CHAPTER 4

Reflexes of $^r$ and $^l$ in ‘Caland’ Formations

Introduction

In chapter 2, it was argued that an analogical account of the vocalism of τέταρτος runs into problems. Moreover, in chapter 1 καρτερός and ταρφύς have been identified as problematic forms for the idea that -ρα‑ is the regular reflex of word-internal $^r$ in Ionic-Attic. I therefore hypothesize that the regular Ionic-Attic reflex is -αρ‑. This means that a considerable number of forms with -ρα‑ < $^r$ must be accounted for. This is the objective of chapters 4 till 9.

Within this context, it is of the utmost importance to systematically examine the analogical processes that may have influenced forms with -ρα‑ and -αρ‑. In this chapter, I discuss forms with -ρα‑ and -αρ‑ belonging to the so-called ‘Caland system’.

4.1 The Root Vocalism of ‘Caland’ Formations in Greek and PIE

According to Caland’s original formulation of the phenomenon that bears his name, Indo-Iranian adjectives in -ra‑, -ma‑, or -ant‑ replace these suffixes with -i‑ when appearing as a first compound member. Caland’s prime examples from Avestan included dərəzra‑ ‘firm’ beside dərəzi-raθa‑ ‘having a firm chariot’, and xruui-dru‑ ‘having a bloody weapon’. Wackernagel (1897) then extended the substitution rule from Indo-Iranian to Greek, adducing cases like κυδρός ‘glorious’ beside κυδι‑άνειρα ‘bringing fame to men’. Crucially, he argued that the phenomenon is inherited from PIE in

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1 For introductions to the Caland system of derivational morphology, the reader is referred to Meissner (2006) and Rau (2009).
2 The following paragraphs on the history of scholarship on Caland’s Law and the Caland system closely follow Meissner’s overview (2006: 14–16). See there for a full discussion of all scholars who significantly contributed to the subject.
view of the equation Ved. r̥jí-śvan- PN “who has swift dogs” beside ἀργι-χέραυνος ‘with bright/swift lightning’ (Il.+) and ἀργίποδας κύνας ‘swift-footed dogs’ (Il. 24.211; cf. also Hom. κύνες ἀργοί and κύνες πόδας ἀργοί). Furthermore, Wackernagel remarked that other suffixes participated in the alternation as well: notably s-stems (ἐν-ἀργής ‘bright’ beside ἀργι-, κῦδος ‘glory’ beside κυδρός) and u-stem adjectives (Ved. r̥jú- ‘straight’ beside r̥jí-pya- ‘flying straight’, epithet of the eagle).4

Although the use of *-i- as a compounding allomorph of *-ro- played a key role in the discovery of ‘Caland’ morphology, this archaic substitution rule has lost its central place in more recent discussions. Scholars like Risch and Nussbaum have stressed that ‘Caland’ morphology is primarily a system of regularly alternating affixes that must be studied as a historically developing entity, with its own dynamics in the individual languages. Thus, Meissner speaks of the ‘Caland system’ as a “regular and well-defined set of correspondences of derivational affixes” (2006: 3).5 What is remarkable about these correspondences is that roots which combine with ‘Caland suffixes’ do not normally take other derivational suffixes (such as *-ti-, *-m̥n̥-).

In Greek, a model ‘Caland system’ consists of a primary adjective (often in -ύς or -ρός, though other suffixes are possible too), forms of comparison in -ίων and -ιστος, compounded adjectives in -ης, and a neuter noun in -ος.6 Sometimes, a compounding first member in -ι- is found. Thus, the following Greek forms containing the root κυδ- are attested:
- Adj. κυδ-ρός
- Comp. κῡδ-ίων, superl. κύδ-ιστος
- Neuter abstract κῡδ-ός
- Cpd. ἐρι-κῡδ-ής
- Cpd. κῡδ-ι-άνειρα.

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3 Wackernagel also claimed that ἀργός originated from *arg-ró- by dissimilation; this has in more recent times been doubted by Nussbaum; see Vine (2011) for discussion.
4 As Meissner (2006: 11–14) shows, this discovery had already been made by Parmentier (1889), who was actually the first to recognize the systematic nature of the alternations involved, but only failed to see that *-i- in compounding first members also took part in the alternations.
5 The term ‘Caland system’ was coined by Nussbaum (1976: 5). Rau, closely following Nussbaum, speaks of “a certain subset of IE roots that take a more or less well-defined subset of IE nominal suffixes that stand in a close derivational relationship and can be thought of as mutually implying one another” (2009: 70).
6 Cf. Meissner (2006: 18), although he does not include the comparative and superlative forms in the Caland alternations, because “the more we go back in time the more universal the use of the inherited suffix *-ios- for the comparative becomes.”
From a Greek point of view, these suffixes (as well as adverbial -α, on which see section 5.2.9) can be called ‘central’, as opposed to ‘marginal’ suffixes (such as -νό- and -μο-). In addition, several verbal formations have close ties to these nominal forms. In Greek, these are notably the stative verbs in -έω (with a Homeric aorist in -ησ-) and the factitive verbs in -ύνω and/or -άινω. The only Greek root to attest all nominal and verbal formations just mentioned is that of κράτος ‘might’; derivations from this root will be extensively discussed in chapter 5. Most Greek ‘Caland’ roots, however, have one or several gaps in their ‘system’.

Already before our first attestations, many Greek ‘Caland’ roots generalized one root vowel throughout the entire system of derivations. Thus, beside the adjective ταχύς ‘quick, swift’, we find a comparative θάσσων, a superlative τάχιστος, a neuter abstract τάχος ‘speed’, and an adverb τάχα, all of which are attested from Homer onwards. As we will see below, there are good arguments for reconstructing an original non-ablauting e-grade root in the forms of comparison and in the neuter abstract, at least for the variety of late PIE from which Proto-Greek developed. This suggests that the forms θάσσων, τάχιστος, and τάχος were influenced in their root vocalism by the positive ταχύς, which can be considered the basic formation.

A second example is furnished by the following Greek forms derived from the PIE root *pletʰ₂-: πλατύς ‘wide’, πλάτος ‘flat open surface’, and compounds in -πλατής. An e-grade root would be expected in the s-stem noun and adjective (cf. Ved. práthas-), but again, Greek has forms with a-vocalism. The system has clearly been reshaped on the basis of the adjective.

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7 The terminology is that of Nussbaum (1976: 6). For the root κυδ- in question, another positive κυδνός is found beside κυδρός, but first in Hesiod. In the following discussion, I will leave most ‘marginal’ Caland suffixes out of consideration, though some instances (such as -αλεός) will treated in more detail.

8 See Meissner (2006: 71).

9 The old strong stem of ταχύς may well have been *thākh-, in view of the Eretrian PN Τήχιπτος “with swift horses” (first connected with ταχύς by Bechtel; cf. GEW, DELG). This interpretation is appealing in view of the Homeric phrases ταχέ’ ἵππω and ταχέες δ’ ἱππῆες. The alternative etymology advocated by Lamberterie (1990: 584–590) seems less attractive to me.

10 The form πλαταμών ‘flat stone or rock’ (with root-final -α- < *h₂) does not belong to the Caland system in Greek, but it has an immediate formal counterpart in Ved. prathimán- ‘extension’. As a morphologically isolated and lexicalized item, πλαταμών must be of considerable antiquity. On the basis of the comparison with Ved. prathimán-, a PIE pre-form *pleth₂-món- has been reconstructed (cf. NIL 564). However, as Jesse Lundquist points out to me, the latter form may well be of inner-Vedic date (created as an alternative for the older abstract formation práthas-; the Vedic form is discussed by Rau 2009: 121, 133). Consequently, one might also derive πλαταμών from PIE *pl̥ th₂-món-.

11 A possible reflex of the full grade *pleth₂- in Greek has been identified by Blanc (2012) in
These fairly trivial examples teach us that nominal forms with -ρα‑, -λα‑ or -αρ‑, -αλ‑ need not (or do not) directly continue a pre-form with *ᵣ or *ᵢ. Thus, in order to judge the provenance of Caland forms and their pertinence as evidence for the regular reflex of *ᵣ or *ᵢ, we must first obtain a clearer picture of the expected ablaut paradigms, in PIE and in early Greek, of the formations involved. Before turning to the reconstruction of these paradigms, however, an important caveat must be made. Many Caland roots are considered to be primarily adjectival or nominal, either because verbal forms are unattested or because they are morphologically marked (with suffixes like *‑eh₁). The root of ταχύς offers an illustrative example. However, as stressed by Lamberterie (1990: 38–39), many IE languages have examples of deverbal u‑stem adjectives; in these cases, influence of verbal forms on the root shape of the adjective (and other nominal formations) must be reckoned with. For instance, Lith. pla‑tis ‘extended’ beside iš‑plečiù ‘I stretch out’ follows the model of e.g. badūs ‘sharp’ beside bediù ‘I sting’. An important consequence of this observation is that forms like Lith. platis do not allow us to reconstruct an o‑grade root allomorph in the PIE u‑stem adjectives.

Within Greek, too, there is some evidence for the derivation of u‑stem adjectives from intransitive verbs. Lamberterie (1990: 44–417 and 542–544, cf. 957) adduces the examples Hom. βριθύς ‘heavy’ (from Hom. βρίθω, βέβριθα ‘to be heavy’) and Hom.+ τρηχύς ‘rough’ (beside Hom. τάρασσω ‘to stir up’, pf. τέτρηχα ‘to be in upheaval’). Risch (1974: 65), too, observed that Caland forms are often derived from verbs, quoting ἐλέγχω ‘to put to shame’, ἔλεγχος ‘disgrace’, superl. ἐλέγχιστος ‘most shameful’. More recently, Meissner (2006: 186–197) has demonstrated that Greek s‑stem adjectives are frequently derived from intransitive verbal formations like the aorist in ‑ην and (following Tucker 1990) from stative verbs in *‑ē‑, and Blanc (2018) has adduced abundant evidence for ‑ης as a general deverbal compound suffix.

It was thought for a long time that such deverbal Caland formations were innovations of Greek. However, Rau shows that a deverbal origin can also be assumed for a large number of Caland adjectives in Indo-Iranian, where “the

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12 Balles, who is followed in this by Rau (2009) and various other scholars, has introduced into Indo-European Linguistics the descriptive framework developed by Dixon (1982). According to this view, most Caland adjectives belong to the class of ‘property concept adjectives’, i.e. they ‘predicate some non-verbal and non-relational property concept state’ (Rau 2009: 78). Typical examples are adjectives for dimensions, physical properties, and speed.

13 As was done by Kuiper (1942: 55), who compared neuter nouns of the type *dór‑u, *dr‑éu‑s.

14 For the deverbal nature of adjectives in -ράς, see now Van Beek 2021a.
vast majority of Caland system adjectives (...) pair with stative/inchoative and factitive formations that are to all appearances primary" (2009: 138–139). Frequently, the primary verb is a full-grade thematic formation, mostly an intranesitive middle, sometimes accompanied by a secondary causative active form. In the example used earlier, PIE *pleth₂-, Vedic has an intransitive primary verb práthate ‘spreads’. In Greek, too, many individual Caland systems stand beside primary thematic middle presents (see the overview in Rau 2009: 152–155). Cases of interest in the present context are primary τρέφομαι ‘to coagulate, grow fat’ (cf. ταρφύς ‘thick, numerous’, τραφερός ‘thick, solid’) and μέλδομαι ‘to become soft’ (cf. βλαδύς* ‘weak’). Clearly, such cases are archaisms: it was no longer possible to derive an adjective in -ύς within Greek.

After these preliminary remarks, let us consider in more detail the ablaut paradigm of the most important primary formations: u-stem adjectives, forms of comparison, and s-stem nouns and adjectives.

4.1.1 The u-stem Adjectives

In Greek u-stem adjectives we generally find a zero-grade root and suffixal ablaut. For instance, the suffix of βαρύς ‘heavy’ is -υ- in the nom.-acc. sg. of the masculine and neuter, and reflects *-eu̯- elsewhere in the paradigm. A similar situation is reflected in cognate Indo-Iranian adjectives of the type urú‑ ‘wide’, pr̥thú‑ ‘broad’, in which the suffix of the m. and n. oblique stem derives from *-eu̯-.

Since this type of suffix ablaut is at home in the proterodynamic (pd) accent/ablaut-paradigm, the reconstruction of a regular pd u-stem adjectival paradigm for PIE (including root ablaut, i.e. strong stem *ÇERC-u-, weak stem *CRC-éu-) is widely accepted.

Since this ablaut pattern could play an important role in accounting for the root vocalism of adjectives like κρατύς, πλατύς, etc., let us first review the reasons for reconstructing it. Within Greek, an important piece of evidence is δασύς ‘hairy; densely grown’. The main question here is how to explain the retention of intervocalic -σ-; this has previously been ascribed to expressive gemination (Szemerényi 1954: 261) or to a “double treatment” of *-NsV¬ (DELG s.v. δαυλός), but neither of these proposals offers a satisfactory solution. The formation is clearly inherited, because a stem *dys-u- is also presupposed by

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15 See sections 4.3 and 4.4 on these words.
16 See e.g. Fischer (1991), Rix (1992: 123 and 147), Meissner (2006: 35), Beekes (2011: 221). However, the acceptance is not universal: a different view is expressed by Lamberterie (1990, e.g. 953), who argues that instances of a full grade root in u-stem adjectives were introduced from coexisting verbal forms.
17 Szemerényi accepts Meillet’s view “that -σ-, earlier -στ-, is due to expressivity”, while deriving δαυλός from *dysulo-. This view is accepted by Lamberterie (1990: 702).
the near-synonym δαυλός (or perhaps rather δαῦλος) ‘dense, hairy, shaggy’ < *d̥ns-u-ló-. In Latin we find dēnsus ‘thick, dense’, and Hittite has daššu- ‘strong, powerful; heavy, well-fed; difficult, important’ (among other meanings). The latter form is important because its geminate -šš- can only be explained if we reconstruct *dēns-u- rather than *d̥ns-u- (EDHIL, s.v. daššu-). Like the verbal forms δαῆναι ‘to learn’, δέδαε ‘taught’, and the relic first compound member of δαέφρων ‘prudent’, δαυλός shows that PGr. *-NsV- was regularly lenited to *-NhV-. This makes the retention of -s- in δασύς an even more urgent problem.

The retention can be explained, however, if we suppose that δασύς continues an ablauting paradigm *dēns-u-, *d̥ns-éu-, and that intervocalic *-s- was lenited earlier than intervocalic *-Ns-. In this case, *d̥h-éu- could be restored to *d̥ns-éu- on the basis of the strong stem *dens-u-. In δαυλός, on the other hand, the -s- was not restored, presumably because the paradigm did not have ablaut. Thus, the pair δασύς beside δαυλός provides indirect evidence that u-stem adjectives preserved paradigmatic root ablaut in Proto-Greek; in addition, the presence of an e-grade in the PIE paradigm is proven by Hittite daššu-.

There is some further suggestive Greek evidence for the presence of forms with an e-grade root within the original paradigm. Willi (2002) attractively derives Att. εὐθύς ‘straight at’ and Ion. (Hom.+) ἰθύς ‘id.’ from a single preform PGr. *i̯eut-hu-. He compares this Proto-Greek form with Lith. judūs ‘belligerent’ and derives both from the verbal root *(H)i̯eudh- ‘to go straight at’, reflected in Ved. yudh ‘to fight’, Lat. iubeō ‘to order’ (OLat. ioubeō ‘to sanction’), Lith. įasti ‘to get moving’, judėti ‘to be agile, stir (intr.).’ Since this verbal root is unattested in Greek, it is likely that forms with e-grade root were originally present in the paradigm, i.e. PIE *(H)jėudh-u-, *(H)judh-éu-.

As for PIE *sueh2d-u- ‘agreeable, tasty’, all IE languages that continue this formation agree in showing the reflex of a full grade root: Gr. ἡδύς, Ved. svādū-, Lat. suavis, OE swót, etc. Since zero grade forms of this root are found in Vedic (caus. sūdāyati ‘to make acceptable, sūda- ‘sweetness’), we know that it could undergo

18 On δαυλός vs. δαῦλος, see Radt (1982; 1994), who argues that the barytone accentuation is old; but according to Probert (2006: 368) “the case is by no means clear-cut”. For the reconstruction, see Lambertie (1990: 702), GEW and DELG (both s.v. δαυλός).
19 For this idea, see also Nikolaev (2010: 238–239, 241, with references to earlier literature).
20 With dissimilation to *eit-u- in Ionic, the intermediary stage *eitb-u- being attested in the derivative eiθμ[ν]’n ‘fine’ (Chios, 5th c.); see Willi (2002: 129).
21 The correctness of this identification with Lith. judūs is suggested by Homeric phraseology: ἰθύς μάχεσθαι means ‘to fight face to face’.
22 Willi, however, explains the full grade of PGr. *jεuθh¬u- by assuming that it replaced the (in his view expected) outcome *ųθύς < *(H)judh¬u- on euphonic grounds. This seems an emergency solution to me.
ablaut in the proto-language. The question remains whether one can exclude that the lexical entry *su̯eh₂d-u- had a non-ablauting root already in the particular chronological phase that corresponds to reconstructed PIE. In my view, the most natural scenario would be to reconstruct a PD paradigm for PIE itself, with subsequent generalization of the full grade root in the daughter languages. Indeed, there would have been a clear motive for this generalization. After the loss of laryngeals, the outcome of the zero grade *suh₂d- was *sūd- in most languages; and since the resulting ablaut *suād- : *sūd- was anomalous, it would not be surprising if all daughter languages eliminated it independently. One also wonders whether the vocalism of ἡδύς was perhaps influenced by the primary thematic verb underlying ἱδομαι ‘to enjoy oneself’ (cf. Ved. svádate, svá-date ‘to become tasty’). This explanation is conceivable for Greek, but it is less evident for most other branches that have a trace of *su̯eh₂d-u-, as they show no trace of the primary verb. We must therefore assume that the PIE adjective contained an e-grade root at least in the strong case forms.

In various different daughter languages, there are scattered remains of original u-stem adjectives with an e-grade root. Examples:

- Lat. brevis ‘short’ < *mreǵʰɨi- << *mreǵʰ-u-;
- Lat. gravis ‘heavy; important’ < *gʷray- plus -i- << *gʷreʰ₂-u-;
- Arm. melk ‘soft’ < *meldu̯i- << *meld-u- ‘weak; soft’;
- Hitt. té̆pu- ‘little, few’ < *dʰébʰ-u-.

23 The Vedic forms with guṇa root (pres. svádati, caus. svadáyatī) can be explained by Lubotsky’s Law (Lubotsky 1981).

24 It is even possible that a trace of *suh₂d-u- is found in Goth. sutis ‘quiet, peaceful’, but there are various problems with this idea: see Lamberterie (1990: 487-489) with further literature.

25 See Fischer 1982 and 1991. I do not consider it likely that the root vocalism of brevis was taken over from the comparative brevior (Siher 1995: 358); one expects the base form (adjective) to influence the derivative (comparative). This is in fact precisely what happened in Latin, because comparatives like brevior contain the *-u- of the positive.

26 For this reconstruction of Lat. gravis, see Fischer (1982), Nussbaum (1976: 41, 68). Greek βαρύς, Ved. gurú-, Av. gouru-, Goth. kaurus (etc.) all point to a zero grade root *gʷrh-u-.

27 For this reconstruction and for different possibilities, see NII 483–484. A zero grade root is found in Ved. mrdu̯- ‘soft, weak; Gr. βλαδέῖς (see section 4.4) and other cognates. The reconstruction of Lat. mollis ‘weak; soft’ is debated. Nussbaum (1976: 67) claims that *mldʃi- would turn up as Latin *molluis, and concludes from this that the pre-form of mollis must have been *mld-i-. I fail to see, however, how the alternative reconstruction *meldu- plus -i- can be excluded: in *meldu-+, with a larger consonant cluster, the d may well have been lost before the development of intervocalic -du- to -u- (as in suāvis) took place. In that case, the development was *meldu- > *meld-i- > *meldi- > *moll-i-. Thus, Lat. mollis possibly represents an old e-grade root, too.

28 See Kloekhorst 2014: 184 on the distribution between plene and non-plene spellings in tepu-.
Like εὐθύς in Greek, these forms can be taken as evidence for the presence of an e-grade root somewhere in the original u-stem paradigm. It must be granted, however, that the evidence is indirect. As for Lat. *brevis and *gravis, the exact derivational history of this type of Latin i-stems is disputed, but in my view it cannot be doubted that the type ultimately developed from PIE u-stem adjectives, as there are too many precise lexical correspondences between Latin and the other languages. Thus, the Latin forms can be taken as evidence for prototodynamic ablaut (with Fischer 1991: 7).

In sum, the case of δασύς (and δαυλός) beside Hitt. *daššu- suggests that u-stem adjectives had PD inflection with root ablaut in PIE. Additional corroboration comes from εὐθύς, *su̯eh₂₂d-u-, and outside Greek from cases like Lat. *brevis. If the explanation proposed here for the retained sibilant in δασύς is correct, it proves that the root ablaut was retained up till Proto-Greek.

In Van Beek 2013, I went one step further, assuming that the root ablaut was retained as late as Proto-Ionic. I used this to argue for an analogical origin of the reflex -ra- in Greek adjectives like βραχύς. When the weak stem *mrkʰéu̯- vocalized as *markhéu̯-, it would have been analogically changed into *mраkʰēu̯- under influence of the strong stem *mrékhu-, after which it would have ousted the latter. This assumption is rather costly, however, and in section 4.3.3 I will propose to account for the leveled zero-grade reflex in an alternative way, by means of influence of the forms of comparison.

4.1.2 Primary Comparatives and Superlatives

The reconstruction of the so-called primary comparatives and superlatives is important for our purposes for more than one reason: the formations are unproductive in Greek, and their root vocalism shows traces of ablaut with respect to the positive. As we will see, a fair amount of analogical reshaping must have taken place in these formations at a relatively shallow time-depth.

According to the most widespread view, PIE primary comparatives had an e-grade root with ablaut in the suffix, whereas primary superlatives regularly had a zero grade root. This is motivated as follows by Schwyzer (1939: 538):

Die Wurzel hatte ursprünglich bei den Komparativen mit -iων Starkstufe, bei den Superlativen auf -ιστος Schwachstufe, z.B. κρατύς, κρέστων (wie

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29 Nussbaum (1976: 67–68) explained Lat. *vi- as a complex suffix consisting of the ‘central’ suffixes -u- and -i-. In more recent times, however, he has revoked this idea (cf. Weiss 2009: 315).

30 It is found, for instance, in Meier-Brügger (1992a: 84, less explicitly 2010: 357–358), Rix (1992: 168), Chantraine (1961: 109–110).
In Schwyzer's view, the case of κρέσσων : κράτιστος proves an original difference in root vocalism between the PIE comparative and superlative. In order to maintain this, it must be assumed that some superlatives acquired the e-grade root of the comparative at an early date.31 To this, one may object that the reconstruction of a zero grade root in the superlative is based mainly on κρέσσων : κράτιστος. In Vedic, there is no clear-cut evidence for an ablaut difference between comparative and superlative: both formations regularly have a full grade root.32 Moreover, the superlative κράτιστος (from earlier *kretisto-) may in fact have taken over the root vocalism of the positive κρατύς, while the comparative κρέσσων remained untouched by this development.33 Thus, the only direct piece of evidence for the alleged difference in root ablaut between the PIE comparative and superlative falls away.

Apart from κρέσσων : κράτιστος, Greek has only one other clear instance of an ablaut difference between primary comparative and superlative: μήκιστος 'longest' beside μακρός, comp. μάσσων.34 The root vocalism of μάσσων may well have been influenced by the positive μακρός, replacing an older *mákjos- or

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31 See Ruijgh (1992: 91 n. 50), who speculates that this leveling of ablaut grades could start when instances like comp. *h₂er-ios- : superl. *h₂r-is-tHó- developed to PGr. *arjós-, *aristo- by regular sound change.

32 A review of the problem and the history of early research on it can be found in Seiler (1950: 21–22), who does not reach a definite conclusion. The idea that the PIE superlative had a zero grade root comes from Osthoff (1910), who drew attention to the oxytone accentuation of some Vedic superlatives (e.g. kaniṣṭhá- 'youngest', davíṣṭháṁ 'far away'). Such forms are probably archaic: in Classical Sanskrit, they are lost or replaced by root-accented forms. However, the final accent of these superlatives is not necessarily related to their root vocalism: even if the suffix was accented (PIE -tHó-), the root may have had a full grade, because the PIE superlative (*CeC-is-tHó- or *-mHó-) was in all probability derived from the weak stem of the comparative. The latter can be reconstructed as *CeC-is- on account of forms like Goth. mais 'more' < *meh₂-is-.

33 See chapter 5 for further discussion of these forms.

34 The Attic pairing of a comparative ὀλείζων beside a superlative ὀλίγιστος also looks archaic at first sight. However, given that Homer has ὀλίζων, Attic ὀλείζων is rather to be analyzed as secondarily influenced by its counterpart μειζον (which itself replaces older μέζων). This analysis is confirmed by the fact that Att. ὀλείζων, like μειζον, has a spurious diphthong (see Seiler 1950: 101–103).
*mākios- (or its outcome). The superlative μήκιστος, on the other hand, is suggestive evidence for an original e-grade root in this formation.

It is much more attractive, then, to reconstruct an e-grade root for both the comparative and the superlative paradigm. This not only directly explains the Vedic forms, but also accounts for isolated Greek cases like κερδίων ‘more profitable, better’, κέρδιστος ‘most crafty’ and πλείων ‘more’, πλείστος ‘most’ < *plēh₁-ios-, *plēh₁-ist(H)o- (beside πολύς ‘many, much’). These e-grade formations were preserved because they were not (or could not be) influenced by a positive with different root vocalism. The case of κερδίων, κέρδιστος is telling: the older zero-grade root is preserved only in the non-Ionic-Attic form κερδύς· πανοῦργος ‘wicked; cunning’ (Hsch.), while Ionic-Attic only has κερδαλέος ‘wily; profitable’ (Hom.+), with a secondary Caland suffix and an e-grade that was probably taken from κέρδος. These examples corroborate the idea that zero grade root vocalism normally spread from the positive to the forms of comparison (cf. βαεδός ‘deep’, superl. βάδιστος, as opposed to the archaism βένθος ‘deep place’).

A remaining issue concerns the possibility that the PIE comparative had paradigmatic root ablaut. This paradigm is often reconstructed with an accented, non-ablauting e-grade root, and its weak stem is supposed to underlie the superlative formation. This matches the situation in Indo-Iranian, e.g. Ved. ugrá- ‘strong’, comp. ójīyas-, superl. ójīṣtha-, or yúvan- ‘young’, superl. yáviṣṭha-. Root accentuation in the comparative is also required for a pre-stage of Germanic, as indicated by the preserved reflexes of Verner’s Law in Goth. juggs ‘young’ ~ comp. juhiza, from PGmc. *jungá-, *júnh-iz-.

As for suffixal ablaut, it is common to reconstruct the oldest paradigm as having qualitative ablaut: *CēC-ös- versus C(e)C-ēs- (and, in Beekes’ view, also *C(e)C-is-). Indeed, an e-grade suffix somewhere in the paradigm would help to

35 The long root vowel of the neuter and adverb μάσσων does not derive from *māki̯ōn, but is secondary; cf. Barber (2013: 169–170).
36 Seiler (1950: 75–76, following Brugmann) thought that μήκιστος was influenced by the neuter s-stem μήκος, but this assumption is both unmotivated and unnecessary. My main objection is that a replacement of a putative *μάκιστος by μήκιστος would distantiate the superlative from comparative μάσσων and positive μακρός (i.e. this analogy would lack all motivation). Besides, it would entail a change in prosodic structure, a problem which does not exist if we assume a replacement of *māki̯ōn by *maki̯ōn. It is quite possible that the neuter μήκος exerted influence on the superlative μήκιστος, but only in the sense that it helped to preserve it against the pressure of μακρός, μάσσων.
37 So strong stem *CēC-ös- vs. weak stem *CēC-ēs- in the comparative, and *CēC-ēs-t(H)o- for the Greek and Indo-Iranian superlative: see Seiler (1950: 21: “Niemand bestreitet dies”, with reference to Meillet and Brugmann); Sihler (1995: 358); Weiss (2009: 356).
explain Lithuanian comparatives of the type *gerèsnis ‘better’ (to gèras ‘good’). Another argument is Lat. maiestās ‘power’, which seems based on a Proto-Italic comparative stem *mag-ies-. Finally, the Skt. comparative suffix -īyas- does not show the effects of Brugmann’s Law and may therefore have to be traced back to *-ies- as well. Still, whatever the exact reconstruction of the PIE paradigm, the Greek comparatives are understood best from a (post-PIE) paradigm nom. *CéC-īos, acc. *CéC-īos-m, gen. *CéC-īs-os, because only in this way do the distributions discussed above receive an account. In conclusion, the vocalism of Greek primary comparative and superlative formations is explained most economically on the assumption that both had a non-ablauting e-grade root in (early) Proto-Greek. In most adjectives, the zero grade reflex of the positive subsequently ousted this e-grade, which was retained only in a number of relic forms.

4.1.3 The s-stem Nouns and Adjectives

As is well known, Schindler (1975) argued that neuter s-stem nouns originally had proterodynamic inflection in pre-PIE, i.e. a strong stem *CéC-s beside a weak stem *CC-ès-. He also sketched a way to derive the standard paradigm to be reconstructed for PIE (nom. *CéC-os, gen. *CéC-es-os) from this earlier paradigm. In the late proto-language, the full grade root would have been generalized in most individual s-stem neuters, and the root accent was also generalized. Following this reasoning, Stüber (2002: 19) concluded that “für die Grundsprache ein intakter Wurzelablaut angenommen werden muss”. Her main addi-

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38 Slavic has -ьs- (continuing zero grade *-is-) and Old Prussian has forms deriving from *-is-, too (cf. Stang 1966: 267–268).
39 See Barber (2013: 157).
40 That is, a paradigm with non-ablauting e-grade root and o/zero suffix ablaut. In Greek, the suffix allomorph *-is- was subsequently eliminated in favor of *-is-, a process paralleled in other 3rd declension paradigms.
41 In other words, the appearance of e-grades and zero grades in Greek forms of comparison is not at all random. I therefore do not share Barber’s pessimism (2013: 157–158) regarding the possibility to draw conclusions about the original root ablaut of specific comparative formations in Greek. For instance, when Barber remarks concerning Ion. κρέσσων vs. Doric κάρρων that “it seems arbitrary to give one historical priority over the other on the basis of ablaut grade alone, if there is a good chance that there was some sort of root ablaut alternation in the first instance” (2013: 158), he fails to note that the vocalism of κρέσσων is aberrant within the adjectival paradigm (and is therefore an archaisms), whereas that of κάρρων can be easily explained by analogical leveling (see chapter 5 for further details). In other words, while it is theoretically possible to explain κρέσσων beside κάρρων as reflecting original root ablaut in the comparative paradigm, it is much less costly to explain this difference from a paradigm without root ablaut.
tional arguments for this claim are inherited s-stems with a zero-grade root that are attested in more than one daughter language (e.g. ῥῖγος 'shiver' beside Lat. frīgus 'cold'), and the word for 'mouth' in Hittite.

Within Greek, however, there is no direct proof of root ablaut in the neuter s-stems. Important observations on this issue have been made by Meissner (2006). For instance, it has been argued since Brugmann (for references see Meissner 2006: 72) that the coexistence of s-stem neuters like πάθος 'experience' and πένθος 'suffering, grief' must reflect a PIE paradigm with root ablaut. However, Meissner convincingly shows (2006: 65–68) how post-Homeric βάθος 'depth' replaces Homeric βένθος, and how πάθος starts to appear at the side of the relic form πένθος. His chronological observations are strengthened by his semantic analysis of the forms: πάθος, derived from the aorist παθεῖν (aided by s-stem adjectives like Hom. αἰνοπαθής ‘who has experienced terrible things’), has the same broad range of meanings as the verb, whereas πένθος only means ‘suffering’; and βένθος functions as a deadjectival abstract to βαθύς, whereas βένθος is a noun with concrete referents. Since πάθος and βάθος are secondary creations, πένθος and βένθος may simply reflect a Proto-Greek paradigm with a non-ablauting root.

In similar cases, it must be borne in mind that neuter s-stems could be synchronically derived from verbal roots throughout Greek prehistory. For instance, Stüber (2002: 199–200) discusses the etymology that derives κῆδος ‘worry; thing to take care of’ (Hom.+ ) with Goth. hatis ‘hate’ and Welsh cawdd ‘rage, grief’ from an inherited root-ablauting neuter *kēh₂d-os, *kh₂d-és-. This analysis is unfounded because the Greek form can be derived from the verb κήδομαι ‘to mourn; take care of’ synchronically: such a derivation dispenses us from the task of accounting for the semantic and morphological divergence between κῆδος and the alleged cognate formations. A similar explanation can be given for the zero grade root in ῥῖγος, which stands beside an intransitive verb ῥῑγέω, pf. ἔρριγα ‘to shudder at’.

Stüber (2002: 199–200) discusses the case of κῆδος together with two other examples: Indo-Iranian *u̯árH-as‑ ‘width’ beside *úrH-as‑ ‘breast’, and the word for ‘mouth’ (Hitt. aiš, gen. sg. iššaš, Ved. ins. sg. āśā, Lat. ās, OIr. ā). But: “Damit ist allerdings die Zahl derjenigen neutralen s-Stämme, für die Wirzelablaut gesichert ist, auch schon erschöpft”. Moreover, even if *u̯rH-as‑ ‘breast’ evi-

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42 Likewise, it has been claimed that δάμβος ‘stupefaction’ beside τάφος ‘id.’ reflects a paradigm containing the root shapes *dʰembh₂ and *dʰmbh₂: cf. Hackstein 2002: 237. On this problematic word, see below.

43 Beside the inherited s-stem νέφος ‘cloud’ (cf. OCS nebo, Hitt. népiš, Ved. nábhas-), forms like Ved. ãmbhas ‘water’, Arm. amb ‘cloud’ have been interpreted as containing the out-
ently has a claim to antiquity, it would be difficult to exclude that the form *Hu̯árH-as- arose beside the adj. *HurH-ú- as a productive adjetival abstract within Proto-Indo-Iranian. Finally, the reconstruction of the Anatolian word for ‘mouth’ is beset with difficulties (see EDHIL s.v. aïš). It is therefore likely that PIE (that is, nuclear PIE at least) had already eliminated most, if not all traces of root ablaut in the s-stem neuters.

In PIE, possessive s-stem compounds could be regularly derived from s-stem neuters. Well-known examples such as εὐ-μενής, δυσ-μενής ~ μένος, beside Ved. su-mánas-, dur-mánas- ~ mánas show that this procedure was inherited. Another example from Greek is πολυ-πενής beside πένθος ‘suffering’ (both Hom.). The comparative evidence suggests that the s-stem compound had a non-ablauting e-grade root, just like the simplex. But there are also compounds with a zero grade root, e.g. Hom. αἰνοπαθής ‘who has suffered terrible things’. As Tucker (1990), Meissner (2006) and recently Blanc (2018) have shown in detail, the derivation of s-stem compounds from intransitive verbs was productive in Greek. In such derivations, the second compound member naturally took the vocalism of the synchronic verbal stem: thus, αἰνοπαθής was derived from the aor. παθεῖν ‘to experience’. This is also the origin of forms with zero grade vocalism in the simplex: πάθος originated as a backformation from compounds like αἰνοπαθής (Meissner 2006: 88). There is no reason, then, to reconstruct root ablaut for PIE s-stem adjectives either.

4.2 Analogical Reshaping and Re-derivation

Having reviewed the ablaut schemes to be reconstructed for the relevant formations, we may now embark on a more detailed discussion of forms that have a bearing on the development of the syllabic liquids. The main issue to be resolved in the remaining part of this chapter concerns the outcome of *r in the u-stem adjectives (sections 4.3 to 4.5). But first, I will illustrate in more detail how a-vocalism of the root spread from these adjectives through entire derivational systems (section 4.2.1), discuss examples of the general tendency of Homeric Greek to avoid u-stem adjectives and replace them with new formations (section 4.2.2), and comment on the origin of factitive verbs of the type θαρσύνω (section 4.2.3). The main purpose of these preparatory discussions is come of a zero grade root *n̥bh- with a re-introduced nasal. However, since an ablauting root existed in PIE (cf. Ved. abhrá- ‘(thunder-)cloud’; Av. aβṛta- ‘rain-cloud’ < *n̥bh-ṛ-, Lat. imber ‘rain (shower)’ < *n̥bh-ṛ-), it cannot be proven that the s-stem paradigm originally harbored a zero-grade root allomorph.
to show that many apparent zero grade forms cannot be used to determine the regular outcome of liquid vocalization. Furthermore, it appears that alternations between -αρ- and -ρα- in formations derived from the same root are never random reshufflings: usually a precise model can be indicated for newly formed derivatives.

4.2.1 The Spread of a-vocalism across ‘Caland’ System Formations

As we have already seen, not every form with -αρ- or -ρα- can be used as evidence for the outcome of *r̥, because many of them contain a generalized a-vowel. The question to be answered in this section is how exactly the a-vocalism started to proliferate in Ionic-Attic. Two important examples are Aeolic κρέτος (Alc.), which was replaced by κράτος (Hom.+), and θέρσος (Alc. fr. 206.2), which was replaced by θάρσος (Hom.+). The same replacement took place in the derivationally connected s-stem compounds and ‘stative’ verbs in -έω (Tucker 1990: 54). See Table 3.

It is generally agreed that the root vocalism of s-stem neuters was influenced by that of u-stem adjectives. Meissner’s comment on this replacement deserves to be quoted in its entirety (Meissner 2006: 71):

... of all words with full grade, only πένθος really remains in use while κρέτος, θέρσος, and βένθος seem to have disappeared from common Attic-Ionic usage at a very early stage, being replaced by the zero grade forms. The first consequence of this secondary emergence of the zero grade forms is that these cannot be considered reflexes of an old paradigmatic ablaut variation in the root. The motivation for this replacement is not hard to find. κρέτος, θέρσος, and βένθος are all abstract nouns and correspond to the u-stem adjectives κρατύς, θρασύς, and βαθύς that have gener-
alized (in the positive) the zero grade. These adjectives can be conceived as the more ‘basic’ form and it is easy to accept Risch’s suggestion that the full grade was eliminated in favour of the zero grade under the pressure of the adjectives. In fact, what we see happening here is only the final stage of this regularization for in a number of cases this change was already complete at the time of our earliest attestations (cf. among others παχύς : πάχος, ταχύς : τάχος). Moreover, the trend is [almost] universally towards the vocalism of the adjective.

Not only may the adjectives be considered as more basic than neuter abstract nouns; it is difficult to indicate another source of the a-vocalism in the relevant s-stem neuters. Meissner makes the important observation that πένθος could be preserved in Homer (and even later) because it was not accompanied by an adjective. As we have seen above, it was eventually replaced by πάθος, but this may have happened as late as the tragedians, perhaps as a backformation to compounds in -πάθης. Another crucial example is κερδαλέος ‘wily; profitable’ (κερδίων, κέρδιστος) beside κέρδος ‘ruse; profit’, where the u-stem adjective (preserved only in the gloss κορδύς· πανοῦργος ‘wicked; cunning’ in Hsch.) was apparently eliminated so early from Proto-Ionic that it could not influence the root vocalism of the other forms.

In my view, the zero grade reflex of the u-stem adjective first spread to other adjectival forms (the forms of comparison), and later to the noun. The pair βαθύς : βάθιστος is illustrative. While the pre-form *βένθιστος of the superlative has apparently been replaced already in Homer, the neuter βένθος was preserved. Although this may be due to its occurrence in formulaic material (e.g. βένθεσι λίμνης, see Meissner 2006: 65–66), the absence of βάθος (first encountered after Homer) is noteworthy. When the vocalism of s-stem neuters like κράτος had been levelled, the same replacement took place in derived s-stem adjectives (in casu ‑κρατής). Indeed, for all roots with an internal liquid, s-stem compounds are attested whenever an s-stem abstract is affected by the replacement: -πλατής, -χρατής, -θαρσής, and -ταρβής.

The ‘stative’ verbs in -έω, -ησα (with suffix PIE *-eh₂-) appear to behave as primary (underived) formations. They differ from denominative verbs derived from neuters in -ος, in that the latter have a different type of aorist in -σ(σ)α

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44 The adverb in -α may have played a role in the case of μάλα : μάλλον : μάλιστα, where we only have adverbial forms.

45 Meissner (2006: 182–186) argues that there was no derivational link between adjectives in -ύς and compounds in -ης.
Originally the ‘stative’ verbs in -έω had a zero grade root, cf. Lat. rubère ‘to be red’ as opposed to the full grade in Gr. ἐρεύθω ‘to make red’. In Homeric verbs like βαρέω (pf. ptc. βεβαρηό-), θαρσέω, κρατέω and ταρβέω, the root vocalism is equal to that of the accompanying s-stem nouns and adjectives (cf. Tucker 1990: 57–63). However, since these s-stems originally had e-grade, the question arises whether the archaic category of ‘statives’ in -έω may have exerted analogical influence on derivationally associated formations such as s-stem adjectives. This indeed seems plausible, and the implication is that ‘stative’ verbs in -έω (just like the adjectives in -ύς) are candidates to show the regular outcome of *r̥.

On the other hand, as appears from Table 3, in Lesbian the leveling seems to have gone the other way: cf. κρετέω ‘to have power’ with the vocalism of τὸ κρέτος ‘power’. In this connection, the root ταρβ‑ requires further comment. The forms τάρβος ‘fear, apprehension’, ἀταρβής ‘intrepid’, and ταρβέω ‘to fear’ are usually derived from a PIE verbal root *terg‑, continued in epic Skt. tarjati ‘to threaten’ (whose active voice may reflect an oppositional causative), Lat. torvus ‘grim’, and perhaps Hitt. tarkuqant- ‘looking angrily’. Since no e-grade forms

46 See Tucker (1990: 28–33), following Watkins (1971).
47 Cf. also ἄσμβος ‘amazement, stupefaction’ beside ἄσμβω, ἄσμβησαι ‘to be stupefied’. Tucker (1990: 42–43) proposes to derive the verb ἄσμβω from the s-stem noun. The argument is that the root shape ἄσμβ‑ cannot represent the development of a syllabic nasal (as in aor. ptc. ταφόν ‘stupefied’), and that it must therefore be a remodeling of ἄσμβ‑. That root shape, however, cannot be original in the stative verb in -έω, but it would be at home in a neuter noun. However, this problem with this argument based on ἄσμβω, ἄσμβησαι is that the reconstruction of the verb’s phonetic developments remains uncertain. Szemerényi (1954) argued for comparing ἄσμβω, aor. ταφόν and pf. τέθηπα ‘to be stupefied’ with Goth. dumbs ‘mute’ and cognates (PGmc. *dumba‑, PIE *dhembh‑). In subsequent discussions, Barton (1993) and Hackstein (2002: 237–238) have tried to account for the difference between ἄσμβ‑, ταφ‑ and θηπ‑. The etymology is semantically plausible, but Szemerényi’s reconstruction of ἄσμβω presupposes that Greek -μβ‑ may derive from PIE *-mbh‑, a development rendered uncertain by ὄμφαλος ‘navel, center; hub’ < PIE *h3nbh-l-ό‑ and ἀστεμφές ‘firmly’ (cf. Ved. stambh, and Van Beek 2018 for the reconstruction of ak‑). The explanation of τέθηπα instead of expected τέτηφα (attested in Hsch.) given by Barton (1993) is not without problems either. Beekes (1990 s.v. ἄσμβω) argues that the variation between ἄσμβ‑, ταφ‑ and θηπ‑ can be understood if the words were borrowed from the Pre-Greek substrate: in such words, interchanges between stops and pre-nasalization are more frequently attested. Although this no longer seems likely to me in view of the archaic morphology of these verbs (cf. also Barton 1993: 2 with n. 3), the reconstruction of ἄσμβω involves too many problems to base an account of the derivational history of statives in -έω on it.

48 Hitt. tarkuqant- may alternatively be derived from *dṛk-yent– ‘with [angry] gaze’, cf. Hom. ὑπόδρα ‘looking askance’. The comparison of Middle Welsh tarfu ‘to disturb, trouble, scare’ with ταρβ‑ is not without problems (cf. EDPC q.v.).
of this root are directly attested in Greek, we must ask to what extent ταρβ‑ can be seen as an analogical vocalization replacing the older e-grade allomorph; for instance, τάρβος might be viewed as a remodeling of older *τέρβος (thus Tucker 1990: 43). However, in this case we must ask in which formation the a-vocalism originated. The adjective attested to this root is ταρβαλέος ‘fearful’ (H. Herm. 165, S. Tr. 957), but its formation is most probably secondary after the antonym θαρσαλέος.49

One might try to resolve this issue by positing an original adjective *τργ‑ú‑‘fearful’, which would have yielded *ταρβύς and then imposed its a-vocalism on the other forms.50 However, this remains speculation, as there is no further evidence for such a form. Moreover, it is quite uncertain that the neuter τάρ‑βος is a primary formation, and that the verb ταρβέω is derived from it.51 Stüber (2002: 47–48) argues that ταρβέω is the oldest formation, and that zero grade root was introduced from there into the s-stem noun. In support of this, Meissner (2006: 94) suggests that τάρβος, which in Homer occurs only in Book 24 of the Iliad, may actually be a backformation from ἀταρβής (or ταρβέω) because these forms are much more frequent in Homer. Thus, we may suspect that ταρ‑βέω is the regular outcome of *τργ‑é‑, and that e-grade forms of this root had been lost before the vocalization of *γ.

In sum, the s-stem nouns πλάτος, κράτος, θάρσος, τάρβος and their counterparts in second compound members cannot be used as evidence for the regular development of the syllabic liquids, as their vocalism may have been influenced by that of u-stem adjectives (πλατύς, κρατύς, cf. also θρασύς) or inchoative verbs in -έω (θαρσέω, ταρβέω). These primary and unproductive formations constitute the main body of evidence for the vocalization of *γ. In addition to u-stem adjectives, there are also productive thematic adjective types in -ερός and -αλέος. Establishing the derivational prehistory of these forms will put us in a better position to judge their relevance for the vocalization of *γ.

4.2.2 Replacement of u-stem Adjectives

In Greek, u-stem adjectives are unproductive generally, and in Epic Greek they even seem to be avoided.52 For instance, the inherited form βραχύς ‘short’ is unattested in Homer, who uses σμικρός and ὀλίγος instead. Moreover, beside an

49 Pace Chantraine (DELG s.v. ταρβέω), who thinks that ταρβαλέος “pourrait être ancienne”.
50 As I did in Van Beek 2013: 92.
51 LIV² 632, Anm. 1.
52 In Classical Attic prose (and presumably in the spoken vernacular), only the following 14 u-stem adjectives were current: βαθύς, βαρύς, βραχύς, βραχύς, δασύς, δριμύς, εὐρύς, εὐθύς, θρασύς, παχύς, πλατύς, πραύς, ταχύς, τραχύς.
expected adjective in -ύς or even in place of it, we find adjectives in -ερός (after light root syllables) or in -αλέος and -άλιμος (after heavy root syllables). Many such forms are found in Epic Greek only, and they occasionally penetrated into other poetic genres.

A key factor accounting for the underrepresentation of adjectives in -ύς in Epic Greek is related to meter and verse composition. Let us consider some instances of suffix competition. While κρατύς appears only in one single name-epithet formula (verse-final κρατύς ‘Ἀργείφοντης’), the form κρατερός ‘fierce, vehement, strong, etc.’ is extremely frequent. Another well-known pair is γλυκύς ‘sweet, pleasant’ beside γλυκερός. In Classical prose there is no trace of γλυκερός; the only current form is γλυκύς. Since the poetic variant γλυκερός is highly convenient in dactylic rhythms, it may well have an artificial origin within Epic Greek. Indeed, in Homer γλυκύς occurs exclusively in the strong stem γλυκύ‑ (γλυκύς, γλυκύν, γλυκύ), while γλυκερός is used in many different cases. This is related in part to the problematic shape of various case forms of γλυκύς: for instance, the feminine γλυκεῖα could be used in hexameter verse only with tautosyllabic scansion of muta cum liquida, which is still relatively rare in Homer and was probably avoided to a large degree (see sections 6.5 and 6.6). A more general problem with adjectives in -ύς is the fact that the metrical shape of the feminine forms is different from the masculine/neuter for every single case form. Poets frequently resorted to inflection and/or transformation of phraseological material, and in such cases (for instance when an adjective had to modify a noun with a different gender) it was convenient to keep it in the same metrical position. This means that using adjectives in -ερός or -αλέος gave epic poets much more flexibility than using adjectives in -ύς, with their suffix ablaut and metrically different feminine formation. Given this metrical incentive, it is likely that γλυκερός was created analogically within Epic Greek, possibly on the model of κρατύς: κρατερός or θαλύς: θαλερός.

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53 Lamberterie (1990: 470) shows that there is no clear semantic difference between γλυκύς and γλυκερός.

54 Some Homeric u-stem adjectives with a heavy root syllable are very numerous as tokens, e.g. ὀξύς and ὠκύς, but this is mainly due to their frequent occurrence in formulaic cola (cf. ὀξύν ’Ἀρηα, ὀξύν ἀκοντα, ἕφορος ὀξύ, φάσαγαν ὀξύ, ὀξεί θεωρ, ὀξεῖ χαλκῷ, all of which belong to traditional war narrative).

55 See chapter 5 for the antiquity of κρατέρος, and note that γλυκερός (denoting quiet, i.e. non-violent, activities) was more or less its antonym. Also, note that θαλερός ‘abundant’ is probably an inner-Greek innovation, too: the correspondence with Arm. dalar ‘green, fresh’ is rightly criticized by Clackson (1994: 118–120), who notes the semantic distance and points out that dalar cannot be derived from a pre-form in *-ero-. Thus, the pair κρατύς : κρατερός may also have induced the creation of θαλερός beside θαλύς (of which Homer
As for the adjectives in -αλέος, although their origin remains hard to establish, it is widely accepted that they were productive synchronically beside s-stem nouns. In Homer, we find examples like κερδαλέος ‘wily’ beside κέρδος ‘ruse; profit’ and the frequent ἀργαλέος ‘painful; difficult’ (dissimilated from *algaléo-) beside ἄλγος ‘pain; hardship’. Some adjectives in -αλέος took the place of an original u-stem adjective, or were created in order to supply for its loss. For instance, the gloss κερδαλέος· πανοῦργος ‘wicked; cunning’ (Hsch.) is clearly of non-Ionic origin, and an archaism. The lack of a corresponding adjective *καρδύς in Ionic-Attic suggests that the u-stem form was lost before κερδαλέος was derived from κέρδος, or at least before *καρδύς had the chance to influence the vocalism of the other forms.

There are three forms in -αλέος with an apparent zero grade reflex: θαρσαλέος, ταρβαλέος and ἁρπαλέος. We have already encountered ταρβαλέος ‘fearful’ (h. Herm.) beside ταρβέω and τάρβος, ἀταρβής. Most probably, ταρβαλέος is not an old adjective (pace DELG s.v.). Instead, it was derived from τάρβος, and the latter’s vocalism was taken over from the stative verb ταρβέω and/or the deverbal adjective ἀταρβής. The form ἁρπαλέος ‘with pleasure, eager’ (3 × Hom.) is from *μαλπαλέον- by liquid dissimilation (cf. ἀλπαλέον· ἀγαπητόν ‘cherished’, Hsch.), containing the root of ἔλπιμαι ‘to reckon; hope, expect’. In this case, no neuter abstract is attested from which *μαλπαλέον- could be derived. However, a-vocalism is also found in the superlative ἄλπιστος (A., Pi.) and may stem from a primary adjectival formation, such as a u-stem adjective.

56 E.g. Tucker (1990: 55–56): “their vocalism or phonological shape suggests that they were created on the basis of s-stem nouns”. Rau (2009: 128 n. 9) observes that this process “generally results from the derivational association of morphologically unrelated formations”. A number of adjectives in -αλέος acquired the suffix by contamination with semantically close forms, such as ἀυσταλέος ‘dry’, ἀζαλέος ‘id.’ (after καρφαλέος) and their antonym μυδαλέος ‘moist’; cf. also ὀπταλέος and λεπταλέος. For an overview of such forms, see Debrunner (1917: 165–168).

57 For this interpretation of κερδύς, and on the question why the adjective was lost so early, see Lamberterie (1990: 867–874), following R. Schmitt. The reflex -οφ- points to an Aeolic or Arcado-Cyprian origin.

58 The adverb ὀτραλέως ‘quickly’ (after Homer also adj. ὀτραλέος) was formed beside ὀτρύνω ‘to spur on’ after the semantically close model of θαρσαλέος: θαρσύνω. Note that ὀτρύνω has no convincing etymology (the traditional comparison with Skt. tvarate and OHG dweran is criticized by Beekes, EDG s.v. ὀτραλέως).

59 These forms and their reconstruction are further discussed in section 10.2.1.
An important form is θαρσαλέος ‘persevering, audacious; confident’ (Hom.; Att. θαρραλέος). The vocalism of θαρσαλέος was influenced by that of θάρσος (from which it was derived) after the latter had replaced the older form *θέρσος. The question is how the last-mentioned replacement could take place if θαρσαλέος did not yet exist. An archaic adjective formation is θρασύς ‘bold, reckless’, but this has a different root shape θρασ-. As I will argue below, it is likely that another form *θαρσύς ‘daring, confident’ once existed in Proto-Ionic, and that this form influenced the vocalism of θάρσος before it lost currency and was ousted by θαρσαλέος.60

In sum, the evidence suggests that the vocalism of forms in -αλέος was adopted from their base forms: ταρβέω, θάρσος (θαρσέω), and κέρδος (in the case of ἁρπαλέος, the base form is unknown). It is therefore not possible to use the vocalism of ταρβαλέος, ἁρπαλέος and θαρσαλέος as evidence for the regular outcome of liquid vocalization.

4.2.3 Derivational History of the Factitives in -ύνω
Homer has a remarkable asymmetry in root shape between the stative verb κρατέω ‘to be mighty’ (with the vocalism of κράτος, -κρατής) and the factitive καρτύνω ‘to make firm’. Later Ionic prose writers do not have the same asymmetry: they use κρατύνω, derived from the original adjective κρατύς. The same derivation cannot explain καρτύνω: as far as we know, there was never a by-form καρτύς*. This, in combination with the fact that κρατύνω was metrically inconvenient in Epic Greek (it necessitated tautosyllabic scansion of muta cum liquida), apparently provided the motive for creating καρτύνω.

However, was it possible to replace -ρα‑ with -αρ‑ just like that? Most scholars seem to make this assumption.61 I suspect that mere metrical convenience was not a sufficient reason for swapping the liquid and the vowel. The reason is that the occurrence or non-occurrence of doublets often cannot be predicted, as appears from the following examples:

- κραταιός ‘violent’ was not avoided, nor reshaped to *καρταιός, but simply tolerated (with its aberrant scansion) in the old formula Μοῖρα κραταιή.

60 It is not excluded that the vocalism of θαρσαλέος and θάρσος was influenced by that of θαρσέω, which could directly reflect an inherited ‘stative’ *θάρς-έ-. However, the derivation of adjectives in -αλέος from nouns in -ός seems more robust (cf. κερδαλέος, κέρδος) than that from verbs in -έω.

61 This view is widespread, see e.g. the casual remark by Strunk (1975: 286), regarding καρτύνω, that “inlautendes -αρ- < *‑r‑ vor Konsonant (...) auch sonst gelegentlich statt oder neben -ρα- vorkommt.”
The superlative κράτιστος, on the other hand, is avoided in Homer and replaced by κάρτιστος ‘fiercest’.

There is no by-form *καρτύς to κρατύς, and there are no compounds in *-καρτής accompanying those in -κρατής.

The aorist (ἐ)κράτησα ‘gained victory/the upper hand’ is absent from Homer. Since this form is common in later poetry, and given that other members of the small group of Homeric stative verbs in -έω are frequent especially in the aorist stem (cf. Tucker 1990: 39), it is natural to suppose that epic poets avoided (ἐ)κράτησα for metrical reasons. They never created an alternative form κάρτησα*, even if this would have been metrically useful.

Apparently, simply replacing -ρα‑ with -αρ‑ was not always a viable option. My working hypothesis is that by-forms with -ρα‑ or -αρ‑ could be created only if they were the product of an inner-epic proportional analogy or derivation. In other words, in order to account for καρτύνω and κάρτιστος we must determine a model and a motive.

Given that καρτύνω cannot be derived directly from the adjective κρατύς, we have to ask whether the derivation of verbs in -ύνω from neuter abstracts was already productive in Homer. Tucker (1981) discusses the spread of the Greek factitive verbs in -όω, -ύνω, and -άίνω. Among the factitive verbs in -ύνω she distinguishes three types according to the base form:

1. based on u-stem adjectives (βαρύς ‘heavy’ → Hom. βαρύνω ‘to weigh down on’)
2. based on s-stem nouns (μήκος ‘length’ → Att. μηκύνω ‘to lengthen’)
3. based on o-stem adjectives (λεπτός ‘thin, delicate’ → Att. λεπτύνω ‘to make thin’).

As the chronology of the attestations confirms, the -ύνω factitives originated beside u-stem adjectives (cf. also Hom. βαθύνω, ἰθύνω). Therefore, types (2) and (3) are generally considered to be later derivational patterns.

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62 An explanation for these distributions is proposed in chapter 6.
63 However, creating *(ἐ)κάρτησα was not strictly necessary from the viewpoint of verse composition, as the meaning ‘to obtain victory’ was expressed already by metrically equivalent νίκησα (cf. formulaic νικήσῃ κρείσσων τε γένηται, 4 × Hom.).
64 The absence of *(ἐ)κάρτησα can be explained if we accept that κρατέω functioned, from a synchronic viewpoint, as a primary formation. I now disagree with Tucker’s suggestion (1990: 62–67) that statives in -έω could be derived from s-stem compounds, and revoke what I said about this in Van Beek 2013: 92. In fact, if compounded adjectives in -ης are derived from statives in -έω, as I now think, the absence of *καρτέω accounts directly for the absence of compounds in *-καρτής.
65 The classic study of Greek denominatives is Fraenkel (1936).
Derivation type (2), factitives in -ύνω beside s-stem neuters, is clearly productive in Attic. Tucker (1990) argues that this type started to become productive already in Homer. She remarks (1990: 47) that in Homer there are “two -ύνω verbs for which the only clear connection is with s-stem nominal forms”: εντύνω beside τὰ ἔντεα, and ἄλεγυνω beside ἄλεγεινός, ὑσ-ηλεγής. She also points to θαρσύνω and καρτύνω as further possible Homeric examples of derivations from s-stems, as the adjectives θρασύς and κρατύς have a different vowel slot, while the correct vowel slot is found in the corresponding s-stem neuters θάρσος and Hom. κάρτος. If it is possible to derive θαρσύνω and καρτύνω from these s-stem nouns, the distribution of -ρα- and -αρ‑ over the attested forms would indeed make sense.66

Although this is definitely an improvement over the view that the interchange between -ρα‑ and -αρ‑ is randomly induced by metrical utility, there are serious problems with Tucker’s concrete suggestions. First of all, the evidence for derivation (2) as early as Homer is not clear-cut: εντύνω ‘to prepare (a meal)’ cannot have been reanalyzed as derived from τὰ ἔντεα, which is a lexicalized form with a concrete meaning ‘gear, tools, equipment’, especially ‘arms’.67 The second example ἄλεγυνω ‘to attend a meal’ cannot count as evidence either, because ἄλεγεινός and ὑσ-ηλεγής have a markedly different meaning, ‘hard to deal with’. It is more likely that ἄλεγυνω is a contamination between ἄλεγω ‘to take care of, attend to’ and ἐντύνω, ἀρτύνω ‘to prepare a meal’.68 The main problem is that Tucker is unable to point out a convincing pivotal form, i.e. a verb in -ύνω beside an s-stem neuter and a u-stem adjective. Her best example is τὸ εὖρος ‘breadth’ beside εὐρύς and εὐρύνω, where the idea seems to be that εὐρύνω was originally derived from εὐρύς, but secondarily reanalyzed as derived from εὐρός. The problem is that εὐρός occurs only once in Homer (Od. 11.312), whereas εὐρύς is frequent. It is questionable whether a transparent derivation εὐρύς → εὐρύνω could fall into disuse as long as εὐρύς existed.

Notwithstanding these issues, Tucker is right to emphasize that καρτύνω was not derived directly from κρατύς (because the latter has a different vowel slot), but from κάρτος. Given the semantic proximity of θάρσος and κάρτος, the pair θαρσύνω : θάρσος would provide an excellent model for the derivation of καρτύνω. But what about the pair θαρσύνω : θάρσος itself? A priori, one expects a sec-

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66 For καρτύνω, the same suggestion was made by Strunk (1975: 296): “Vermutlich ist κάρτος sogar die wirkliche morphologische Basis für die epische Verbalableitung.”

67 The root of ἔντεα has no convincing etymology. In spite of DELG (s.v. ἔντεα), the connection with ἄνω ‘to accomplish’ < *snh₂-u- is difficult to maintain because that root ended in a laryngeal.

68 Compare Chantraine’s judgment, “après ἔντυνω” (DELG s.v. ἄλεγω).
ondary association of s-stem nouns and -ύνω verbs to have started in one or two (preferably frequent) cases where an original u-stem adjective has been lost or replaced by a different form. Subsequently, a derivational relation between a neuter abstract noun ‘X-ness’ beside a factitive in -ύνω ‘to provide with X-ness’ could easily be established. The root θαρς- would be an excellent candidate for this reanalysis, because the base form *thr̥sus- had turned into θρασύς, with the wrong vowel slot. Moreover, there are independent indications that θαρσαλέος ousted an older form *θαρσύς (see section 4.5). Finally, the derivation θάρσος → θαρσύνω ‘to encourage, reassure’ is transparent in Homeric Greek, and θαρσύνω is frequent and semantically close to καρτύνω.

In sum: the later, Classical derivational pattern μῆκος → μηκύνω has not yet acquired full productivity in Homeric Greek, but it is already present in an embryonic stage in the pair θάρσος : θαρσύνω, combined with the absence of an adjective *θαρσύς.

4.3 Reflexes of *r and *l in the u-stem Adjectives

The following u-stem adjectives with a root shape CLaC- are attested in Home-
ric Greek and/or Classical Ionic-Attic: βραδύς ‘slow’, βραχύς ‘short’, θρασύς ‘bold’, κρατύς ‘firm’ (vel sim.), and πλατύς in its distinct meanings ‘broad’ and ‘salty’. In Homer, none of these adjectives is frequent, and βραχύς is even absent; as we have seen, this tendency can be ascribed to the metrical inconvenience of ablauting paradigms. An adjective βλαδύς ‘weak’ is frequently cited; it is attested only as a gloss βλαδεῖς (Hsch.), along with a few other glosses with βλαδ-.

In the handbooks, a number of these forms are adduced as evidence for the regular development of the syllabic liquids.69 Given that the evidence is so meagre, it is remarkable that these treatments systematically ignore another u-stem adjective with an original syllabic liquid: ταρφύς ‘numerous’. Derived from the same root (that of τρέφω) is the rare adjective τραφερός ‘solid, thick’

69 Examples are Lejeune (1972: 196, citing βλαδαρός ~ ἀμαλδύνω and “θαρσύς, θρασύς”; but note that the first form θαρσύς is not directly attested), Rix (1992: 65, citing πλατύς), and Sihler (1995: 94–95, citing θρασύς, βλαδύς, and πλατύς). DELG (s.v. θάρσος) remarks that a form θαρτύς “a dû exister comme l’indiquent divers composés et le verbe dénominatif en -ύνω.” As we will see below, this may well be true, but the form should be asterisked in any case. Sihler not only cites θαρσύς, but also “Lesb. θορσέως”, which does not exist at all (the form is correctly cited as θροσέως by Lejeune (1972: l.c.), and is attested as such only in Joh. Gramm. 2.11, where it is labelled Aeolic).
(Hom.+), with an interchange that calls to mind the doublet χρατερός ~ καρτερός. In my view, a correct understanding of the origin of ταρφύς and τραφερός is crucial for establishing the regular development of *r̥, and we will therefore turn to these forms first. There are two questions to be answered: Why do we find -αρ‑ in ταρφύς, as against -ρα‑ or -λα‑ in all other u-stem forms?70 And: What was the derivational basis for τραφερός?

4.3.1 *r̥ > αρ is Regular in ταρφύς
The Homeric adjective ταρφύς ‘thick, dense, close together’ modifies nouns for ‘snowflakes’ (e.g. ταρφειαὶ νιφάδες Il. 19.357) and ‘arrows’ (e.g. ταρφέες οἱ Il. 11.387).71 Its acc. pl. n. ταρφέα is used as a temporal adverb meaning ‘again and again, one right after the other’, e.g. ταρφέα τε στρέφεται στήχες ἀνδρῶν πειρήτιζου, “(the boar) turns round again and again, putting the ranks of men to the test” (Il. 12.47). Lamberterie (1990: 676–680) gives solid arguments for deriving ταρφέες from the intransitive verb τρέφομαι (pf. περιτέτροφε) in its older meaning ‘to form a layer, become thick, coagulate’ (Hom.+).72 The development of meaning from ‘thick’ to ‘frequent’ is common, too. For instance, English ‘thick’ may also be used as an adjective or adverb denoting a frequent occurrence, as in thick and fast; in Dutch, dikwijls means ‘frequently, often’.

A striking fact about the attested forms and their meanings is that Homer appears to have used ταρφεες, ταρφειαί as a plurale tantum. This usage is continued in post-Homeric poetry.73 The singular form ταρφύς is attested in literary texts twice in Aeschylus, and much later once in Lucian, in a parody; other Hellenistic poets again use only the plural form.74 Another remarkable feature is the accentuation of the feminine ταρφειαί, which is paralleled in the synonymous plurale tantum θαμέες, θαμειαί. This accentuation is clearly a retained

70 An exception could be made for the gloss χορδύς· πανοῦργος (Hsch.), but this is of non-Ionic-Attic origin: see above. As I have argued in section 2.2, the Mycenaean form ta-pa-e-o-te is too uncertain to be used in this discussion.
71 Lamberterie (1990: 665–666) remarks that this use is intimately related with that as a qualification of snowflakes, the image being that of a rain of arrows.
72 An extensive study of the semantics of τρέφω is Demont (1978).
73 The adverb ταρφέως (only B. 13.53) is a trivial reshaping of the Homeric acc. n. pl. ταρφέα.
74 The two Aeschylean passages are discussed by Lamberterie (1990: 671). In Pers. 926, ταρφύς τις is a plausible conjecture for γὰρ φύστις, because φύστις would be a vox nihili. Lucian uses the gen. sg. ταρφέος modifying ἐχέτλης. Remarkably, in all three cases the adjective modifies a feminine noun. Moreover, note that in both ταρφύς ... δρίξ ‘thick hair’ (A. Sept. 535) and the conjecture ταρφύς τις μωρίας ἀνδρῶν ‘thronging myriads of men’ (A. Pers. 926), ταρφύς qualifies a singular noun with plural or collective sense. I therefore claimed in Van Beek 2013: 101 that the singular of ταρφύς was a secondary creation by Aeschylus. I still consider this plausible, but there is no need to insist on it.
archaism: presumably, it was not aligned with the productive type of accentuation (βαρύς βαρεῖα βαρύ) because the forms ταρφειαί and θαμειαί were no longer current in the spoken language.

Most dictionaries (e.g. LSJ) cite another form with the root shape ταρφ-: the neuter s-stem τάρφος. However, as Meissner has demonstrated (2006: 110–111), the singular τάρφος is only found in ancient grammarians, commentaries and scholia; all real attestations in primary sources are in the plural. It is therefore possible to assume that these forms are substantivizations of the u-stem adjective, with a corresponding accent retraction. This hypothesis is corroborated, as Meissner remarks, by the parallel case of τὰ βράχεα, attested from Thucydides and Herodotus onwards in the lexicalized meaning `shoal, sandbank’. The absence of contraction of -εα in the Attic form proves that we are dealing with an old u-stem form, with subsequent retraction of the accent accompanying the lexicalization as a substantive. Moreover, the expression ἐν τάρφεσιν ὕλης ‘in the thick (= dense parts) of the forest’ (Hom.) has a neat phraseological parallel in ἐν βράχεσι λίμνης ‘in the shallows (= shallow parts) of the lagoon’, attested in Hdt. 4.179.

We may conclude that τάρφος can be ignored for purposes of reconstruction. This puts us in a better position to judge the origin of -αρ- in ταρφύς. In section 1.4, a number of previous attempts to explain the reflex ταρφ- were discussed, such as secondary ablaut (Kuryłowicz), or metrically-induced metathesis (Güntert). All such proposals illustrate the embarrassment of earlier scholars concerning the reflex -αρ-. In reality, in view of the full-grade slot of the root (τρέφομαι, PIE *dʰrebʰ-), the outcome ταρφ- cannot have an analogical origin. That the vowel slot of ταρφύς was not aligned with that of τρέφομαι is not surprising, given the lexicalized nature of this adjective. Apparently, it did not

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75 βαθείς τάρφεσιν ὕλης ‘in the thicket of the deep forest’ (II. 5,555), βαθείς ἐν τάρφεσιν ὕλης (II. 15,606), and μνιόεντα βυθοῖο τάρφεα ‘the mossy thicket of the depth’ (A.R. 4,1238).

76 Already before Homer, following the loss of intervocalic digamma, the u-stem adjectives in Ionic-Attic had generalized the dat. pl. ending -εσι by a proportional analogy with the s-stems, with which they shared the nom. pl. n. in -εα.

77 From an older s-stem form, one would expect Att. βράχη (Meissner 2006: 108–109).

78 In Van Beek 2013: 101, I claimed that ταρφ- was protected from analogical replacement by ταρφ- because ταρφέες would have become a plurale tantum early on. I explained the difference with other u-stem adjectives (e.g. κρατύς, βραχύς), in which analogical influence of the full grade did take place, with the assumption that paradigmatic root ablaut was still preserved in the singular paradigm when *r was eliminated in Proto-Ionic. However, while I still consider it plausible that the singular form ταρφύς was created anew beside ταρφέες after Homer (cf. above), I now renounce on the idea that the adjectives in -υς retained paradigmatic root ablaut until as late as Proto-Ionic.
undergo the influence of comparative or superlative forms: no such forms are attested for ταρφύς, which may well have to do with its lexical semantics.79

We may conclude that ταρφεῖς (and its feminine ταρφειαί, with relic accentuation) is the regular outcome of PGr. *τρ̥πhéyes. It is a prime piece of evidence for a regular development *r̥ > -αρ‑ in Proto-Ionic.80

4.3.2 Derivation of Hom. τραφερός

Before the end of the classical period, the adjective τραφερός is attested only in the formula ἐπὶ τραφερήν τε καὶ υγρήν (Il. 14.308, Od. 20.90, h. Dem. 43) “both over the solid land and the waters of the sea” (Wyatt 1999), literally ‘over the solid and the liquid’. After that, τραφερός first reappears in Hellenistic poetry,81 and Oppian is especially fond of the word in his Halieutica.

Ancient scholia and lexica explain τραφερή by remarking that θρέψαι is another word for πῆξαι, which may mean “make solid or stiff, esp. of liquids: freeze, ... curdle, ...” (LSJ mg. iii).82 That the juxtaposed forms υγρός and τραφερός are antonyms is confirmed by the following Homeric simile, which illustrates how Pæëon heals wounded Ares:

> ὡς δ᾽ ὅτ’ ὀπὸς γάλα λευκὸν ἐπειγόμενος συνέπηξεν, υγρὸν ἐόν, μάλα δ᾽ ἄκα περιτρέφεται κυκόωντι, ώς ἄρα καρπαλίμως ἰήσατο θοῦρον Ἀρηα.

Il. 5.902–904

Even as the juice of the fig speedily makes to grow thick the white milk that is liquid, but is quickly curdled as a man stirs it, even so swiftly healed he furious Ares.

tr. wyatt 1999

79 This is not to say that no comparative or superlative forms of ταρφύς ever existed, but only that they were apparently too marginal (at the relevant time) to influence the vocalization of the adjectival root. Since being clotted or curdled is an aggregation state, its meaning does not easily lend itself to the expression of degree: what matters most is the binary opposition between ‘thick’ and ‘liquid’.

80 Incidentally, note that the absence of forms like *τραφειαί with muta cum liquida scansion (which would be the expected outcome of *τρ̥πhéai in Epic Greek, according to the scenario to be put forward in chapter 6) can be ascribed to the availability of the synonymous form θαμειαί.

81 ὑγρή τε τραφερή τε (A.R. 2.545/6), υγρής τε τραφερῆς τε (A.R. 4.281), further in Arat. 1.1027, Theoc. 21.18 and 44, in the last passage in the meaning ‘well-fed, thick, fat’.

82 LSJ (s.v. τραφερός) remarks that τραφερός is from τρέφω in the meaning ‘to make thick’. The connection with τρέφομαι ‘to curdle’ is also corroborated by glosses like τραφερόν· πηκτόν. τρόφιμον. λευκόν. ξηρόν. πεπηγμένον (Hsch. τ 1284).
This secures the etymological connection between τρέφομαι, τραφερός, and ταρφύς. We now have to explain why -ρα‑ is found in τραφερός, as against -αρ‑ in ταρφύς. What was the model for creating τραφερός? At first sight, the most logical option would be a proportional analogy with the u-stem adjective, given the existence of other similar pairs: κρατερός beside κρατύς, θαλερός beside (*θαλύς, and γλυκερός beside γλυκύς. However, the shape of the u-stem adjective is ταρφύς, not *τραφύς, and this means that the model breaks down. Even if one were to assume a prolonged retention of root ablaut in u-stem adjectives, it would not be feasible to argue that the root allomorphs ταρφ‑ and τραφ‑ once coexisted within the same paradigm.

Fortunately, an alternative base form for the creation of τραφερός can be pointed out: the verbal stem. A number of adjectives in -ερός pair with primary verbs: apart from κρατερός ‘strong’ beside κρατέω ‘to be strong’, cf. the Homeric cases στυγερός ‘horrible’ beside στυγέω ‘to abhor’, and βαλερός ‘abundant’ beside βάλλω ‘to be abundant’. Remarkably, after Homer we find a couple of cases where -ερός pairs with an inagentive aorist in -ήναι: e.g. τακερός ‘soft, tender’ (Alcm.+), τακῆναι ‘melt’, βλαβερός ‘damaging’ (Hes.+), from βλάπτω, βλαβήναι ‘hinder, damage’, φανερός ‘clear, evident’ (Pi.+), from φαίνομαι, φανήναι ‘appear’, and σφαλερός ‘that makes one stumble’ (A.+), from σφάλλω, σφάλληναι ‘(make) stumble’ (Hom.+). Apparently, the adjectival suffix -ερός could be added to the verbal root (in its weak form, when available) with some productivity.

The derivation of τραφερός from τρέφομαι ‘to curdle’ fits well in this series, as the verb has an old intransitive aorist ἐτράφην. From a semantic perspective, too, this derivation of τραφερός ‘solid’ works better than a connection with ταρφέες: the verb τρέφομαι actually has the meanings ‘to become solid, form a crust’, while ταρφέες had probably lexicalized its metaphorical meaning ‘thick’ > ‘frequent, in large numbers’ early on (before the vocalization of *r̥).

In conclusion, while ταρφέες, ταρφειαί contains a precious vestige of the regular development of *r̥, the adjective τραφερός has a different root shape because it was derived from the verb τρέφομαι, ἐτράφην at a later time.

4.3.3 Analogical Root Vocalism in the Structure *CraCu-
If ταρφέες provides compelling evidence for *r̥ > αρ, we are left with the other u-stem adjectives. How to explain the vowel slot of βραδύς, βραχύς, κρατύς, πλατύς, βρασός (beside θέρσος) and βλαδεῖς (beside μέλδομαι)? While the more problematic cases βρασός and βλαδεῖς will be dealt with later, the vocalization in βραδύς, βραχύς, κρατύς, and πλατύς can be analogical after full grade forms. Before discussing the evidence for these forms and their cognates, let us pause and ask in which ways such analogical influence may have taken place.
As we have seen above, there is some evidence for the reconstruction of pro-
terodynamic root ablaut in PIE u-stem adjectives. The retention of -σ- in δασύς
gives reason to assume that this ablaut remained intact as late as Proto-Greek.
In Van Beek 2013, I assumed that it was even preserved as late as Proto-Ionic,
and that the outcome -ρα- in βραχύς and κρατύς is due to inner-paradigmatic
levelling of the vowel slot (*markhευ- >> *mrakhευ- after *mrekhυ-). While
this assumption gives us some leeway in explaining the vocalized zero grades,
 it is a rather costly assumption in the absence of further positive evidence,
and especially when viewed against the general trend in Greek to eliminate
inner-paradigmatic root ablaut. Moreover, if we assume that βραχύς and κρατύς
underwent reshaping, we also have to explain why θρασύς and βλαδεῖς escaped
this alleged influence of the strong stem.

As an alternative, one could assume that the full grade root attested in other
formations (e.g. the neuter abstract) influenced the vocalization of the adject-
itive. For instance, κρατύς (*kratus) would have supplanted *καρτύς (*kartus),
with the regular vowel slot, under the influence of κρέτος as attested in Lesbian.
However, we must take into account that the root vocalism of the adjective
usually spreads to derived formations (hence, κρέτος was replaced by κράτος).
Moreover, θρασύς did not undergo the influence of θέρσος.

For these reasons, I prefer to ascribe the analogical reshuffling of the root
vowel to the forms of comparison. Indeed, most adjectives stand in a close
relation with their forms of comparison.83 It is straightforward to assume that
the adjective *mykhu- was vocalized as *mrakhu- rather than *markhu- because
the comparative and superlative were originally *mrékhyos- (or its outcome)
and *mrékhisto-. Given the lexical meaning ‘short’, the superlative would be
frequent enough to exert such influence. In the case of *ktu- there is actual
evidence that the comparative and superlative retained the original root shape
*kret- longer (κρέσσων, κράτιστος << *krétistos; see chapter 5 for further discus-
sion).

With this in mind, let us now discuss in more detail the development of sev-
eral individual adjectives in -ύς, together with their cognate formations.
κρατύς is attested exclusively in the formula |H κρατὺς Ἀργεῖφόντης (4 × Hom.,
5 × h. Herm.), which refers to Hermes. Its meaning is therefore somewhat uncer-
tain, but the etymological connection with κρείσσων, κρατερός (etc.) cannot be
doubted. The reflex -ρα- may have been influenced by the comparative κρέσ-
σων ‘stronger, superior’ (*krét-ιος-). The cognate form κρατερός cannot be used

83 Whether the relation between the forms of comparison and the basic adjective is seen as
inflectional or derivational is a theoretical issue that need not detain us here.
as evidence for the development of *r because the variant καρτερός, which is also the Ionic-Attic prose form, displays the regular reflex. This means that κρατερός may well have been influenced by κρατύς, but not the other way around. More extensive argumentation and discussion of these claims will be provided in chapter 5; for the reflex -ρα- in Homeric κραταιός, κραταί-, see also section 6.8.3.

βραχύς is the normal word for ‘short’ (of time) in Classical Greek, but it is unattested in Homer.84 The adjective is first attested in its Aeolic form as an adverb βρόχεα n.pl. (Sappho fr. 31.7),85 and from Pindar onwards in its Ionic-Attic and West Greek form. The primary superlative βράχιστος is attested a number of times in poetry, but in classical prose the forms of comparison have generally been replaced by βραχύτερος, βραχύτατος (Hdt.+).86 In view of the full grade in Lat. brevis ‘short’, the PIE root was *mreǵh-.87 As just explained, it is a distinct possibility that a zero grade PGr. *mṛk-h- adapted its vocalization to the root shape *mre(kh- to be reconstructed for the forms of comparison. In Aeolic, βραχ- < mṛk-h- has the regular dialectal reflex; note that names like Thess. Μροχός (SEG 24: 406.1, ca. 460–450 BCE) prove that initial µr- was preserved until a relatively late date.88

βραδύς ‘slow’ is rare in Homer but normal in the classical language, both in Attic prose and in poetry.89 Primary forms of comparison are only marginally attested. The comparative βράδιον (Hes. Op. 528) is probably analogical, because in an inherited form one would expect to find -ζ- < *-dj- after a light root syllable. An inherited *βράζων may underlie the hapax βράσσων (II. 10.226), if this form acquired its -σσ- from the antonym θάσσων ‘faster’.90 The primary superlative is attested only twice as βάρδιστος (II. 23.310 and 530); after

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84 On the hapax comparative βράσσων II. 10.226, which may belong to βραδύς, see immediately below. It seems that (σ)µικρός ‘short’, ὀλίγος ‘small’, and the adverb µύννά ‘for a short time’ are used instead of βραχύς in Epic Greek. This may be due to a general preference for using thematic forms in hexameter Greek (see section 4.2.2); besides, the superlative βράχιστος was metrically unfit.

85 Cf. also βράσσωνοι· βραχυτέρου (Hsch. β 1193), probably of Aeolic origin.

86 On the question whether βραχόν ‘(upper) arm’ is related, see section 6.9.5.

87 A reflex of the zero grade root is found in Ved. mūhur ‘instantly’, Av. mazau-jīti- ‘short-lived’, OHG murt(i) ‘short’, Goth. gamaurjan ‘to shorten’ (denom. verb).

88 For this point, see further section 7.2.1.

89 Only 3 attestations in Homer: βραδύς (Od. 8.329 and 330), βραδέες … ἵπποι (II. 8.104).

90 Cf. Seiler (1950: 43 and 56f.); differently Barber (2013: 160 with n. 23). The text at II. 10.226 runs: βράσσων τε νόος λεπτή δέ τε µῆτις. Normally, βράσσων is taken to be a comparative of βραχύς ‘short’ on phonological grounds, but semantically βραδύς would fit much better (cf. Nordheider, LfgrE s.v. βράσσων).
Homer, βραδύτερος and βραδύτατος are generalized. The neuter s-stem βράδος is a nonce formation based on τάχος, and can be left aside for purposes of reconstruction.91

Since βραδύς may refer both to physical slowness (in running or racing) and to lack of mental alertness, it probably has a cognate in Baltic: Lith. gurdūs ‘weak, slow, uncommunicative’, Latv. gur̃ds ‘tired, weary’, both from *gwr̥d-ú-.92 The reconstructed form is peculiar because it violates the constraint that a single PIE root may not contain two mediae. Nevertheless, given the perfect formal and semantic match between Greek and Baltic and the relic status of u-stem adjectives in Greek, it cannot be doubted that the form is inherited.93 Moreover, since no other adjective denoting physical slowness can be reconstructed for PIE (as far as I am able to discern), it seems probable that *gwr̥d-ú- fulfilled this function.

In view of its isolation, one could be tempted to take βραδύς as a key example for the regular vocalization of *r̥. It is difficult, however, to establish the original full grade slot of the root. In Proto-Ionic, a full grade may have been around in the forms of comparison. At first sight, the Homeric superlative βάρδιστος could be taken as evidence for *gwerd-. However, βάρδιστος could be an artificial epic creation because, as Chantraine (1958: 24) already remarked, *βράδιστος “ne pouvait entrer à aucune place du vers homérique”. While metrical utility alone was not a sufficient reason to substitute αρ for ρα (see section 4.2.3 above), a model for an analogy is available: βάρδιστος may have been formed to βραδύς on the model of another artificial Homeric superlative, κάρτιστος to κρατύς. This idea receives support from the fact that both roots are used in the context of horse-racing: κάρτος denotes the stamina or endurance of horses in Od. 3.370 (they are ἐλαφρότατοι θείειν καὶ κάρτος ἄριστοι),94 and the horses of

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91 Cf. Lamberterie (1989) and Meissner (2006: 102–103).
92 Perhaps, Slavic *gurd (→ Ru. гурдъ ‘proud, haughty’) is related to the Baltic forms: the o-stem may replace an earlier u-stem. A thematic noun would be presupposed by Lat. gurdus ‘blockhead’, but its appurtenance is not certain (cf. Lamberterie 1990: 594–595). For further literature on these etymologies, see NIL 195–196.
93 One may compare the situation with that of PIE *b, for which there is hardly any evidence and where the reduction of certain clusters may perhaps explain the occurrence of *b in initial position, as Sasha Lubotsky has suggested in unpublished conference papers. Although we do not know what actually happened in the prehistory of *gwerd-, I would not exclude a similar reduction of an initial cluster in this case. There is, therefore, no reason to doubt the Indo-European pedigree of this root.
94 Cf. also the application of the formula κρατερόν μένος to the stamina of mules (Il. 17.742). For further connections of the root κρατ- with horse-riding, see chapter 5.
Antilochus are called βάρδιστοι θείειν (II. 23.310) by his father Nestor. Finally, if βράσσων indeed replaced *βράζων, this form probably recovers an earlier *gʷred-i̯os.-

As for the abstract βραδυτής (Hom.+), its accented suffix only occurs in four Greek abstracts in -της (Pike 2011: 148). Since the s-stem abstract τάχος may denote both speed and swiftness, whereas the -της abstract βραδυτής is the regular form to refer to slowness (cf. Lamberton 1989), it is likely that βραδυτής is older than ταχυτής ‘swiftness’, which has the same accentuation. However, this does not imply that βραδυτής is the regular outcome of a PGr. *gʷrd-u-tāt-: it is possible that the form was secondarily re-derived from (or influenced by) its base form βραδύς.

Thus, none of the forms βραδύς, βράσσων, βάρδιστος provides unambiguous evidence for the regular vocalization of *ᵊ, because the original full grade slot of the root is not known with certainty. If this was *gʷred-, it may have influenced the outcome of *gʷrd-ú-.

The adjective πλατύς ‘broad, extended; flat’ is cited as a prime example of the development of the syllabic liquids in most manuals. It is well-attested from Homer onwards, and also attested in Lesbian poetry (πλάτυ, Alc. fr. 74). The forms of comparison were secondarily rebuilt as πλατύτερος, ‑τατος. Related forms attested in Greek are πλαταμών ‘flat stone or rock’ (h. Hom. +), πλάτος ‘breadth, width; plane surface’ (Cypr. fr. 1.2, Simon., Hdt.+), and adjectives in -πλατής (X., Th., Arist.). As will be discussed in chapter 10, ‑λα‑ may well be the regular reflex of *ᵊ, but in πλατύς it could also be explained in the same way as in κρατύς and βραχύς, i.e. as an adaptation to the original full grade slot (PIE *pleth2‑). Though no reflex of this full grade is attested in Greek, it may have been eliminated in the s-stem noun at a relatively recent date. Outside of Greek, the same formation is attested in Ved. práthas‑, Av. fraθah‑ ‘breadth’, and OIr. leth ‘side’; cf. also the primary verb Ved. práthate ‘extends’.

95 I assume that the comparative βαρδύτερος, attested in Theocritus, is also an artificial poetic creation.

96 It is possible that πλατύς ‘brackish’ is a different adjective, both synchronically and historically: see Lamberton (1990: 452–463). Proponents of the historical identity of both lexemes believe that πλατύς ‘broad’; as an epithet of the Hellespont, was misunderstood to mean ‘salty’, an important argument being that Herodotus also calls the Hellespont ἁλμυρός ‘salty’. Cf. gew s.v. πλατύς 2, and Mayrhofer EWAia s.v. patu‑ (both embracing this view), delg s.v. 2 πλατύς (doubting it). Against this, Lamberton remarks that πλατύς only denotes brackish, never salty water.

97 According to Blanc (2012), this full grade is reflected in ἄπλετος ‘immense’, which would have arisen from *sᵐ‑pleth₂‑eto‑ by haplology.
In sum, the forms βραδύς, βραχύς, κρατύς, and πλατύς can no longer be viewed as compelling evidence for the regular reflex of the syllabic liquid. The forms θρασύς and βλαδεῖς, on the other hand, constitute serious evidence for -ρα‑ and -λα‑ as the regular vocalizations of the respective syllabic liquids: they cannot have been influenced by cognate full grade forms. There is, however, also evidence for a different reflex of the zero grade: the factitive verbs ἀμαλδύνω 'to erode, weaken' and θαρσύνω 'to encourage'. As we have seen, verbs in -ύνω were productively derived only from u-stem adjectives until a relatively recent date (section 4.2.3). Therefore, ἀμαλδύνω and θαρσύνω seem to imply the earlier existence of adjectives *(ἀ)μαλδύς and *θαρσύς. We have to account for the coexistence of both vocalizations.

4.4 *βλαδύς versus ἀμαλδύνω

Traces of the zero grade reflex βλαδ‑ < *ml‑ are attested only in glosses (Hsch., ὁ 54–59):
- βλαδά· ἄωρα, μωρά AS. 99 ὁμά ('untimely; dull, stupid'; ‘raw, uncooked’)
- βλάδαν· νωθρῶς ('lothful')
- βλαδαρά· ἄωρα AS. μωρά. ὁμά AS
- βλαδαρόν· ἐκλελυμένον, χαῦνον ('flaccid, porous')
- βλαδόν· ἀδύνατον ('powerless, weak')
- βλαδεῖς· ἀδύνατοι . ἐξ ἀδυνάτων. 100

Thus, an adjective βλαδύς is only attested in the plural form βλαδεῖς. The appurtenance of the first three glosses is not straightforward: ὁμός 'raw' means...

98 For the same reason, the form κορδύς· πανοῦργος (Hsch.) beside κερδίων, κέρδιστος can play no role in this discussion: κορδύς may have replaced the regular zero grade outcome *κροδ‑, in an Aeolic dialect, under the influence of an older strong stem *κερδύς. Theoretically, however, κορδύς could also stem from Arcadian or Cypriot (see section 3.4).

99 Words provided with these sigla may have been incorporated later into the text of Hesychius from the lexicon of Cyril of Alexandria (5th c.); A and S denote two manuscripts of that lexicon. See Cunningham (2018: x).

100 The alphabetical order of these glosses (βλαδεῖς following βλαδόν) may confirm that βλαδεῖς is from a u-stem adjective *βλαδύς. Sometimes βλαδαρός is quoted as attested in Galen (e.g. Rau 2009: 153), but there the form is actually a conjecture for transmitted βλαβεραί (cf. Lamberton 1990: 356). Lamberton also includes the gloss βλάζειν· μωράνειν ‘to act foolishly’, but its appurtenance to *βλαδύς seems uncertain to me.

101 It has been suggested that βλαδόν· ἀδύνατον should be corrected to βλαδύν (gew, delc), but this is rejected by Lamberton (1990: 356 n. 4), who also convincingly argues against the necessity to restitute βλαδύς for the transmitted form βραδύς at Hp. Aër. 20 (o.c. 356–358).
almost the opposite of ‘weak, soft’, and the meanings contained in the glosses ἄωρα, μωρά and νωθρῶς could have developed from ‘weak’, but this is not evident. The glosses ἐκλελυμένον, χαῦνον and ἀδύνατον, on the other hand, can be understood quite well as having developed from ‘weak, soft’.

The verb ἀμαλδύνω is attested from Homer onwards, but in various different meanings. The philological evidence for this verb has been extensively discussed by Lamberterie (1990). From his discussion, I retain the following conclusions:

1. In Homer, ἀμαλδύνω occurs three times in a similar context. On each occasion, the Achaeans wall is reduced to dust, corroded, by the erosion of wind and water. The meaning ‘to make invisible’, found in post-Homeric poetry, is ultimately based on reinterpretations of the Homeric passages. In the Hippocratic Corpus, ἀμαλδύνω means ‘to weaken’ (vel sim.); sometimes, ἀμαλδύνω is even used as an equivalent of ἀμβλύνω ‘to make blunt’ (cf. Lamberterie 1990: 364–368).

2. The ἀ- of ἀμαλδύνω may be due to contamination with ἀμαθύνω ‘reduce to sand’ (Hom.+), which may itself owe its factitive suffix -υν- to ἀμαλδύνω (cf. Lamberterie 1990: 363). It is noteworthy that the ἀ- of the gloss ἀμέλδειν·τήκειν. στερίσκειν ‘to melt; deprive of’ (Hsch.) was also secondarily added: cf. μέλδομαι ‘to become soft by boiling or heating’ (II. 21.363, Nic.), from the same root as ἀμαλδύνω.103

3. As Lamberterie (1990: 372–373) shows, the PIE root was *meld- rather than *mled- in view of Gr. μέλδομαι, PGmc. *(s)meltan- ‘to melt’, Arm. melk ‘soft’ < *(s)meldu̯i-.104 The full grade of Ved. vi mradā (RV, hapax) and úrṇa-mradas- ‘soft like wool’ is an innovation of Indo-Aryan.105

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102 I would add to this that other adjectives like ἀμαλός ‘weak’ (II.+, no etymology), ἀπαλός ‘soft, tender’ (Hom.+), ἀμαυρός ‘dark, unseen, invisible’ may have played a part in the reshaping of an earlier *μαλδύνω. Lamberterie (1990: 362) also draws attention to the gloss ἀβλαδέως· ἡδέως ‘in a pleasant way, agreeably’ (Hsch.). The meaning of the gloss may derive from ‘soft’, in which case the addition of ἀ- would have to be secondary (as with ἀμαλδύνω). For semantic reasons this seems preferable over assuming a privative s-stem compound *n̥-ml̥d-es‑; besides, a zero grade root would be unexpected as a second compound member.

103 The second gloss στερίσκειν suggests that the glossator was confused by the similarity with ἀμέλδειν·τήκειν. στερίσκειν ‘to melt; deprive of’ (Hsch.).

104 Armenian melk confirms that the root did not have an initial laryngeal. Unclear to me is the claim of Hamp (1988: 89) that Arm. melk is a “revocalization” of *malk.

105 Within early Vedic, the root mrad ‘to soften’ is semantically distinct from mard ‘to crush’, even if both roots were confused early on (Mayrhofer EWAia s.v. MRAD). Mayrhofer reconstructs PIE *(h)meld- ‘to become weak, dissolve’ as against *merd(H)- ‘zerdrücken, zerreiben’ (comparing this with Lat. mordeō ‘to bite’). However, it would not be wise to base...
(4) ἀμαλδύνω presupposes the earlier existence of an adjectival stem *(ἀ)μαλδύ‑ ‘reduced to dust’ (Lamberterie 1990: 364).

A semantic problem must now be taken into consideration. All reflexes of the adjective PIE *ml̥d-ú‑ carry the meaning ‘weak, soft, tender’, but ἀμαλδύ­νω means ‘to corrode’. At first sight, then, the meaning of ἀμαλδύ­νω seems to match that of Vedic mard ‘to crush’, which is both etymologically and synchronically distinct from the root mrad ‘soften’. Lamberterie answers this problem by assuming that the meaning ‘to reduce to dust’ displayed by the Homeric factitive is old, claiming that it “reflète directement le sens fondamental de la racine *mel(H2)‑ ‘broyer, moudre’ (...)” (1990: 364). This forces him to consider the meaning ‘weak, soft, tender’, attested in all branches that have a reflex of the u-stem adjective, as a secondary development from ‘crushed, pulverized’. It does not seem very likely, however, that this semantic development took place independently in various different branches. Although it is possible that the roots *meld- and *melh₁- were identical at a pre-stage of PIE (via the ‘effet Kortlandt’), the meaning of *meld- ‘to become weak or soft’ was clearly distinct from that of *melh₁- ‘to crush’ in PIE itself.106 We may assume that the meaning of *(ἀ)μαλδύ‑ developed from ‘weak, soft’ to ‘flaccid, porous’ (as in βλαδαρόν· ἐκλελυμένον, χαῦνον Hsch. discussed above);107 and from *(ἀ)μαλδύ‑ the factitive verb ἀμαλδύ­νω ‘to make porous, corrode’ could be derived.

It remains to explain the different vocalizations in *(ἀ)μαλδύ‑ and *βλαδύ‑. It would not help to start from an adjective *méld-u‑, *ml̥d-éu‑ with root ablaut, for it would be difficult to derive both *μαλδ‑ and *βλαδ‑ from it within the same dialect.108 Moreover, it is uncertain whether root ablaut was preserved in adjectives in -ύς until the vocalization of *l.

As a way out of this dilemma, one might surmise that the forms with βλαδ‑ are not from Ionic-Attic, but from a different dialect. The glosses provide no
clue about their provenance, but since lexical meanings such as ‘flabby’ and ‘porous’ would be compatible with medical terminology, one could hypothesize that forms with βλαδ‑ are from the Hippocratic Corpus (a considerable number of treatises belonging to this corpus are known to have been lost). In that case, it may be wondered whether these forms could be of Doric origin: Hippocrates and his pupils lived and worked on the island of Cos. This speculation may receive some support from the adjective πλαδαρός: one of its meanings is ‘flaccid’, which is also how βλαδαρός is glossed, and πλαδαρός is mainly attested in the Hippocratic corpus. It is not unthinkable that πλαδαρός is a secondary reshaping of βλαδαρός in Ionic, perhaps under the influence of πλάσσω ‘to knead’. In this case, βλαδαρός could well stem from a different dialect, and the same might then hold for βλαδύς.

In conclusion, the adjective *(ἀ)μαλδύς that seems to be presupposed by the factitive verb ἀμαλδύνω ‘to corrode’ would be the expected Ionic-Attic continuant of PIE *ml̥d‑ú‑ ‘weak, flaccid’, provided that its vocalization was influenced by the full grade (as found e.g. in the forms of comparison and the primary verb μέλδομαι). On the other hand, in glosses with βλαδ‑ we find a direct reflex of *l. The main problem is posed by the gloss βλαδεῖς, which seems to be the plural of an adjective βλαδύς: why did this form coexist with *(ἀ)μαλδύς? There is no obvious explanation, but it is conceivable that one of these forms is of non-Ionic-Attic origin. In any case, βλαδ‑ reflects a zero grade *ml̥d‑; this conclusion will be bolstered with further arguments in chapter 10.

4.5 θρασύς versus θαρσύνω

The adjective θρασύς ‘bold’ < *dʰr̥s‑ú‑ is attested from Homer onwards, both in poetry and in prose. Given that the root had a full grade θερ‑, it seems a strong counterexample against *r‑αρ‑ as the regular Ionic-Attic development. However, θρασύς is different from other u-stem adjectives with a similar root structure in that its zero grade reflex does not show the influence of the original full grade root, θερ‑. If κρατύς, βραχύς, and βραδύς are indeed due to leveling, one would expect *dʰr̥s‑ú‑ to end up as θαρσύς* under influence of *dʰers‑. Although some historical grammars cite a form θαρσύς,109 it is not attested as an appellative, nor as a simplex, but only as a first compound member Θαρσύ-, Θαρρυ‑ in personal names; moreover, these names occur in West Greek dialects.

109 Lejeune (1972), Sihler (1995); Chantraine’s reference to a “θαρσύς (attesté en composition)” (DELG s.v. θάρσος) is more precise but may still give rise to confusion.
not in Ionic-Attic. A key question is whether an adjective *θαρσύς indeed existed at some pre-stage of Ionic-Attic.

In the following pages I will therefore consider all derivatives of this root, first in Homer, then in Classical Attic and Ionic. The semantic values of the attested formations play a key role; they may help us establish the historical and synchronic derivational relationships.

4.5.1 The Roots θρασ‑ and θαρσ‑ in Homer: Attestations

Table 4 (next page) contains all forms containing the root shapes θρασ‑ and θαρσ‑ as attested in Homeric Greek.

It appears that there are no true doublets in Homer. The only exception is the neuter abstract θάρσος ~ θράσος, but the variant θράσος may well be a one-off creation, analogical to κράτος ~ κάρτος. Leaving aside this hapax θράσος, the root shape θρασ‑ only occurs in θρασύς and compounds with θρασυ-, for which no variant with θαρσ‑ exists. It is therefore not true that -αρ‑ could always be substituted for ‑ρα ‑ in Homer, or vice versa (pace Lamberterie 1990: 849 and 852).

The allomorph θαρσ‑ can be due to the secondary introduction of a-vocalism in a pre-form with *θερσ‑. Thus, the full grade root of θέρσος, attested in Alcaeus, has been replaced by θάρσος in Ionic-Attic. Similarly, in πολυθαρσής the second member replaces ‑θερσής, which is preserved in Homer only in the personal names Ἁλιθέρσης and Πολυθερσεΐδης. The question then remains where θαρσ‑ originated: does it also reflect an older zero grade in some forms, whether by regular sound change or analogical reshaping?

In the first member of compounds (including personal names), the two variants available in poetry were θρασυ‑ and θερσ‑. They serve as counterparts of both θρασύς and θαρσαλέος, θάρσος. While θερσ‑ is a clear archaism, it seems as if θρασ‑ may have been introduced in compounds at any time. However, since the distinction between these first members was utilized for metrical variation, and since both θερσ‑ and the reflex of *θήρσ‑ are widespread in epigraphic onomastic material, the coexistence of θερσ‑ and θρασ‑ (earlier *θήρσ‑) is bound to be old as well.

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110 I regard the interpretation of the Mycenaean man’s name ta-su as uncertain.
111 As we will see in chapter 5, the alternations κράτος ~ κάρτος and κρατερός ~ καρτερός in Epic Greek are structural and have a real linguistic basis.
112 In epigraphic onomastic material we also encounter a variant Θαρσ‑ or Θαρρ‑, especially on Crete and in archaic Theran graffiti. In these dialects these forms may well regularly reflect *θήρ‑, but in other dialects it is difficult to exclude that Θαρσ‑ replaced Θρασ‑ under the influence of θαρ‑ in related formations such as θάρσος. Cf. sections 3.1.2
Table 4

| θρασ‑ | θαρ‑ |
|-------|------|
| θρασύς ‘dauntless, brave, reckless’\(^{113}\) | θαρ‑ |
| θαρσυκάρδιος ‘brave-hearted’ | θαρσ‑ |
| θρασυμέμνονα ‘id.’ | θαρ‑ |
| PN S Θρασυμήδης, Θρασύμηλον | θαρ‑ |

| θαρ‑ denial θρ‑ | θαρ‑ denial θρ‑ |
|-----------------|-----------------|
| θαρ‑ denial θρ‑ | θαρ‑ denial θρ‑ |

\(^{113}\) Forms of comparison of θρασύς are not attested in early Greek epic. If the Classical forms θρασύτερος and θρασύτατος already existed, they could not have been used in epic meter. The *hapax* θράσιον (Alcm. fr. 87) is a secondary formation (cf. Barber 2013: 161).

In sum, leaving aside the *hapax* θράσιον, the root allomorph θρασ‑ is limited in Homer to the adjective θρασύς and the compounds with first member θρασ‑ (including personal names). This distribution calls for an explanation. In what follows, I argue that there is evidence for a lost adjective *θαρσύς in Proto-Ionic, and suggest that θρασύς reflects an archaism not of the spoken language, but of the epic tradition. Not only is θρασύς morphologically isolated, but it is also semantically detached from most forms with θαρ‑.

\(^{114}\) θάρσυνος ‘confident’ only occurs twice in Homer. Its derivational morphology is unclear. According to Nussbaum (1976: 76) it is a composite Caland formation, with -no- stacked onto *dhr̥s‑u‑; older suggestions are listed in Risch (1974: 150–151), with further literature. Since the meaning of θάρσυνος matches that of the other θαρ‑ forms, and since it only occurs in Homer, I suspect that it was created as a metrical alternative for πίσυνος ‘confident’ (Hom.+), the only other adjective in -υνος and one with an almost identical lexical meaning. Since the root meaning ‘confidence’ of θαρ‑ is innovative, it is unwarranted to use θάρσυνος as evidence for *r > -αρ‑.
4.5.2 The Roots ὑραισ- and ὑφαιρ- in Homer: Semantics

It is usually thought that there was not yet a tangible semantic or lexical distinction between ὑρασαλέος and ὑφαιρ- in Homer. In his dictionary treatment of this etymon, Chantraine (DELG s.v. τάρσος) claims that Homeric ὑφαιρ- means ‘brave’ as an epithet of Hector and other heroes, ‘courageous’ in the phrase πόλεμον ὑφαιρ-, and ‘intrepid’ as an epithet of arms that throw spears. A lexical split allegedly first occurs in Classical Attic, which (generally speaking) makes a distinction between ὑφασαλέος ‘confident’ and ὑφαιρ ‘courage, confidence’ on the one hand, and ὑφαιρ ‘audacious, reckless’, ὑφάς ‘arrogance’ on the other. This semantic specialization is thought to be of post-Homeric date and supposed to have developed by the lexicalization of a pragmatic difference between a pejorative sense ‘reckless’ and a laudatory meaning ‘confident, courageous’.

In reality, the Homeric evidence may point in a different direction. In his extensive discussion of the semantics of this root, Lamberterie (1990: 854) shows that ὑφασαλέος, not ὑφαιρ-, serves as the productive adjectival counterpart of ὑφάς, ὑφασκέω, and ὑφασᾷν. He compares the following items of Homeric phraseology:

– ὑφασαλέον νῦ οἱ ἦτορ ἐνὶ φρεσίν (II. 19.169);
– ὑφασύνον δέ οἱ ἦτορ ἐνὶ φρεσίν (II. 16.242, ὑφασύνον = 2sg. impv. aor.);
– ὑφασύνονθ’ ἑτάρους καὶ ἐποτρύνοντα μάχεσθαι (II. 13.767; 17.117, 683).

This observation is corroborated by a closer consideration of the two Homeric forms and their semantics. In Homer ὑφασαλέος has the same range of meanings as the abstract noun ὑφάς, from which it was probably derived (cf. section 4.3.2):

(1) ‘persistence’ (whether in a positive sense ‘stamina’, or pejorative ‘obstinacy, perseverance, audacity’), cf.
καὶ οἱ μυῖης θάρσος ἐνὶ στήθεσσιν ἐνῆκεν,
ή τε καὶ ἐργομένῃ μάλα περ χροὸς ἀνδρομέοι
ἰσχανάᾳ δακέειν, λαρὼν τε οἱ αἷμος ἀνθρώπου
τοίου μιν θάρσευς πλήσε φρένας ἀμφὶ μελαίνας
Il. 17.570–573

and she [Athena] put into his [Menelaus] heart the perseverance of a mosquito, which even when brushed off keeps trying to bite in the human skin; it likes the taste of human blood; with a similar endurance did she fill him in his dark lungs.

σὺ δὲ ἔσω κιέ μηδέ τι θυμῷ
τάρβει εἰς ἁρσαλέος γὰρ ἀνὴρ ἐν πάσιν ἀμείνων
ἐργοσιν τελέθει, εἰ καὶ ποθεν ἀλλοθεν ἐλθοί.
Od. 7.53–52

But do you enter the palace and do not be timid at heart: for a man who perseveres has more success in all matters, even if he comes from somewhere else.

ὡς τις θαρσαλέος καὶ ἀναιδής ἐσσι προίκτης
Od. 17.449

such an obstinate and shameless beggar you are

(2) ‘courage, confidence’, cf:

τῇ γὰρ Ἀθήνη
θάρσος ἐνὶ φρεσὶ θήκε καὶ ἐκ δέος εἴλετο γυῖων.
Od. 6.140

and in her [Nausicaâ] heart Athena put courage and she took fear out of her legs.

θαρσαλέον νῦ οἱ ἦτορ ἐνὶ φρεσίν, οὔδε τι γυῖα
πρὶν κάμνει πρὶν πάντας ἐρωῆσαι πολέμοιο.
Il. 19.169

The heart in his chest is courageous, and his limbs do not get tired before everyone else has stopped fighting.
On the other hand, in pre-classical poetry θρασύς usually means ‘bold, intrepid’, and this is clearly an older meaning than ‘courageous, confident’ or ‘audacious’.

However, already in Homer there are restrictions on the use of θρασύς. The positive nuance ‘intrepid, dauntless’ is retained in compounds and in the archaic formula θρασειάων ἀπὸ χειρῶν, where it qualifies the persevering arms of warriors (that keep throwing spears). The negative nuance ‘reckless’ is predominant when θρασύς qualifies human beings: Hector (whose recklessness is thematic throughout the Iliad), his charioteers, and Odysseus in a passage where his foolhardy eagerness to confront the Cyclops is criticized by one of his companions.

Finally, the phrase πόλεμον θρασύν (3×) is used twice when Helen’s abduction is mentioned as the cause of the Trojan war (cf. also II. 10.27–28):

ὅτ’ ἐμεῖο κυνώπιδος εἶνεκ’ Ἀχαιοι
ἡλθεθ’ ὑπὸ Τροίην, πόλεμον θρασύν ὁρμαίνοντες
Od. 4.145–146

when you Achaeans came to the walls of Troy on account of me, bitch-face, waging a stout-hearted/reckless war

Thus, in spite of some potential overlap between θαρσαλέος and θρασύς in Homer, there are in fact clear differences between the two in meaning and use. While θρασύς never means ‘confident, courageous’, θαρσαλέος and θαρσύνω are readily used in this sense. If the phrase θαρσαλέον ... ἦτορ is paralleled by the compound θρασυκάρδιος, this is due to the fact that θρασύνω is still the productive 1st compound member corresponding to θαρσαλέος and θάρσος, θαρσέω. Furthermore, θαρσαλέος, θάρσος, θαρσέω and θαρσύνω are frequently opposed to words for fear (τάρβος, δέος; ταρβέω, δείδω) or restraint (αἰδώς), but θρασύς is never used in such oppositions.

In sum, the derivational connection in Homer between θαρσαλέος (but not θρασύς) and θάρσος, θαρσέω, θαρσύνω suggests that θρασύς is a poetic archaism.

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116 I disagree with Chantraine’s claim (DELG s.v. θάρσος) that the original root meaning is ‘to be confident’.

117 Pace Lamberterie (1990: 850), who thinks that θρασύς, with the exception of Od. 10.436, always has a positive nuance in Homer. Cf. also Meissner (2006: 71).

118 For Thucydides, Huart (1968: 426) reached the same conclusion concerning θάρσος and θαρσέω: “toujours θαρσεῖν est en rapport direct avec l’action”, and “la confiance s’oppose ainsi à l’appréhension et cette opposition, assez souvent implicite, est parfois clairement formulée”.
The use of θρασυ- as a first compound member corresponding to both θαρσαλέος and θρασύς confirms this. The relic status of θρασύς and θρασυ‑ may explain why their root was not adapted to θαρσ‑.

On the other hand, θαρσαλέος was probably derived from θάρσος. But what caused the replacement *θέρσος >> θάρσος? It would be problematic to assume that the vocalism of θαρσ‑ was responsible, as one expects analogical influence to reduce the number of different root shapes, not to increase them. Therefore, the root vowel of θάρσος must have been introduced from a different form, preferably from an adjective.119 We must now pose the question: is it possible that an earlier stage of Ionic-Attic had an adjective *θαρσύς? This would immediately account for the vocalism of θάρσος and for the vowel slot of the factitive verb θαρσύνω in one time (cf. section 4.2.3). Before further discussing this issue, let us first consider the situation in Classical Greek.

4.5.3 The Roots θρασ‑ and θαρσ‑ in Classical Greek

The attested formations and the distribution of the allomorphs θρασ‑ and θαρσ‑ in Classical Greek are listed in Table 5 (on the following page). It distinguishes Ionic from Attic, and poetic forms from prose forms.

In Classical Greek, the allomorph θρασ‑ is no longer limited to the forms θρασύς and θρασυ‑: we also find the forms of comparison θρασύτερος, θρασύτατος, a denominative verb θρασύνω, and an abstract θράσος. Thus, unlike Homeric Greek, the Classical language has the variants θρασύνω ~ θαρσύνω (Attic θαρρύνω) and θράσος ~ θάρσος (Attic θάρρος).120 As we will see in the next chapter, the situation for κρατ‑ ~ καρτ‑ is exactly the reverse: doublets κρατερός ~ καρτερός and κράτος ~ κάρτος are found in Epic Greek, but not in Classical prose.

The alternation θρασ‑ ~ θαρσ‑ in Classical Greek reflects a phenomenon of the spoken language, while that between κρατ‑ and καρτ‑ in Homer belongs to the artificial language of epic. In Homer the alternation is utilized for metrical purposes, but in Classical Attic the two roots θρασ‑ and θαρσ‑ are semantically distinct. As is well-known,121 Attic prose generally makes a distinction between

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119 I have played with the idea that θαρσέω, which could well be an inherited ‘stative’ verb, directly reflects PGr. *θ̣ρ̣σ-ē- and, after its vocalization, influenced the vocalism of θάρσος. Although such a scenario is possible, I see no clear way to rigorously prove it at present. Moreover, the earlier existence of an adjective *θαρσύς must be posited in any case: see below.

120 Excepting the one-off instance of θράσος in Homer, see above. In the remainder of this chapter, I will refrain from citing the Attic forms with their proper dialectal outcome -ρρ‑ and refer to them only in the form with -ρσ‑.

121 See Lamberterie (1990: 849–859), and also Huart (1968: 426–431), with a special focus on Thucydides; for a concise discussion, see Meissner (2006: 70–71).
**Table 5** θρασ‑ vs. θαρσ‑ in Classical Greek prose and poetry

| θρασ‑ ‘bold, brave, reckless’ | θαρσ‑ ‘courageous, assertive’ |
|--------------------------------|-------------------------------|
| θρασύς ‘bold, reckless; audacious’ (poetry and prose) | |
| 1st cm θρασυ‑, θρασ‑ (poetry, Pl.)\(^{122}\) | θαρσ‑ | |
| θρασύτερος, -τατος (never in poetry) | θαρσ‑ | |
| θρασύνω ‘to embolden’ (Attic, Hp.) | θαρσ‑ | |
| θράσος ‘audacity, insolence’ (Attic, e.g. Ar., X., Pl.; never in Ionic) | θάρσος ‘courage, confidence’ (Pi., trag., Hdt., Th., Pl.), Att. θάρρος (X., Pl.) |
| κυνο‑θρασής ‘impudent as a dog’ (A.)\(^{123}\) | ευ‑θαρσής ‘courageous’ (A.) |
| θράσος ‘audacity, boldness, recklessness’ and θάρσος ‘courage, (self‑)confidence’, and also between θρασύνω ‘to embolden’ and θαρσ‑ ‘to encourage, give confidence’.\(^{124}\) Generally speaking, this distinction is respected in Classical poetry, |

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\(^{122}\) In the extant *Odes* of Pindar, we find 14 compounds with θρασ‑ (including 7 × a proper name), as against 7 attestations of the adjective θρασύς. Names in θρασ‑ are common in inscriptions and compete with names in θερσ‑ (for an outdated overview, see Bechtel 1917: 207 and 211–213). The latter form also occurs in the appellative compound θερσ‑επής ‘with audacious words’ (in Bacchylides). The distribution between θερσ‑ and θρασ‑ was probably metrically conditioned (see above); names in θερσ‑ and θρασ‑ are found only in certain West Greek dialects and Arcadian.

\(^{123}\) In view of its meaning, κυνο‑θρασής was based on θράσος (Meissner 2006: 185).

\(^{124}\) This semantic distinction has generally been interpreted as a difference between pejorative (θράσος) and laudatory (θάρσος) values. Cf. Huart (1968: 428): “On admet généralement que θάρσος et θράσος s’emploient assez indifféremment en poésie, tandis que, dans la prose, θάρσος est utilisé de préférence en bonne part, et θράσος en mauvaise part.” As Meissner (2006: 71) formulates, “The negative connotation [of θρασ‑] becomes more frequent in Attic, and as early as in tragedy the meaning ‘arrogant’, ‘audacious’ prevails (...). Thus, θρά‑ 

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too, even if there are some instances where ἡθρα‑ is used instead of expected ἡθρα‑, perhaps for metrical reasons. It is plausible that ἡθράςσος and ἡθρασύνω were productively created to the old adjective ἡθρα‑ς as an adjectival abstract and factitive verb, respectively.

For ἡθρα‑ς, the Homeric meaning ‘bold, daring’ continues to be the normal one in early Classical poetry, also in poetic compounds with ἡθρα‑ (see Lamberterie 1990: 851). In Classical prose the predominant meaning becomes ‘audacious’, but we must note, with Huard (1968: 430), that ἡθρα‑ς and ἡθράςσος do not have an exclusively pejorative meaning in Thucydides. This does not imply, however, that Thucydides made no distinction between ἡθρα‑ς and θαρσαλέος (as Huard claims): ἡθρα‑ς means ‘bold; reckless’ as against θαρσαλέος ‘confident, self-assured’.

Both Ionic and Attic retain θαρσύνω (already Homeric), but we also find ἡθρα‑ς‑νω, based on ἡθρα‑ς or on ἡθράςσος. It is noteworthy that the -έω verb only appears in the form θαρσέω ‘to gain courage; hold on’; the stative-inchoative verb corresponding to ἡθράςσος was not *ἡθρα‑ς‑έω, but expressed by means of the middle of the factitive, ἡθρα‑ς‑ύνομαι ‘to be(come) bold or audacious’. Thus, the only old verbs are θαρσύνω and θαρσέω; θαρσύνω is a more recent creation. This means that Homeric θαρσύνω is not a metrical replacement of a vernacular form *ἡθρα‑ς‑νω ‘to encourage’, but that it was linguistically real already at an early date. In view of the difference in root vocalism, we may conclude with some confidence that θαρσύνω was not directly derived from ἡθρα‑ς. The deriva-

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125 Lamberterie (1990: 856) mentions A. Supp. 772 πρὶν ἐρμον ναῦν θρασύνθηναι “before the ship has reached a safe haven”, where one would expect a form in θαρ‑. It is perhaps on the basis of such instances that LSJ (s.v. θράςσος) remarks that “θαρσύνω and θαρσυνω are used indifferently”, but that clearly goes too far.

126 About θαρ‑ς, Huard (1968: 430) remarks: “… chez les prosateurs postérieurs à Thucy- dide, le mot est généralement de valeur péjorative: Thucydide, lui, reste fidèle à l’usage ancien—celui de la poésie—où le terme est pris en bonne, ou en mauvaise part.” Herodotus (7.49) also attests the meaning ‘bold’ without any negative connotations.

127 As for θαρσαλέος, see Lamberterie (1990: 855): “elle désigne toujours l’assurance, la confiance en soi, par opposition à la crainte”. That θαρσαλέος is semantically distinct from θαρ‑ς is explicitly noted by Plato, Leg. 649c (see Delg s.v. θάρσος), although θαρσαλέος does not mean ‘self-confident’ there, but is rendered with ἀναίσχυντος ‘audacious’.
Table 6  The oldest distribution of the root shapes θρας‑ and θαρ‑

| Archaic forms and meanings | Innovative forms and meanings (Homer) | Innovative forms and meanings (Attic) |
|---------------------------|--------------------------------------|--------------------------------------|
| θρασύς ‘bold, daring, reckless’ | θαρσάλεος ‘audacious; courageous’ | θρασύς ‘audacious, arrogant’ |
| θάρσος ‘persistence’ | θάρσος ‘courage, confidence’ | θάρσας ‘audacity, insolence’ |
| θαρσέω ‘persevere’ | θαρσύνω ‘give courage’ | θαρσύνω ‘embolden’, θαρσύνομαι ‘be bold, take courage’ |

The innovation of θαρσύνω probably took place before the vocalization of *r̥, and before the ancestor of θαρσάλεος ousted that of θρασύς.

In sum: in Homer θρασύς retains its archaic meaning ‘bold, reckless’; it did not take part in the semantic development to ‘courageous, self-assured’ that θαρσάλεος, θαρσύνω and other derivations with θαρ‑ had already undergone in Homer. In Classical Greek, θρασύς further specializes in pejorative meanings like ‘audacious; arrogant, insolent’ and serves as the basis for new derivations: a factitive verb θαρσύνω and an abstract θάρσος. See Table 6.

4.5.4  Reconstruction

Let us now review the arguments for positing an older adjective *θαρ‑.

First of all, the shape of the factitive verb θαρσύνω seems to presuppose a base form *θαρ‑ for the adjective.128 Against this, both Tucker (1990) and Strunk (1975) have objected that θαρσύνω may have been derived from the abstract θάρσος already in Homer. However, we have seen (section 4.2.3) that the basis for this derivation, as early as Homer, is very slim. The main question

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128 This was first proposed by Chantraine (Delg, s.v. θάρσος): “Le verbe dénominatif confirmérait l’existence de *θαρ‑ et se présente sous deux formes: θαρσύνω (att. θαρ‑) « encourager, donner confiance », etc. (Hom., ion.-att., etc.) et θρασύνω « encourager », qui se dit généralement d’une audace imprudente ou impudente (Aesch. Ag. 222, Th. 1.142), surtout employé au passif et au moyen, le plus souvent au mauvaise part, cf. Ar. Gren. 846, etc.” Although I concur with Chantraine concerning the priority of *θαρ‑, I disagree with his claim that *θαρ‑ and θαρ‑ were simply doublets: “... la forme [θαρ‑] pouvant être analogique de θαρ‑ (attesté en composition) qui présente le traitement ‑αρ‑ de *r̥, θέρ‑, etc. (⋯).” For this, Chantraine refers to Lejeune (1972), who ascribes the double reflex of *r̥ to liquid metathesis.
is: how did the derivational pattern originate which links factitives in -ύνω to neuter abstracts? Homeric καρτύνω was derived from κάρτος (a form *καρτύς never existed), but this derivation presupposes the existence of a model. Given the absence of alternatives, it is attractive to think that the pair θαρσύνω : θάρσος was pivotal in the emergence of the new derivational pattern, i.e. that the original base form *θαρσύς of θαρσύνω was lost before our first attestations.129 This is corroborated by the pair ὀτραλέως : ὀτρύνω ‘to incite’, which is clearly based on θαρσαλέος : θαρσύνω ‘to encourage’.

Secondly, except for the fact that θρασύς is actually attested, there is every reason to believe that *dθρυς-ú- would indeed have resulted in *θαρσύς, whether its vocalism arose by analogy with the full grade root *dθερ- or by regular sound change. If we suppose that this *θαρσύς was supplanted by θαρσαλέος (derived from θάρσος), all pieces suddenly fall into place. First, *θαρσύς (perhaps assisted by θαρσέω) induced the reshaping θέρσος >> θάρσος. Next, after *θαρσύς had fallen in disuse and was replaced by θαρσαλέος, a new derivational pattern θάρσος → θαρσύνω emerged.

If this account is accepted, it still remains to account for the form θρασύς. Its deviant root shape can only be explained as the regular phonetic reflex of a preform *θρυσú-. It can be excluded, however, that both θρασύς and *θαρσύς resulted from the same paradigm in the same dialect. In my view, a promising solution is that θρασύς has a special epic reflex of *γρ; it was borrowed from epic into the spoken language with its archaic meaning ‘bold, intrepid’ (whence ‘audacious; reckless’). It would not be unexpected if an adjective meaning ‘bold, daring, reckless’ was borrowed from heroic poetry. This scenario will be bolstered with further arguments in chapter 6, where I propose that -ρα- was a regular outcome of what I shall call ‘Epic *γρ’, i.e. *γρ which was retained in Epic Greek longer than in the vernaculars and then underwent its proper vocalization.

Such a suggestion may appear random at this point, especially since the isolated adjective ταρφέες (with its reflex -αρ-) is also limited to Epic Greek. In order to effectively counter this objection, we must analyze more material. I will start with a discussion of the root of κρατύς and καρτερός in chapter 5, and then turn to the Homeric evidence for muta cum liquida scansion in forms with -ρα- or -ρο- in chapter 6. At this point, we may already take into account the fact that θρασύς occurs in Homeric material that is clearly traditional: cf. the

129 The alternative would be to assume that the expected form *θρασύνω was replaced by θαρσύνω under the influence of the neuter θάρσος and the stative-inchoative verb θαρσέω. This is unlikely because (i) usually the root shape of the adjective (as the basic form for derivation) wins out, and (ii) as long as the adjective continued to exist in the shape θρασύς, a reshaping *θρασύνω >> θαρσύνω would be unlikely.
formulaic verse-end θρασείαων ἀπό χειρῶν, the phrase πόλεμον θρασύν, and the metrically governed alternation between θρασύ- and θερσι- as first compound members and in names.

4.6 Conclusions

Starting out from a discussion of the expected ablaut grades in PIE and Proto-Greek ‘Caland’ formations, we have seen that many forms with -αρ‑ (-αλ‑) and -ρα‑ (-λα‑) cannot be used as evidence for the regular reflex of *r̥ or *l. This holds for most forms belonging to the following categories:

– s-stem nouns (e.g. πλάτος, θάρσος, κράτος) and compounded adjectives (e.g. -πλατής, -θαρσής, -κρατής); these originally had a full grade root and secondarily introduced the zero grade reflex of a simplex adjective;
– the u-stem adjectives πλατύς, κρατύς, βραχύς, βραδύς, whose vocalization may have been influenced by the full grade slot of the root (as in the forms of comparison);
– a number of adjectives in -αλέος like θαρσαλέος, ἁρπαλέος, ταρβαλέος, which may owe their vocalism to earlier s-stem abstracts or stative verbs.

The so-called ‘stative’ verbs in -έω (e.g. κρατέω, θαρσέω, ταρβέω) play an ambiguous role. Etymologically, they have a zero grade root, but synchronically they have derivational ties with s-stem nouns and adjectives, witness the fact that the Lesbian poets use κρατέω beside τὸ κρέτος (contrast Ionic-Attic κρατέω). For this reason a form like θαρσέω is difficult to use for the purpose of reconstruction, although it may in theory display the direct reflex of zero-grade *tʰrs-. In the case of ταρβέω, τάρβησα it is quite plausible that its aorist directly reflects *tr̥gw-ē-s-.

Returning to the u-stem adjectives, we have seen that three forms show the regular vocalization of a syllabic liquid. PIE *ml̥d-ú- ‘soft’ is reflected in the plural form βλαδεῖς, attested as a gloss in Hesychius. The factitive verb ἀμαλδύνω ‘to corrode’ is a denominative based on another reflex of *ml̥d-ú-, *ἀμαλδυ‑ with secondary ἀ‑, whose vocalization was influenced by the full grade *meld‑ (cf. μέλδομαι ‘to melt’). It is uncertain how this divergence is to be explained (possibly a dialectal difference). For further evidence for *l > -λα‑, see chapter 10.

We have discussed θρασύς and ταρφέες as the only two cases of a reflex of *r for which analogical reshaping is excluded. Ex hypothesi, the two reflexes cannot both be regular in the same variety of Greek. The form ταρφέες, an archaic plurale tantum in Homer, with an aberrant accentuation of the feminine ταρφειαί, shows the regular Proto-Ionic reflex. The cognate adjective τραφερός ‘solid’, with its alternative vocalization, was productively derived from the
verb τρέφομαι, ἐτράφην ‘to thicken’. In chapter 5, we will see that *r > -αρ- in the Ionic-Attic vernaculars is also supported by καρτερός ‘firm’ and κάρτα ‘very’, while *r > -ρα‑ is found in epic vocabulary derived from this root (κρατερός, κραταιός).

This leaves us with the task of accounting for θρασύς. Excepting some cases in poetry, there was never a free allomorphy between θρασ‑ and θαρ‑, neither in Homeric Greek nor in Classical prose. I have argued that an alternative form *θαρσύς once existed: this underlies the factitive verb θαρσύνω, and crucially, it would be hard to understand why and how the allomorph θαρ‑ spread through all other derivatives (replacing θερ‑) if θρασύς had always been the current form of the adjective. The adjective corresponding functionally to θάρσος and θαρσύνω is θαρσαλέος (not θρασύς), and it would make good sense if *θαρσύς was ousted by θαρσαλέος. The pre-Homeric loss of *θαρσύς would also explain how the derivation of factitives in ‑ύνω from s-stem neuter abstracts started (namely from the pair θαρσύνω : θάρσος).

In view of these considerations, I suppose that *θαρσύς is the regular Proto-Ionic reflex of *tʰrho-, and that θρασύς did not develop in spoken varieties of Ionic-Attic. In chapter 6, I will further elaborate the idea that its reflex -ρα‑ arose within the prehistory of Epic Greek.