cf. βλαστάνω : βλαστεῖν, ἁμαρτάνω : ἁμαρτεῖν). It is possible that the transitive s-aorist *wert-s- presupposed by Hom. ἀπόερσε 'drove off course' coexisted with an intransitive thematic aorist *wr̥t-e/o- in Proto-Greek.[223] If so, the latter form developed into *wrate/o- in Elean, and the substantive βρατάνα was also built on this root allomorph.

If these two glosses are to be considered reliable evidence, *r̥ may have yielded -ρα- in Elis, and the disagreement with the Cretan treatment, where we find o-coloring after a labial consonant and a different vowel slot, would be remarkable. But since the only evidence comes from these two glosses, this conclusion rests on rather shaky foundations.[224] It must also be taken into account that the word for 'drachme' is attested several times (Minon 2007: 355) as δαρχμα and once as δαρχνας, forms which could point to a pre-form *dr̥k^hmnā-.[225] Moreover, καρπος (attested as κ]αρποφορο[ and [κ]αρπομ[ετρον) might theoretically be the genuine dialectal reflex of PGr. *kr̥pó-. Note, however, that the word for 'drachme' could theoretically be an inter-dialectal loan, and that καρπος has the same form in every dialect where the word is attested, and also in Epic Greek. Under these conditions, it would not be wise to base any firm conclusions on the evidence at our disposal.[226]

### 3.3.4 Conclusion for West Greek

The only West Greek dialect for which we have clear evidence is Cretan, where we normally find *r̥ > -αρ-, but -oρ- after a labial consonant. There is very slight evidence for a regular outcome -ρα- in Elis and in Syracuse, and for -αρ- in Theran and Cyrenaean onomastic material. If the evidence for -ρα- in the former two dialects is taken seriously, the divergence with Cretan would show that Proto-West Greek, and even Proto-Doric, preserved *r̥. The vocalization would then have taken place during the Dorian migrations in the early Dark Ages. But as we have repeatedly stressed, this conclusion is based on meagre evidence.

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[221] Thus, στερχανά· περίδειπνον. Ἠλεῖοι ('funeral meal') has been emendated to *ταρχανά in order to connect it with ταρχύω 'to bury'. However, the latter is itself a loan, so the form cannot be used in any case.

[222] Also attested as ῥατάναν· τορύναν (Hsch.), without dialectal identification, but apparently non-Ionic-Attic.

[223] In Ionic-Attic, this root is attested only residually in Homeric ἔρρω 'to be banished' < *wert-i̯e/o- (attested in many dialects, and in Elean as ϝαρρω) and Hom. ἀπόερσε 'drove off course' (of the waves) < *-wert-s- (cf. Forssman 1980).

[224] Moreover, the scenario to be proposed for Homeric ἔδρακον in chapter 8 warns us that no far-reaching conclusions can be based on a single thematic aorist form.

[225] All the relevant inscriptions are dated to slightly before or after 500 BC, so it is impossible to tell which of both forms is older.

[226] One epigraphic form from Elis is highly relevant for the outcome of *l̥: αϝλανεος 'completely, all together' (Minon 4.4 and 8.3). As I will argue in section 10.6, this form shows that *l̥ yielded -λα- in Elean, even in front of a nasal. Since the outcome of *l̥ may have been -λο- after a labial consonant in Cretan, it seems that Proto-West-Greek still preserved *l̥.

### 3.4 The Aeolic dialects

The determination of the reflexes of the syllabic liquids in the Aeolic dialects is complicated in several ways. The problems have been clearly formulated by Ruijgh (1961). First, the most abundant sources of examples are the Lesbian poets Sappho and Alcaeus, but the status of this evidence is not always clear, because a number of forms may be hyper-Aeolic or of epic origin.[227] Second, the Lesbian epigraphic material has obviously undergone huge Koine influence at the time when inscriptions start to appear in larger quantities. Most Thessalian evidence is also late and may suffer from the same problem.[228] Third, much of the evidence consists of personal names, where the influence of Epic Greek is a factor to be reckoned with.

In addition, there is no comprehensive grammar of the Thessalian dialects yet (the one by García Ramón and Helly being still in preparation), nor of Boeotian (Vottéro, likewise, is still in preparation).[229] Blümel's grammar of the Aeolic dialects (1982) has no separate treatment of forms with -ρο- or -ρα-. Still, the combined evidence of our sources does allow us to draw a definite conclusion: the regular reflex was -ρο- in all Aeolic dialects. I will review the epigraphic evidence first, and then turn to the extant fragments of Sappho and Alcaeus. The discussion of Homeric words with -ρο- will be postponed to chapter 7: there appear to be serious reasons to doubt that they are of Lesbian or Aeolic origin.

### 3.4.1 The numerals in the Aeolic dialects

Let us start with the interchanges ρα/αρ and ρο/ορ in the numerals. For the attestations of numeral forms in the Aeolic dialects, see the overview in Blümel (1982: 271-75). He judges that these reflect "…verschiedene Varianten teils der Vertretung idg. silbischer Sonanten, teils bestimmter Kompositionstypen; die Einzelheiten der Abgrenzung zwischen phonologischen und morphologischen Ursachen sind noch nicht übereinstimmend geklärt" (1982: 52-53). In section 2.6, I have discussed the idea that the numerals in the Aeolic dialects may have undergone analogical processes also attested in other dialects. Thus, Boeotian πετρατος and πετρα- are not necessarily due to Attic or West Greek influence (the commonly accepted explanation, e.g. Waanders 1992: 379), but may replace *πετροτος and *πετρο- or even *πετρυ-. The same analogy was operative in Ionic-Attic τετρα-, which must have been influenced by δεκα-. Similarly, Arcadian πεμποτος 'fifth' must be explained by the influence of δεκοτος. Note that Boeotian inscriptions also have δεκατος and ενατος, in contrast with δεκοτος or ενοτος as found in Lesbian and Thessalian.

These explanations can be extended to Thessalian πετρο-ετηριδα and πετροτος. The analogical ordinal form δεκοτος is also found in Thessalian; again, it may have been influenced by the color of the final vowel in 'nine' or even 'eight' (cf. the shortened form οκτο in Boeot. and Lesb.). The Thessalian form εξομεινον 'period of six months' (*IG* IX 2, 506.4) is of special importance, because it offers another clear instance of the spread of the "compositional vowel", cf. Ionic-Attic πεντα-, ἑξα- after ἑπτα-, …, δεκα-.[230] It is not entirely clear, then, that Thess. πετρο- is the regular outcome of $*k^w et_r-C-$.

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[227] "Les textes de la lyrique lesbienne ont subi des altérations plus ou moins graves, surtout dans les citations de la tradition indirecte, mais aussi dans les papyrus, ce qui a provoqué des formes de la koiné ou des "hyperéolismes"; par surcroît, Sapho et Alcée eux-mêmes adoptent quelquefois des éléments épiques." (Ruijgh 1961: 194)

[228] "les inscriptions antérieures à 400 sont rares, surtout en lesbien; les inscriptions postérieures subissent de plus en plus l'influence de la koinè attique (ou d'une koinè grecque occidentale); en béotien et en thessalien, les éléments occidentaux sont présents même dès le début." (Ruijgh, l.c.)

[229] Vottéro (1998, 2001) has announced the publication of a book on the phonetics and phonology of Boeotian, but to my knowledge, this has not yet appeared.

[230] Thess. πετρα-γουνος (for Class. τετράγωνος 'rectangle') (Larisa, late 3rd c.) may be due to Koine influence.

### 3.4.2 Epigraphic evidence (Boeotian, Thessalian, Lesbian)

I depart from the forms given in the dialect grammars (e.g. Bechtel 1921-24, I: 242-3). Most discussions of the outcome of *$\mathring{r}$ in the Aeolic dialects give just two forms for Boeotian: names in -στροτος (extremely frequent) and those beginning with Βροχ- (Βροχυλλος *IG* VII, 1908, Thespiae, 450-400 BC).[231] It is important that the word for 'army, campaign' does not only appear in names, but also in the denominative verb εσστροτευαθη (*IG* VII, 3174 and *passim*).[232] Boeotian also has instances of *a*-vocalism such as πετρα- and πετρατος, but as we have just seen, these forms may be analogical. Thus, although Boeotian does not offer much information, στροτος definitely speaks in favor of a regular development *$\mathring{r}$ > ρο. There are no data for *$\mathring{l}$.[233]

Neither Blümel (1982) nor Hodot (1990) has a separate discussion of the reflexes of the syllabic liquids in Lesbian. Hodot (1990: 56) remarks that the Lesbian title στροταγος is in the process of being replaced by στραταγος, a hybrid form with dialectal (-αγος) and Koine (στρατ-) elements. The real Koine form στρατηγός, with Ionic -η-, never occurs in Lesbian inscriptions. Other formations of the same stem have already introduced στρατο- much earlier in Lesbian, e.g. στρατεια (Hodot, NAS 01, 4th c.). Thus, the title στροταγος suggests that στροτος was the genuine dialectal form corresponding to Ion.-Att. στρατός. A second important form is αμβροτην 'to break the law' (*IG* XII 2.1, 5), which confirms the genuine dialectal status of ἄμβροτε in literary Lesbian (on which see below). An inspection of Hodot's indices shows that there is no further evidence: γραφ- (αντιγραφευς, γραφην etc.) is well-attested as in all other dialects, but need not have contained *$\mathring{r}$. The attestation of σαρξ (MAT 03.11 and 05.16, 21, end of 3rd c.) is late, and it could be an Ionic word. In conclusion, both στροταγος and αμβροτην are good evidence for the claim that *$\mathring{r}$ > ρο in Lesbian.

In Thessalian, the adjective for 'short' (PGr. *$mrek^h$-u-, *$mrk^h$-ew-) is attested as a personal name Βροχυς (*IG* IX(2), 460.13, Krannon, Pelasgiotis, 2nd c.) and above all in the female name Μροχō (*SEG* 24.406, Perrhaibia, 500-450 BC). The name Βορχιδας (*SEG* 26, 672.32, Larisa, Pelasgiotis, early 2nd c.) is unclear, and perhaps due to a later metathesis.[234] As we have seen, Βροχυ- is also found as an onomastic element in Boeotian. A regular Thessalian outcome -ρο- is often thought to be supported by πετροετηριδ- (*RPh.* 1911, 123.26, Larisa, 1st c.). Since this form has an unexpected spelling <η> of the outcome of *$\bar{e}$, and since the inscription has a number of Koine features, scholars occasionally used to doubt the evidential value of πετρο-. But meanwhile, the form πετρο- has been confirmed by πετροετειριδα (*SEG* 17.288 *passim*, Larisa, 1st c. BC or later) and by the ordinal πετροτος (*SEG* 43.311, Skotoussa, Pelasgiotis, early 2nd c.).

As we have seen in section 2.6, Myc. *qe-to-ro-* and Class. τετρα- may be replacements of the older form *$k^w$etru- after the compositional form of 'ten-'. Since the same could be assumed for Thessalian πετρο-, this form does not provide secure evidence for *$\mathring{r}$ > -ρο-. Note that the -*o*- is also found in δεκοτος 'tenth', attested in Larisa and Skotoussa (*SEG* 27.202, *passim*), and in ενοτος 'ninth' (*SEG* 43.311, Skotoussa). It is less likely, however, that this -*o*- would have spread to πετροτος 'fourth' if the older form was *πετορτος: Ionic-Attic preserves τέταρτος, Arcadian has τετορτος, and the Homeric form τέτρατος may have an inner-Epic

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[231] E.g. García Ramón (1975), Parker (2008). In the overview of Boeotian characteristics in van der Velde (1929), the attestations of the forms in the various different localities are shown. A third form often mentioned in this context is εροτις (plus names in Εροτο-, corresponding to Ionic-Attic Ἐρατο-), but it must be left aside because it cannot derive from a pre-form *$\mathring{r}$. The alleged PN Θρ]οσιουστρoτoς is based on a false reading and therefore cannot be used anymore (see Masson 1972: 293).

[232] This is the 3p. pf. mid. of a verb στροτευομαι, with the athematic ending -αθη < *-αται, which has the secondary -θ- and monophtongization of αι that are characteristic for Boeotian.

[233] But it is perhaps relevant that Πλάταια is a Boeotian-speaking town in the first millennium.

[234] A retention of the regular zero grade development to -ορ- from *$mrk^h$- (with β- for μ- from the full grade, cf. the preservation of μρ- in Μροχō) seems unlikely to me in view of the late date.

explanation (see section 6.7.4). Therefore, πετροτος strongly suggests that the vowel regularly developed after the liquid in Thessalian, too. But again, influence of the compounding form πετρο- cannot be entirely excluded.

Another piece of evidence has been adduced by García Ramón (1999: 11-13): he argued that Θροσια, an epiclesis of Artemis at Atrax and Larisa in the Hellenistic period, is derived from *θρόσις < *$d^h\mathring{r}$-ti- 'support'.[235] In his opinion, Θροσια refers to Artemis in her function as a supporter and protector of youngsters in a rite of initiation. He remarks that an alternative derivation from the root *$d^h$ers- of θρασύς has been proposed (see e.g. *LSJ*), but objects that this adjective is continued in Thessalian as ⁺θερσυς (with full grade root) on account of a different epiclesis, Αθανα Θερσυς.[236] But no matter whether the underlying etymon is *$d^h\mathring{r}$-ti- or *$d^h\mathring{r}$s-, Θροσια may be taken as an example for the vocalization of *$\mathring{r}$. On the other hand, the form is to be handled with some caution, because we are dealing with a name.

García-Ramón has argued on several occasions that *o*-vocalism is the genuine Thessalian reflex not only in contact with a labial sound, but also generally. If Θροσια is mentioned correctly in this connection, then "lässt sich der *o*-Vokalismus bei der Vertretung von *$\mathring{r}$ als nicht durch die phonetische Umgebung bedingt erkennen." (2007c: 106). He also refers to the (as yet unpublished) Thessalian form ορσεν 'male', which contains no initial digamma and derives from the zero grade also reflected in Hom. ἄρσην. Moreover, contrary to what is often stated, the *$\mathring{r}$ in πετροτος did not stand in a labial environment, in view of the early reduction of *$tw\mathring{r}$ to *$t\mathring{r}$ (section 2.5).

While the *o*-coloring of the Thessalian reflex is secure, the regular vowel slot is less clear than in Boeotian or Lesbian. The direct evidence for -ρο- is limited to the epiclesis Θροσια. Names like Μροχō, Βροχυς may also be due to the ablauting full grade PGr. *$mrek^h$-, and πετροτος may have theoretically been influenced by πετρο- in compounds, which itself may have taken its *o*-vocalism from δεκο-. In ορσεν, -ορ- may be a restoration of -ρο- after the full grade ἔρσην, or even be due to a special development of *$\mathring{r}$ in word-initial position (see section 9.1.7 on ἄρσην). We may conclude that the Thessalian reflex was probably -ρο-, like in Lesbian and Boeotian, but the evidence does not entirely exclude -ορ-.

### 3.4.3 The relation between Lesbian poetry and Ionic Epic

The evidence from the fragments of Sappho and Alceaus has to be used with caution for more than one reason. As remarked above, they may not only contain Ionic words with *a*-vocalism; they may also have suffered from hyper-Aeolicisms due to the later interference of editors or copyists. A dominant opinion, especially after the work of Lobel, has been that Sappho composed her poems not in a literary dialect, but in the Lesbian vernacular (cf. the discussion in Bowie 1981: 60ff.). In order to maintain this thesis (dating from the 1920's), Lobel had to reject a number of Sapphic fragments as ungenuine, and to assume a rather large number of emendations in the other fragments. As Bowie remarks, some fragments that were declared non-Sapphic by Lobel had the same metre as others that he did consider genuine. Thus, Lobel's criteria for emendating forms or rejecting entire poems lack any real basis. Since the monographs by Hooker (1977) and Bowie (1981), two things have become much clearer:

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[235] Cf. also García-Ramón & Helly (2007: 305-306).

[236] In my view, this objection is not cogent. First of all, the *u*-stem adjectives preserved root ablaut in Proto-Greek (see the discussion in section 4.1.1). Moreover, as García Ramón himself remarks, Θερσυς is a substantivized feminine 'the bold one', "Her Boldness" of the archaic type ἰθύς (f.) 'course' beside ἰθύς (adj.) 'straight' (see de Lamberterie 1990: 887f.). This substantivized form may have been derived from the full grade root at an early date, and coexisted with the adjective which later generalized the zero grade reflex θροσ-.

(1) Sappho and Alcaeus used a literary dialect which had a tradition of itself (Aeolic lyric). Both poets may therefore owe a substantial part of their vocabulary and formulae to this Lesbian tradition.[237]

(2) There is substantial Ionic influence on the language of both Sappho and Alcaeus. This influence was, to a large degree, due to Epic Greek. Furthermore, it is possible that vernacular Lesbian vocabulary used by Sappho and Alcaeus has been influenced by that of the neighboring Eastern Ionic vernaculars (Bowie 1981).

Generally, the influence of Ionic on the language of the Lesbian poets must have been substantial. In practice, it is often difficult to decide whether a given Ionic form is due to epic influence or to borrowing from the Ionic vernacular, but this is irrelevant for present purposes.[238] Both poets attest a fair number of epic lexical items and grammatical characteristics, especially in poems with epic subject matter, but also in the more lyrical poems.

A number of convincing cases of Ionic or Epic influence are the following. The long vowel s-aorist subjunctive (e.g. φαρξώμεθα, Alc. 6.7) is typical for Ionic-Attic. It is highly unlikely that ἀδελφέα (Sapph. Alc. 364) < *ha-g$^w$elp$^h$-eh- is the genuine Lesbian form, because Thessalian has the equivalent form κατιγνειτος for 'brother' (Epic κασίγνητος), and because of the dental reflex of the labiovelar (Bowie 1981: 89-90). The form Πέραμος (Sapph. 44.16), apparently a cross between Lesbian Πέρραμος and the metrical structure of Epic Πρίαμος, is probably due to epic influence (Bowie 1981: 58, referring to M. L. West).[239] In a summary of his treatment, Bowie (1981: 137) further mentions the forms περιτέλλεται, πίλναται, γαῖα (native Lesbian γᾶ), ῥῆα, ἀμφί + dat., ποτέονται, and ἐστυφέλιξε (guttural flexion of the aorist). This list could easily be extended.[240]

Like φαρξώμεθα, a number of forms attested with ρα/αρ from *ṛ in Sappho and Alcaeus may stem from Ionic. For this reason, I disagree with scholars like O'Neil (1971) and Wyatt (1971) that ρα/αρ is the regular reflex in Lesbian under certain conditions, as it is in Ionic.[241]

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[237] According to Bowie (1981: 177), the lexicon of Sappho and Alcaeus "shares the characteristics and components of the poetic dictions of the other early Greek poets, both epic and lyric". Bowie summarizes his views on the difference between Greek prose and poetry as follows: "a general view given by the Greek dialects is that there did exist this body of words which were felt more appropriate to poetry. The origins of this poetic Koine are presumably to be sought back in the Mycenaean period at least, and it no doubt survived migrations and the splitting up of dialect groups through the conservative nature of poetic language, and also the combined forces of metre, tradition, and convenience. This basic community of diction was no doubt then reinforced after the Dark Age, when interstate relations blossomed again, and poets travelled from one place to another. In all of this, epic poetry certainly played an important role, but it should not be granted a role of total dominance" (1981: 178).

[238] Bowie is reluctant to explain words that occur both in Lesbian poetry and in Homer as epicisms in Lesbian. In each particular case, the fact that a word is shared by the Lesbian poets and the epic language may mean two things. Either the word is inherited from an earlier, common Greek poetic language, or one of the poetic languages borrowed the word from the other.

[239] As candidates for borrowing from spoken Ionic into the Lesbian vernacular, where it is unnecessary to assume epic influence, Bowie (1981: 136) mentions ἴερος, τοιαύτα, κάρτερος, the 3p. ind. aor. ending -σαν, the pf. ptc. ἐοίκοτες (in Aeolic, one would expect -οντες), and ἥπερ (enclitic -περ otherwise absent from Lesbian).

[240] For instance, the productive Epic suffix -αλέος (cf. section 4.2.2) is found in ὀτραλέως (Sapph. 44.11), and Alcaeus is fond of ἀργαλέος 'painful'.

[241] My main objection to O'Neil's argumentation is that most of his explanations for forms with o-vocalism are ad hoc. For instance, we read that "Στρότος opposed to στρατός by itself no more proves that ṛ gives aeolic ρο than κρέτος opposed to κράτος proves that it gives ρε. It is only if a majority of forms represented in attic-ionic by ρα/αρ from ṛ are in ρο/oρ that we may conclude that this represents the normal aeolic reflex." (1971: 24). The first remark is pointless, since it is well known that κρέτος contains the older full grade, which was replaced in Ionic κράτος under the influence of adjectival forms (chapter 5). The second point contains a methodological flaw: it is not uncommon that only one or two strong examples for a given sound change can be given, and that

### 3.4.4 Evidence for *o*-vocalism in literary Lesbian

The following forms from Sappho and Alcaeus, in alphabetical order, can be adduced as potential evidence for -ρο- as a regular reflex (-ορ- analogical):[242]

ἄμβροτε (Sapph. 5.5)
ἀμβροσίας (Sapph. 141)
Ἀφροδίτα (Sapph. 1.1 *passim*)
βρόδων (Sapph. 55), βρόδοισι (Sapph. 2.6), βροδοπάχεες (Sapph. 53; 58.19), βροδοδάκτυλος (Sapph. 96.8).
βρόχε᾽ (Sapph. 31.7).[243]
δρό[μωμεν (conj. in Alc. 6.8; note Sapph. ὐπαδεδρόμηκεν 31.10)
δρόπ[ω]σιν (Alc. 119.15)
ἐμμορμένον (Alc. 39.7)[244]
ποικιλόθρον᾽ (Sapph. 1.1)
τρόπην (Alc. 70.9), ὀνέτροπε (Alc. 72.8), πεδέτροπεν (Alc. 75.11)
στρότον (Sapph. 16.1, Alc. 382.2).[245]

The following forms with -ρο- are found not only in literary Lesbian, but also in Epic Greek: ἄμβροτε (~ Epic augmented impf. 3s. ἤμβροτε), ἀμβροσίας (= Epic ἀμβρόσιος), Ἀφροδίτα (= Epic Ἀφροδίτη), βροδοδάκτυλος (= Epic ῥοδοδάκτυλος), ποικιλόθρονος (~ Epic χρυσόθρονος).[246]

On the other hand, βρόχυς, ἐμμορμένον, στρότον, and the thematic aorists δρομε/ο-, δροπε/ο-, and τροπε/ο- cannot be due to Epic influence. This shows that the reflex -ρο- belonged to the Lesbian poetic tradition. Moreover, the following forms with -ρο- are backed up by epigraphic evidence from Lesbian or other Aeolic dialects: ἄμβροτε (αμβροτην *IG* XII 2.1, 5), βρόχυς (Thess. Μροχō, Boeot. Βροχυλλος, etc.), and στρότος (Lesb. στροταγος, Boeot. εστροτευαθη, names in -στροτος). As has already been noted, στρότος (beside Homeric and class. στρατός, Cret. σταρτος) shows that the *o*-vocalism was regular also in a non-labial environment.

In order to judge the evidence for the regular place of the epenthetic vowel, let us now discuss the attested forms in more detail. Like Ionic βραχύς, Lesbian βρόχεα and Thess. βροχυς (*IG* IX 460, 13) may have leveled the old full grade slot (cf. Lat. *brevis*, section 4.4.3). There are three examples of thematic aorists with *o*-vocalism in Lesbian poetry. Of these, the

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all other examples can be shown to be due to analogy, or to a different secondary origin. This means that one or two ascertained instances of Aeolic *o*-vocalism (such as στρότος) may weigh much heavier than the combined evidence of a dozen of forms with α-vocalism: the latter cases *may* be due to Ionic origin.

[242] I leave aside the following forms: (1) Since Lesbian also attests presents in -αίρω, ὄνοιρος ‘dream’ (Sapph. 63.1) is probably not from *onr̥-i̯o-, but rather from *onōr-i̯o- (cf. Arm. *anurǰ* ‘id.’). (2) The original vocalism of ὄρπετον ‘beast, creature’ (Sapph. 130.2) is unclear: see the monographic treatment of this form by Vine (1998). (3) μόλθακος ‘soft’ (Sapph. 46.1, Alc. 338.8) has no good etymology, see section 10.1. (4) In spite of its similar meaning and the gloss σπολεῖσα· σταλεῖσα (Hsch.), Lesb. κασπολέω is probably not related to Ion. στέλλω ‘to equip, send’, because στέλλω derives from PIE *stel-. (5) φρένα …. βόρηται (Sapph. 96.17) is now generally derived from compounds in -βορος (especially Hom. θυμοβόρος), from the root of βιβρώσκω ‘to devour’. (6) γροππατα (Balbilla) is probably a hyper-Aeolism in view of the universal occurrence of γραφ- in inscriptions. (7) ].τροπτε σίδαρ[ (Alc. 179.12) may contain the Aeolic form corresponding to Epic ἀστράπτω ‘to flash (of lightning)’, but both the form and the reconstruction of this etymon are uncertain. The only potential reflex of *l̥ (ἀόλλεες Alc. 348.3) may be either an epicism or an instance of *l̥ > -ολ- in front of a nasal. But the case is complicated and admits of more than one solution: see section 10.5.2.

[243] The form ]βραχη[ in Alc. 300.9 (cited by O'Neil 1971: 24, but of unclear interpretation) need not belong here: it may be from a completely different lexeme, e.g. that of Hom. βραχεῖν ‘to resound’.

[244] Probably also in Sappho (*SLG* S 261A).

[245] Perhaps also in ]νστροτ[ (Alc. 300.1 *PL*).

[246] Note also ἀόλλεες (= Epic ἀολλέες).

best attested is τρόπην (prefixed forms ὀνέτροπε, πεδέτροπεν); δρόπ[ω]σιν and the conjecture δρό[μωμεν also clearly speak in favor of *o*-vocalism. The future of τρόπην is attested as ὀντρέψει, and the pres. inf. as ἐπιτρέπην. Thus, ὀνέτροπε (etc.) have the regular reflex of the zero grade root, as opposed to the full grade attested in the present stem τρεπ-. However, the vowel slot could be analogical.

The corresponding Attic form εἱμαρμένος shows that ἐμμόρμενον is an old formation. It cannot be excluded, however, that ἐμμόρμενον was built on the older active perfect ἔμμορε (Hom.), as in the Epic replacement of middle perfect forms for older active perfect forms (cf. τετυγμένος beside older τετευχώς < τετευχϝώς, Myc. *te-tu-ku-wo-a₂*). For this reason, ἐμμόρμενον does not furnish compelling evidence for a regular development to -ορ- (either generally, or in front of a nasal).

Having eliminated these cases, the remaining evidence shows that the regular Lesbian outcome of *C̥rT-* was *CroT-*. The clearest instances are ἄμβροτε (epigraphic αμβροτην), στρότος (epigraphic στροταγος), and the thematic aorist forms (ὀνέτροπε, πεδέτροπεν). Unlike in Ionic-Attic, Arcadian, or Mycenaean, the epenthetic vowel regularly appears *after* the liquid in ἄμβροτε, αμβροτην, and στρότος.[247] This is a clear characteristic of Aeolic, as opposed to Mycenaean and Arcadian, where -*ro*- was not the regular reflex.

### 3.4.5 Evidence for *a*-vocalism in literary Lesbian

The following list contains all potential evidence for an *a*-colored reflex of *r̥* and *l̥* in literary Lesbian:

βραδίνοις 'supple' (Sapph. 44A(b).7), βραδίναν (Sapph. 102.2), βραδίνῳ (Sapph. 115)
ἔαρος 'spring' (Alc. 296b.3), contracted ἦρος (Sapph. 136, Alc. 367).
καρδίαν 'heart' (Sapph. 31.6, Alc. 207.9)
κάρπος 'harvest' (Alc. 119.10)
κάρτερον 'strong' (Alc. 119.19; probably also Alc. 302 (col. 2).19)
ἔμαρψε 'seized' (Sapph. 58.21), μαρψαι[ (Alc. 61.14)
νέκταρ 'nectar' (Sapph. 2.15 and 96.27)
ὄναρ 'dream' (Sapph. 134)
ὄνηαρ 'benefit' (*SLG*, S286(2).10)
πάρθενον 'maiden' (Sapph. 56 *passim*, Alc. 42.8)
τάρβην 'be scared' (Alc. 206), τάρβημι (Alc. 302.12)
τράγον 'he-goat' (Alc. 167.5)

A number of these forms must be left out of the discussion: ἔμαρψε and πάρθενον do not occur with *o*-vocalism in any Greek dialect, and have no convincing etymology; for τράγος, a pre-form with *r̥* is uncertain in view of the strange ablaut with the present τρώγω (for all these forms, see section 9.4). Given what has been said above about the relations between Epic Greek and Lesbian poetry, there is no problem in assuming that the Epic (or general poetic) word ταρβέω was also utilized in Lesbian poetry. This form may owe its *a*-vocalism to the adjectives ταρβαλέος and ἀταρβής (cf. section 4.2.1). Furthermore, κάρτερος is certainly a borrowing from Ionic, either from the vernacular or from Epic Greek; see the arguments in Bowie (1981: 99-100).[248] It is also conceivable that κάρπος is of Epic or Ionic origin: we have already noted that this word occurs in this shape in all dialects where it is attested.

Examples for -αρ as the word-final treatment of *r̥* are ὄναρ, νέκταρ, ὄνηαρ, and ἔαρος. Given the change *ā > η, ὄνηαρ must be a borrowing from Ionic.[249] The three other

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[247] The vowel slot of thematic aorists like ὀνέτροπε may, of course, be analogical.

[248] Bowie's analysis is misguided to some extent, however, by O'Neil's (1971) poor treatment of the material.

[249] On Lesb. η corresponding to Ionic ει in prevocalic position, see Slings (1979, p. 251 n. 36 on ὄνηαρ).

forms also occur in Homer, and especially ὄναρ and νέκταρ are liable to be epicisms. The Gs. ἔαρος is commonly thought to have been built on the Ns. ἔαρ (Hom.+) < PIE *ues-r̥. The two attestations of contracted ἦρος may be of Ionic origin, and uncontracted ἔαρος may be an epicism. Thus, there is no convincing evidence for the Lesbian vernacular development of *r̥ in word-final position.[250]

The two remaining forms require a more elaborate discussion:

(1) Both Lesbian poets use καρδία as a word for 'heart'. There is one possible, but rather uncertain attestation κ]ορδίαν (Alc. 130A.4, initial κ- suggested by Diehl).[251] On account of the secure case στρότος beside Ionic στρατός, it seems excluded that καρδία contains the regular reflex of *r̥ in Lesbian. Since καρδία was certainly the synchronic vernacular form of the neighboring Ionic dialects, it seems best to assume that this form was borrowed. If κ]ορδίαν is indeed the correct reading, it could be hyper-Aeolic for Ion. καρδία.

(2) βράδινος occurs three times in Sappho, and its βρ- certainly represents earlier *wr- (see the discussion in Bowie 1981: 80-4).[252] The word has two main applications: (1) soft or supple body parts of women, e.g. feet, hands, cheeks, also Aphrodite herself; (2) shoots, branches, a whip that are 'supple, tapeable'. An etymological connection with Ved. *vrad- could therefore be envisaged, but the suffixation in -ινος would remain without a clear parallel.[253] There are two options to explain -ρα- in this clearly poetic word. First, it is conceivable that βράδινος stems from the Ionic Epic tradition. Secondly, since βράδινος has no secure etymology, one might argue that a pre-form with *r̥ is not ascertained, in which case the word could be genuine Lesbian or belong to the Aeolic tradition.

### 3.4.6 Evidence for Aeolic *o*-vocalism from lexicographical sources

In general, I agree with a number of previous authors that much of the evidence from lexicographical sources and grammatical treatises cannot be relied upon.[254] In many cases, there is no dialect indication: for instance, μορνάμενος· μαχόμενος (Hsch., cf. μάρναμαι 'to fight') need not be Aeolic, but could also stem from Arcadian or Cyprian. In other cases, the sources of the Ancient grammarians cannot be determined. For instance, the middle perfect forms τέτορθαι, μέμορθαι and ἔφθορθαι (quoted as "homeric" by O'Neil 1971: 26) are only cited as Aeolic in (pseudo-)Herodian. It is hard to prove that such forms ever existed in any Greek dialect. The adverb θροσέως and the noun πτόρμος (for πταρμός 'sneeze') are only attested in the "Compendium περὶ διαλέκτων" attributed to Johannes Grammaticus.

Having said that, one gloss clearly supports the Aeolic development of *o*-vocalism that we established on the basis of literary and epigraphic evidence: πορνάμεν· πωλεῖν ('to sell',

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[250] Ruijgh (1961) proposed that the Lesbian (and Achaean) outcome of *r̥ in this position was -ορ, as in the (in his view Achaean) words ἦτορ 'heart' and ἄορ 'sword'. He claims that ἦτορ is found in Alcaeus, but I have not been able to trace the source. The only remaining evidence for the Lesbian development would be the Sapphic form ὄνοιρος (fr. 63.1), but like Arm. *anurǰ* 'dream', this form could also be derived from *onōr-i̯o- (with Osthoff's Law). The relation between the different attested formations (Hom. ὄναρ and ὄνειρος, Lesb. ὄνοιρος) remains obscure, much like that between τέκμαρ, τέκμωρ, and τεκμήριον.

[251] The Cyprian form is perhaps κόρζα (ascribed to Paphos by Hsch., see section 3.5.1). Even if the -ζ- looks like a Lesbian development, the vocalization to -ορ- would be at odds with the otherwise clear evidence for -ρο- as the Lesbian reflex.

[252] In a number of cases (e.g. βροδοπάχεες Sapph. 53, and βρόδων 55.2), β- has been added by modern editors. In all three instances of βράδινος, however, the mss. or papyri have the initial β- (*quasi* digamma). Bowie criticizes Hooker's view (1977: 28) that the β- was a device to indicate that a short syllable was lengthened due to prevocalic initial ῥ-. In fact, only in half of the cases in Sappho does the βρ- close a final syllable that is short by nature (thus in ὄρπακι βραδίνῳ Sapph. 115; in Alcaeus, both cases of βρ- generate a heavy syllable). Himself, Bowie thinks that words spelled with βρ- are poetic archaisms of Lesbian: they preserve a reflex of *w- insofar as this was metrically useful, while in the vernacular, *wr- had already developed to r- by the time of Sappho.

[253] See the discussion of ῥόδον 'rose' in section 7.2.8.

[254] See most recently Parker (2008).

Hsch.), also πορνάμεναι· κεντούμεναι, πωλούμεναι (Hsch.). The form, with its *o*-vocalism in combination with the infinitive ending -μεν, could only stem from Thessalian. The nasal present matches the formation in Ionic πέρνημι 'to sell' (which has a secondary ε after the aorist περάσαι). Thus, πορνάμεν can only be derived from a pre-form *$pr̥nā$-, *-na-.[255] The vowel slot -ορ- is comparable to that in μάρναμαι, but not necessarily related to the following nasal, because it could be analogical after the aorist περάσαι.

### 3.4.7 Conclusion for the Aeolic dialects

Both στρότος and αμβροτην provide clear evidence for the development of the anaptyctic vowel -*o*- after the liquid in the Aeolic dialects. This development is shared by Lesbian with Boeotian. In both dialects, στρότος seems to prove that neighboring labial sounds had no influence on the development. Although the Thessalian evidence is slightly ambiguous, the attested forms are compatible with the development established for Boeotian and Lesbian, and θροσια and πετροτος render a Proto-Aeolic development to -ρο- likely.

The most recent discussion of the question is by Parker (2008: 446-47). Parker lists six "certain forms" that contain *o*-vocalism in Lesbian: βρόχεα, ἄμβροτε[256], ἀμβροσίας, ἐμμορμένον, βρόδον and compounds, and στρότον (beside inscr. στροταγοι). Parker excludes τρόπην, with the argument that it "is likely to be from τροπέω". Even if this is unlikely already for the infinitive form, this does not explain the indicative forms ὀνέτροπε, πεδέτροπεν, which cannot be anything but thematic aorists. Further, Parker fails to mention δρόπ[ω]σιν.

Parker starts by observing that five of these six cases have a labial environment, except for στρότον, which "is good evidence for a regular development of *$r̥$ > ρο/ορ" in Lesbian. For the other dialects that are traditionally considered as Aeolic, Parker is very sceptical. He agrees that Boeotian εσστροτευαθη and names in -στροτος seem to be "good evidence for a regular change *$r̥$ > ρο", but he does not seem to consider the proper names in Βροχ- (frequent in both Boeotian and Thessalian) to be reliable evidence. This is part of a rhetorical strategy designed to create the impression of uncertainty surrounding the reflexes of *$r̥$. Parker reaches the following conclusion:

"In sum, the change of *$r̥$ > ρο/ορ is not compelling, since *$r̥$ is a rather stable sound in Greek (there are clear traces of its survival in the scansion of Homer), and the same (or at least a similar) change occurs in Arkadian, Cyprian and Mycenaean. As Cowgill notes: "At most one can say that the contrast of ορ and αρ is not very important for grouping Greek dialects." To put the matter differently, *$r̥$ > ρο/ρα is a comparatively late change in various Greek dialects. Further, there seem to be no cases of *$r̥$ > ρο/ορ feeding any later sound change shared by Thessalian, Boiotian and Lesbian."

I agree with Parker that the elimination of *$r̥$ may indeed have been post-Mycenaean in many dialects, including Ionic-Attic. But this does not imply that the change is "not very important for grouping Greek dialects", as he states. The vocalization found in Lesbian and Boeotian (and perhaps Thessalian) is not identical to that in Arcadian and Mycenaean, because the place of the epenthetic vowel is different in the latter dialects.[257] In fact, there is no other dialect, beside Boeotian and Lesbian, where we know for certain that the reflex of *$r̥$ was -ρο-.[258] Furthermore, it is highly uncommon in other IE languages for the anaptyctic

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[255] The -α- in the gloss may have been long or short: not too much value should be attached to the acute accent.
[256] Parker does not mention αμβροτην in epigraphic Lesbian.
[257] Arcadian probably has -ορ-, Mycenaean excludes -ρο-, Cyprian is ambiguous. See below.
[258] Parker speaks of a change *$r̥$ > ρο/ορ in Lesbian, but only of *$r̥$ > ρο in Boeotian. In fact, as we have just seen, the evidence does allow us to determine the regular place of the anaptyctic vowel: the Lesbian development was *$r̥$ > -ρο-, and independent of the neighboring consonants. The same conclusion can be drawn for Boeotian on the basis of στροτος and derivations.

vowel to develop after the liquid. The only clear example is Celtic (e.g. OIr. *cride* 'heart' < *krd-i̯o-). This is, then, a strong indication that we are dealing with a single isogloss affecting Boeotian, Lesbian, and Thessalian. Adding to this that Thessalian, Boeotian and Lesbian are geographically close, the only logical conclusion is that the change *r̥ > ρο is a common innovation of the ancestor of these three dialects, which we may call Proto-Aeolic.[259] It is difficult, however, to determine more exactly when this Proto-Aeolic vocalization to -ρο- took place. I would speculate that it was earlier than 1200 BC, because this is the only way to explain why the Aeolic dialects did not develop *a*-coloring, as West Greek and Ionic-Attic did.

## 3.5 Arcado-Cyprian

The first scholar to explicitly state that *o*-vocalism is regular in Arcado-Cyprian was Fraenkel (1911: 250-51). He adduced the forms παναγορσις, εφθορκως from Arcadian, and "cypr. πλότει (…) das sich dem Sinne nach mit sonstigem πλάτει deckt". This thesis was quickly taken up by the handbooks, and it remained the standard view until Morpurgo Davies (1968) proposed that the instances of *o*-coloring were conditioned by a preceding *w*-: "both in Arcadian and Cyprian the reliable instances of *aR/Ra* considerably outweigh those of *oR/Ro*. This amounts to saying that the data definitely favour the suggestion that *aR/Ra* and not *oR/Ro* is the regular treatment of *R̥* in these dialects" (1968: 808). Since then, scholars have occasionally doubted that *o*-vocalism was the only regular outcome in either Arcadian or Cyprian. However, mere numbers cannot decide the issue, and Morpurgo's thesis cannot be upheld because much of the supposed evidence for *a*-vocalism in these dialects has been adduced for incorrect reasons. In my view, then, scholars like García Ramón (1985) and Haug (2002) are correct in insisting that *o*-vocalism is the only regular outcome in Mycenaean and Arcado-Cyprian.

## 3.5.1 Cyprian: evidence for *o*-vocalism

The evidence below has been collected from the discussion by Morpurgo Davies (1968), and analyzed on the basis of the edition and commentary by Masson (1983 = *ICS*²). Unfortunately, the most recent edition and grammar by Egetmeyer (2010) was unavailable to me.

There are five more or less reliable forms with *o*-vocalism in Cyprian, three of which are attested in glosses ascribed to the Paphians by Hesychius (εὐτρόσσεσθαι, κόρζα, and στροπά), and two in the syllabary (*ka-te-wo-ro-ko-ne*, *to-ro-su-ta-mo-se*). Two other forms that have been adduced (*po-lo-te-i* and the gloss θόρναξ) have no bearing on the discussion.

*ka-te-wo-ro-ko-ne* /kat-eworgon/[260] 'they beleaguered' (*ICS*² 217) is traditionally interpreted as a zero grade root aorist from the root of ἐέργω 'to shut in'. Morpurgo Davies objects that "we have no independent evidence for a strong aorist from this verb", and refers to a suggestion by Schwyzer that *kat-eworgon* could be a pluperfect of the type ἄνωγον, a form which is found in the same inscription (*a-no-ko-ne ICS*² 217, 2). However, as a

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[259] This is also the conclusion reached by García Ramón (1975: 63): (if *r̥ was still intact in Mycenaean,) "la conclusion s'impose d'elle-même: le proto-thessalien a développé *r̥ > ορ, ρο à une époqie où les Béotiens ne s'étaient pas encore séparés de la Thessalie, mais postérieure en tout cas à *ca.* 1200." Note, however, that the regular vowel slot was not a relevant issue for García Ramón. For a discussion of other phonological and morphological arguments in favor of assuming Proto-Aeolic, see García Ramón (1975: 60-68). This is not the place to discuss Parker's criticism of these arguments, but the development of *r̥ in the three Aeolic dialects furnishes at least one common isogloss between them, which shows that Parker is wrong.
[260] On the basis of the syllabary, other possible interpretations include /kat-ēworgon/ (if from an augmented root *ewerg-*) or /kat-ewrogon/. This has no bearing, however, on the question whether *o*-vocalism or *a*-vocalism is regular in Cyprian.

pluperfect with the meaning of an imperfect, ἄνωγον is clearly an exceptional case; the interpretation as a thematic aorist is therefore to be preferred.[261]

A PN *to-ro-su-ta-mo-se*, interpreted as /tʰrosu-dāmos/, is cited by Egetmeyer (2010, No. 245).[262] The form must be used with some caution, because a personal name Θορσυς is also found in Cretan (Polyrrhenia, *IC* II, 27), that is, in a dialect where one expects an *a*-colored reflex. Still, the fact that Arcadian also attests θορσυ- in the PN Θορσυλοχος (see below) suggests that we are dealing with a genuine reflex of *$\dot{r}$ in Cyprian.

The gloss εὐτρόσσεσθαι· ἐπιστρέφεσθαι. Πάφιοι (Hsch.), 'to turn around or towards', is mostly thought to derive from a *yod*-present *$t\dot{r}k^w$-i̯e/o-. Although the correspondence εὐ- / ἐπι- is not quite clear, the root of εὐτρόσσεσθαι is probably that of τρέπω, which is semantically close to στρέφω. Morpurgo Davies (1968: 800) casually remarks that "in the absence of any other evidence a denominative formation on an -*o*- grade substantive cannot be excluded", but this seems highly unlikely: in all other Greek dialects, denominatives from *o*-stem nouns are of the type φορέω.[263] Unless one is prepared to consider syncope of *$trok^w ei̯o$- to *$trok^w i̯o$- in Cyprian, followed by a new palatalization yielding -τροσσ- (as in the gloss κόρζα), it seems unlikely that εὐτρόσσεσθαι contains an *o*-grade root. The most plausible reconstruction of -τρόσσεσθαι, then, is *-$t\dot{r}k^w$-i̯e/o-.

The gloss κόρζα· καρδία. Πάφιοι (Hsch.) is disqualified by Morpurgo Davies (1968: 801, 812) with the words "but this is a gloss attested only in Hesychius". If the other available evidence spoke against *o*-vocalism, this would certainly be a legitimate way of argumentation. But since there is no compelling evidence for *a*-vocalism in Cyprian, it seems best to take the gloss seriously, especially given the desyllabification of -*i*- and the subsequent development of *-di̯- to -ζ-.

στροπά· ἀστραπή. Πάφιοι (Hsch., Ael. Herod.). Beside this, the gloss στορπάν· τὴν ἀστραπήν (Hsch., Ael. Herod., without dialect indication) may well be Arcadian, in view of epigraphically attested Arc. Διος Στορπαο (gen.sg., *IG* V 2, 64, 5th c.). The word is of unclear etymology: Beekes (1987) convincingly argues against the older interpretation as *$h_2 str$-$h_3 k^w$- 'star-eye', which is not evident semantically and which explains neither the forms without prothetic vowel, nor the lacking reflex of *$h_3$. Still, since the forms with *o*-vocalism appear precisely in Arcadian and Cyprian, the former presence of a syllabic liquid in this word cannot be excluded. One would have to reconstruct a form *$st\dot{r}pā$, of unknown origin, with a variant *$ast\dot{r}pā$ continued in the Classical form ἀστραπή and in the Epic denominative verb ἀστράπτω. But in view of the lack of a good etymology, no real conclusions can be based on this form (cf. also Haug 2002: 60).

The gloss θόρναξ· ὑποπόδιον (Hsch.) used to receive the addition Κύπριοι (e.g. in Frisk), but Latte does not print it anymore. If the pre-form contained *$\dot{r}$ at all (see chapter 7 for reasons why this was probably not the case), it is to be ranged among the cases of *o*-vocalism in glosses of unknown origin.

Finally, the form *po-lo-te-i* (*ICS*[2] 318 VII, 2) was interpreted by Meister, in his *editio princeps*, as the Ds. of a neuter ++πλότος which he supposed to be the dialectal equivalent of

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[261] Tichy (1983: 287 n. 165) accepts the analysis of *ka-te-wo-ro-ko-ne* as a zero grade formation, but interprets it as an imperfect. Together with ἐέργω (in her view, *$w\acute{e}rg\bar{o}$ without initial laryngeal) and Av. *vərəziiąn* (subj.) 'to fence in', she derives it from an ablauting athematic root present. But given the lack of further evidence for an athematic present from this root within Greek, this seems less likely to me than the traditional analysis as an aorist. A zero grade thematic aorist beside a full grade thematic present (as in λείπω : λιπεῖν) is a productive scheme in early Greek; it is quite conceivable that this thematic aorist is older than the *s*-aorist (attested only once in Homer, ἔρξαν *Od*. 14.411).

[262] I quote this form from Egetmeyer 2010 on the authority of a paper presented by J. Rau during the 2012 Copenhagen Fachtagung.

[263] In Mycenaean, we do find a verbal form *to-ro-qe-jo-me-no* /trok^wei̯omeno-/ 'making tours of inspection' (*Docs.*[2] p. 268), which may be either a denominative to *$trok^w o$-, or perhaps rather an inherited iterative.

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Ionic-Attic πλάτος 'breadth'. For the Cyprian form, he posited the meaning 'tablet, writing surface'. With *i te-ka-to-i po-lo-te-i*, the ostrakon on which the text has been written would then refer to itself as the 'tenth page' of an archive. A consultation of Masson's edition and especially his 1966 article show, however, that no definite value can be attached to Meister's interpretation.[264] Instead of Meister's reading *po-lo-te-i*, Masson prefers to read *pe-lo-te-i*. Moreover, the interpretation as 'tablet' and the comparison with Attic πλάτος, which is not attested with this meaning, are completely in the air. Therefore, the form can be left out of further consideration.[265]

### 3.5.2 Cyprian: evidence for *a*-vocalism

Several forms are listed by Morpurgo Davies (1968: 799-801) as evidence for *a*-vocalism, but none of them is compelling. For reasons given in section 1.2, we may leave aside all forms where *$\mathring{r}$ was word-final (e.g. *a-u-ta-ra* /autar/) or due to some other Pan-Greek development. Forms for which there is no apparent reason to assume a syllabic liquid must also be left aside, such as the gloss μάρπτω (included by Morpurgo Davies 1968: 801; see section 9.4.2). The gloss ταρβεῖ is ascribed to Cyprian by the γλῶσσαι κατὰ πόλεις (cf. Ruijgh 1957: 163), but this does not exclude that it entered Cyprian from Early Greek Epic, the prime locus of attestation of the root ταρβ-.[266] The same goes for personal names attested in other non-Ionic-Attic dialects, such as those in -κράτης (which are only attested very late in Cyprian, as remarked by Morpurgo Davies 1968: 800).

There are two Cyprian forms where a pre-form with syllabic nasal could be assumed, and which therefore do not prove a vocalization *$\mathring{r}$ > -ra-. As I will argue in section 9.1.4, the imperative *ka-ra-si-ti* /grast$^h$i/ 'eat!' may be the regular outcome of *$gr\mathring{n}s$-$d^hi$. The reading *ta-ta-ra-ka-ma-ta* as /ta dragmata/ 'bundles' (*ICS*[2] 318 A III, 2) was established by Masson (1966), but in the *ICS*[2] he follows Meister's original transcription as *ta-<ka>-ta-ra-ka-ma-ta*.[267] However this may be, the root of δράσσομαι is non-ablauting, and the form could contain the outcome of a vocalized nasal (see section 9.2.1). To repeat our conclusion: there is no compelling evidence for an *a*-colored reflex of *$\mathring{r}$ in Cyprian.

### 3.5.3 Arcadian: evidence for *o*-vocalism

The epigraphic evidence unambiguously proves that the regular Arcadian reflex had an *o*-colored reflex (cf. Haug 2002: 60). The forms below are discussed in alphabetical order.

Arc. βροχυ[ (Dubois 1988: 43 with n. 212). Morpurgo Davies doubts the Arcadian origin of the form. Dubois could not retrace the stone in the museum of Dimitsana, but he remarks (ibid., n. 212, cf. Haug 2002: 60) that "il est peu probable qu'il y ait eu dans ce musée beaucoup de pierres errantes éoliennes." The place of the vowel in βροχυ can be analogical after the full grade, like that of Class. βραχύς (see section 4.4.3).

According to Morpurgo Davies (1968), following Chantraine and Wackernagel, the Arc. form εφθορκως (*IG* V 2, 6.10-11 = *Del.*[3] 656) may have been built on the active perfect

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[264] "On a gardé ici sans modification la translittération de Meister (…) la lecture de nombreux signes et la présence de beaucoup de diviseurs apparaissent très incertaines, ainsi même que le sens de la lecture" (Masson, *ICS*[1] ad loc., p. 317-18). The text was left unchanged in the 1983 second edition of *ICS*. In his article, Masson comments: "L'interprétation des deux derniers mots est fort incertaine. Meister voulut reconnaître ἰ(ν) δεκάτῳ πλότει "sur la dixième tablette", avec (…) une forme *πλότος correspondant à l'ionien-attique πλάτος "largeur, surface", qui aurait ici le sens matériel non attesté de "Tonplatte, Tonscherbe"; tout l'argumentation concernant ce dernier terme est peu plausible; d'autant plus que nous ne croyons guère au *po* initial." (1966: 263-4).

[265] It is not mentioned by *DELG* or Frisk s.v. πλατύς.

[266] As I proposed in section 4.2.2, the Epic form may stem from Ionic, where the *a*-vocalism may have spread from an adjectival form with -αρ- (cf. ταρβαλέος, ἀταρβής).

[267] Strangely enough, Masson does not mention his earlier interpretation as /dragmata/ in the second edition of his corpus. Note Masson's comments (1966, *ICS*[2]) about the limited usability of this inscription.

(δι)-ἐφθορα. But as Haug (2002: 60) remarks, the classical κ-perfect was normally derived from a middle perfect, as in Attic ἔφθαρκα derived from the middle ἔφθαρμαι. And in Ionic-Attic, one never finds intrusion of the *o*-vowel from the active into the middle perfect. Therefore, I agree with Haug and with Dubois (1988: 44) that εφθορκως is best taken to point to an Arcadian middle perfect *εφθορμαι, with *o*-coloring of the regular outcome.

Θορσυλοχου (Dubois 1988: II, 171) is attested on a proxeny decree from Orchomenos, 3$^{rd}$ c. Morpurgo Davies (1968: 794) remarks that the name refers to a person from Achaea and removes the form from the evidence. Haug (2002: 60) does not exclude this, but prefers to see in Θορσυ- the regular development of a zero grade. Dubois (ad loc.) follows Masson (1972) in seeing in this form an element of the pre-Doric substrate in Achaea. Note, in this context, the Cyprian form *to-ro-su-ta-mo-se* (see above) and the Cretan PNs Θορυσταρτος and Θορσυς (beside Masson 1972, cf. also Leukart 1994: 191). It is hard, then, to base any conclusions on this name.

Arc. παναγορσι (*IG* V 2, 3.26 = *Del.*$^{3}$ 654) lit. "gathering of all", month name παναγορσιον (ibid. 3.3), τριπαναγορσιος (ibid. 3.7), Hsch. ἄγορρις· ἀγορά, ἄθροισις 'gathering'. The zero grade is also attested in αγαρρις 'meeting' (*IG* XIV, 659, lines 12 and 16) in a Western Ionic colony. A comparison between Arcadian and Western Ionic shows that the original form of this word was *\*agr̥-ti-*.[268] As Dubois remarks, Eastern Ionic ἄγερσις (attested in Herodotus in the meaning 'mustering of an army', and epigraphically in Miletus) must have the restored root of ἀγείρω, while Arcadian παναγορσις and Western Ionic αγαρρις show the etymologically expected zero grade formation. One might compare *\*agr̥-ti-* with *\*agr̥-to-*, which is perhaps attested in Mycenaean *a-ma-ko-to me-no* /hamagortō mēnnos/ (or /hamagr̥tō/) < PGr. *\*sm̥- + \*-agr̥-to-*. According to Taillardat (1984), this means 'in the month of the assembly').

The form αγαρρις was discarded as "doubtful evidence" by Morpurgo Davies (1968: 794), for the reason that it occurs in a "late inscription, in which the only other dialect formations are φρητρία and its derivatives". In her view, it is "quite possible" that αγαρρις arose by vowel assimilation from ἄγερρις, but this is clearly an *ad hoc* assumption.[269] The fact that both αγαρρις and φρητρια may denote institutions peculiar to this colony rather suggests that the *form* αγαρρις preserves older morphology. Moreover, as Dubois (1995: 86) remarks, αγαρρις shows the expected result of -ρσ- in Western Ionic and cannot therefore be a Koine form. Criticism of Morpurgo Davies' argument is also found in Haug (2002: 60): as he remarks, the *\*ti*-stem παναγορσις can hardly have had an *o*-grade.

On Arc. Στορπαο, epithet of Zeus, see the discussion of the Cyprian gloss στροπά. It would prove a regular outcome -ορ- if the pre-form contained *\*r̥*, but this remains uncertain.

Arc. τετορτος (Dubois 1988: 42-3). The form is attested twice as a Gs. fem. τετορταυ and probably once in a broken attestation as a Ns. τετ]ορτα. As a PN, Τεταρτος is attested only once. I do not accept the reasoning followed by Morpurgo Davies (1968: 795), according to which the single -τ- (from *\*-tu̯-*) in τετορτος can only be explained from an earlier form *τέτροτος or *τέτρατος.[270] As I have explained in section 2.5, the distribution of forms with -τ- rather suggests that the cluster *\*-tu̯-* was reduced in front of *\*r̥* before the vocalization of

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[268] Of course, the vowel slot of αγαρρις could theoretically be analogical after the full grade of the verbal root. For the vocalization of *\*-r̥s-*, see section 9.1.

[269] See van Beek (2011) for a general criticism of the idea of "vowel assimilations" in Greek, and also the doubts ventilated by Dubois (1988: 44 with n. 219) concerning Morpurgo Davies' idea.

[270] "… otherwise it would be impossible to justify the presence of a single τ instead of the geminated -ττ- expected as a treatment of the cluster -tu̯-. -oρ- is then due to a metathesis of -ρo-" (Morpurgo Davies 1968: 795).

the syllabic liquid.[271] Like Attic τέταρτος, Arcadian τετορτος cannot be explained by analogy, because the cardinal form is τεσσερες.[272]

### 3.5.4 Arcadian: evidence for *a*-vocalism

According to Haug (2002: 59-61), the counterevidence to a regular vocalization *$r̥$ > -ορ- in Arcadian merely consists of the forms δαρχμα, γραφω and στραταγος. There are two possible ways to explain these forms: either they are non-dialectal words, or they have -αρ- or -ρα- for some other reason.

As was already remarked e.g. by Ruijgh (*apud* Morpurgo Davies 1968: 813), στραταγος could well be a borrowing from Doric. He compares the military term Att. λοχαγός, where the long -ᾱ- excludes a native Ionic-Attic word, and which is generally accepted to be due to borrowing from Doric.

The root of γράφω has *a*-vocalism in all Greek dialects, except in the agent noun γροφεύς 'scribe' attested in many dialects, but mainly on the Peloponnesos (see section 9.2.2 for a discussion of the details). Arcadian has γραφεα (*IG* V 2, 343.31-2), συγγραφο̯υ (*IG* V 2, 6.53), and γ]ραφης (*IG* V 2, 8.4), whereas γροφεύς is only known from Koine texts.[273] The *a*-vocalism of γράφω could be the reflex of a vocalized nasal (section 9.2.2).

It is hard to utilize δαρχμα as evidence: as a word designating a monetary unit, it may have easily been borrowed. Indeed, the same form is found in the neighboring West Greek dialect of Elis, as well as on Crete. Moreover, the Boeotian dialect of Thespiae also offers instances of δαρχμα (Roesch, *IThesp.* 38 and 39), which cannot have the genuine reflex of *$r̥$ in Aeolic, as we have seen above.[274]

It remains to discuss αρσενα 'male' (*Lex sacra* from Tegea, 4th c., Dubois I, 80; II, 34ff.). This form cannot be used as evidence, because the genuine Arcadian form must be reflected in τορρεντερον (with crasis), found in a well-known inscription from Mantinea (Dubois II, 94ff. and 105, 5th c.). Since the latter form has the assimilated result of -ρσ- > -ρρ- as well as an additional suffix -τερο- which is unattested for this word in Ionic, τορρεντερον is clearly the genuine dialectal form. Consequently, αρσενα must be a literary or Koine form.[275] As for τορρεντερον, it remains unknown whether this form resulted from το αρρεντερον or from το ορρεντερον. Neither αρσενα nor τορρεντερον can therefore be used as evidence.

### 3.5.5 Conclusions for Arcado-Cyprian and Achaean

As Haug (2002) has convincingly shown, Morpurgo Davies was mistaken in assuming that the vocalization *$r̥$ > -αρ-, -ρα- is regular in Arcadian. While βροχυ[ does indeed contain a

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[271] As explained in section 1.3.1, I reject Bader's opinion (1969, followed by Dubois 1988: 42-3) that all four vocalizations αρ, ρα, ορ, and ρο were possible outcomes of the syllabic liquids in any Greek dialect. Dubois' opinion that both Τεταρτος and τετορταυ are possible vocalizations in Arcadian violates the principle of *Ausnahmslosigkeit der Lautgesetze*.

[272] Note, in this connection, that τετόρταιος (Theoc. 30.2) is inadmissible as evidence for a Lesbian form [++]τέτορτος: this form may be analogical after the Doric cardinal form τέτορες.

[273] According to Minon (2007: 301-2), the Elean alphabet was taken from the Laconians. This would explain why γροφεύς is found in that dialect. Is a similar explanation possible for the occurrence of γροφεύς in Arcadian?

[274] Haug (2002: 61) proposes to assume influence of the present stem of δράσσομαι < *$dr̥ŋg^h$- on δαρχμα in Arcadian and Aeolic, but this does not explain the deviating vowel slot in comparison with Class. δραχμή. One might therefore envisage to assume that δραχμή underwent the influence of the present stem, and that δαρχμα, δαρχνα contain the regular outcome of PGr. *$dr̥k^hmnā$. See section 9.2.1.

[275] Morpurgo Davies (1968: 796) bluntly stated that "the different origin accounts for the different treatment of the cluster -rs-", without further argumentation. In his extensive treatment of the material, however, Dubois (1988: 80-83) has found no indication for a geographical distinction within Arcadian between Tegea and Mantinea. He therefore argues for a chronological distinction: until the late 5th c., the form with geminate -ρρ- is found; after that (from the 4th c. onwards) it develops into a form with compensatory lengthening.

labial environment, the forms παναγορσι and τετορτος clearly show that the *o*-coloring was regular in this dialect. The *o*-vowel of εφθορκως offers further support for this conclusion. The situation in Cyprian is a bit less clear, but here too, the gloss κόρζα (with non-labial environment) and the verb *ka-te-wo-ro-ko-ne* point to regular *o*-coloring. The gloss εὐτρόσσεσθαι and the PN with *to-ro-su-* support this conclusion.

As for the regular vowel slot, Arcadian τετορτος can only point to a vocalization -ορ-. Let me stress once again that for the numeral 'four', analogical influence of the cardinal on the ordinal can be excluded (see section 2.5). The outcome -ορ- is also found in παναγορσι and Στορπαο, but it must be noted that Στορπαο has no clear etymology, and that παναγορσι may have undergone influence of a full grade form. Likewise, in βροχυ[, -ρο- can be due to paradigmatic levelling, as in Class. βραχύς. In view of the nature of the Cyprian syllabary, we have to rely on glosses in order to determine the regular vowel slot in Cyprian. Unfortunately, the evidence is inconclusive: κόρζα points to -ορ-, but εὐτρόσσεσθαι to -ρο-.

Even if the evidence is much more meagre, the situation in Arcado-Cyprian is similar to that in Mycenaean. There is no clear evidence for an *a*-colored outcome, and there is some evidence for *o*-vocalism.[276] In view of these similarities, one could be tempted to reconstruct a Proto-Achaean vocalization *$\mathring{r}$ > -*or*- (the Arcadian reflex was clearly -ορ-), but we have to be careful. While a vocalization to -*ro*- can be excluded for Mycenaean, this dialect may have preserved *$\mathring{r}$. Moreover, there is no way to exclude the outcome -*ro*- for Cyprian on the basis of our evidence. It is unclear, then, whether Mycenaean and Cyprian had the outcome -*or*- in the first place. If Linear B did indeed preserve *$\mathring{r}$, the Arcadian reflex -ορ- may have come into being in the Sub-Mycenaean period, before speakers of West Greek dialects established themselves on the rest of the Peloponnesus. The Cyprian reflex (whether -*or*- or -*ro*-) may then be due to an independent development. Note that a development to -*or*- is phonetically more natural than a development to -*ro*-, so that an independent vocalization in Arcadian and Cyprian is hard to exclude.

## 3.6 Pamphylian

It is mostly assumed that Pamphylian, like Cretan, underwent a liquid metathesis. This view has been codified in Brixhe (1976: 61-3), who adduces five items as evidence:

Pamph. PN Αφορδισιυς, Φορδισιυς ~ Hom. Ἀφροδίτη, Cret. Αφορδιτα.

Pamph. Πρειιας, Πρειϝυς, Πρεεως ~ Ion. Πέργη.

Pamph. περτ- ~ Ion.-Att. πρός, Hom. προτί, Cret. πορτι

Pamph. PN Πορσοπα, "qui sans doute est une forme partiellement extra-dialectale pour *Προσόπα" (1976: 61).

Pamph. Στλεγιυς, Εστλεγιυς (supposed to derive from a pre-form *sleg- with consonant epenthesis) ~ Non-Pamph. Σέλγη.[277]

In Brixhe's view, these five forms show that the liquid metathesis does not only concern doublets that are due to the vocalization of *$\mathring{r}$ or *$\mathring{l}$. But upon closer consideration, this claim appears to be ill-founded. The toponym Πέργη ~ Pamph. Πρειια < *Πρεγα and Στλεγιυς 'inhabitant of Σέλγη' may suggest that the (Greek and non-Greek) languages of Asia Minor vocalized a syllabic liquid of Anatolian origin in two different ways. This point is nicely illustrated by the self-designation of the Lycians. The Lycian form *trm̃mili-* probably represents /tr̥mili-/. Here, Ionic has Τερμίλαι (Hdt. 1.173, 7.92, also attested epigraphically in Pisidia), but Pamphylian attests Τρεμιλας. The same distribution is found in Πρειια ~ Ion. Πέργη and Στλεγιυς ~ Ion. Σέλγη. This shows that the foreign names *$sl̥g\bar{a}$-, *$pr̥g\bar{a}$, and *$tr̥mil$- appear in Ionic with the reflex -ερ-, -ελ-, but in Pamphylian with -ρε-, -λε-. That is, these names were borrowed into both Ionic and Pamphylian after the vocalization of inherited

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[276] The regular outcome of *$\mathring{l}$ is unclear in all three dialects.

[277] Brixhe further mentions the forms κεκραμενος, Τρεκουδας, Θρεκουδας, and Στρατοκλιτους (o.c. 62).

PGr. *l̥ and *r̥ in these dialects. Apparently, -ε- was perceptionally closest to the anaptyctic schwa in [əl], [ər] (Ionic) or [lə], [rə] (Pamphylian).[278]

Disregarding these ethnonyms and toponyms, then, we are left with περτ-, Αφορδισιυς, and Πορσοπα. As we will see in chapter 7, the latter two forms may well derive from a pre-form with syllabic liquid (assuming that Πορσοπα is the equivalent of an Ionic *Προσώπης 'Face'). It is by no means certain that Pamph. περτ- arose by liquid metathesis from PGr. *preti, as is often believed. Wyatt (1978) suggests that it may be a cross between περί and ποτί, and Bechtel's proposal (1921-24, II: 820) that this is the reflex of *porti < *pr̥ti in proclitic position also deserves attention. In my view, then, there is no compelling reason to assume liquid metathesis for Pamphylian.

Apart from the forms treated, Brixhe's index contains no other possible evidence for the outcome of *r̥ or *l̥. All three forms with the supposed metathesis can be derived, in theory, from a pre-form with syllabic liquid. Taken at face value, Αφορδισιυς and Πορσοπα suggest a development *r̥ > oρ at least after labial consonants. However, the material is far too scanty to prove anything, and the difference between περτ- and Πορσοπα remains awkward.

### 3.7 Conclusions

In chapter 2, it appeared that either -or- or preserved -r̥- is the regular reflex of *r̥ in Mycenaean. In addition to this, a scrutiny of the Alphabetic Greek dialects has shown that:

(1) Arcadian has general o-coloring and develops the vowel in front of the liquid, on the evidence of τετορτος; this is further supported by the forms in -αγορσις.

(2) In Cyprian, much depends on the interpretation of the verbal form ka-te-wo-ro-ko-ne and the personal name to-ro-su-ta-mo-se. Regular o-vocalism is further supported by the gloss κόρζα. However, the regular vowel slot in Cyprian remains uncertain.

(3) The Aeolic dialects have regular o-coloring and develop the vowel after the liquid. This appears most clearly from Lesbian and Boeotian. The Thessalian evidence is slightly weaker, but the form πετροτος probably points in the same direction. Generally, the evidence from numeral forms is difficult to use, because analogies clearly played a large role.

(4) Cretan did not undergo a liquid metathesis, but developed the vowel in front of the liquid. The post-labial reflex is -oρ-, and elsewhere -αρ- is regular. The situation in Theran (and in its colony Cyrene) could be similar, but the evidence is slight.

(5) The situation in most other West Greek dialects seems to be similar to that in Ionic, but the precise details might be different. In Elis (βρατάναν, βρατάνει) and Syracuse (middle pf. ἔμβραται, ἐμβραμένα, ἔπραδες) there is slight evidence for -ρα-, but it is hard to based any conclusions on these forms. The Doric dialects of Magna Graecia show evidence for -αρ- in the ordinal form τεταρτος. The situation in a number of West Greek dialects could benefit from further investigation. It seems unlikely that *r̥ had already vocalized in Proto-West Greek: the conditioned development in Cretan is different from that found in Ionic-Attic.[279]

(6) The situation in Pamphylian is unclear, but there is no compelling evidence for liquid metathesis.

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[278] This may also explain the reflex -ρε- in the PNs Τρεκουδας, Θρεκουδας, which are the Pamphylian reflexes of a borrowed Lyc. trqqñt- 'Storm God' (cf. Hitt. tarḫunt-).

[279] In chapters 6 and 7, I will argue that Epic Greek had a special reflex *r̥ > -ρα-, but -ρο- after a labial consonant. The conditioning of this vocalization is the same as in Cretan, but the outcome is different. I therefore see no reason to assume a special relation between these two developments.