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

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4. Reflexes of **r* and **l* in Caland formations

When determining which one of the reflexes *-ρα-* and *-αρ-* is regular and which one is analogical, it is of the utmost importance to critically examine the analogical processes that have been proposed. In chapter 2, we have seen that the models proposed for *καρπός* and *τέταρτος* are difficult to accept. Departing from the assumption that *-αρ-* is the regular reflex of **r* in Ionic-Attic (or rather in Proto-Ionic), a considerable number of forms with *-ρα-* require an explanation. Since a large number of them belong to the derivational system which bears the name of Caland, I will start my treatment of the Ionic-Attic evidence with these formations. I will start with an overview of the Greek Caland system, its ablaut mechanisms, and the various possibilities of derivation.

4.1 The root ablaut of Caland formations in Greek and PIE

A model specimen of the Caland system in Greek would consist of a primary adjective (mostly in *-ύ-* or *-ρό-*), its forms of comparison in *-ίων*, *-ιστος*, a neuter abstract in *-ος* together with compounded adjectives in *-ής*, an adverb in *-α*, and sometimes a compounding first member in *-ι-*.²⁸⁰ In addition, several verbal formations are intimately linked with these nominal forms, notably the stative verbs in *-έω* and the factitives in *-ύνω*. The only Greek root which attests all these formations is that of *κρατύς*, *κράτος*; it will be extensively discussed in chapter 5.

Most Greek Caland roots generalized one root vowel throughout the entire system of derivations. A good example is the root **t^hak^h-*, attested in the adjective *ταχύς* ‘quick, swift’, comparative *θάσσων*, superlative *τάχιστος*, the neuter abstract *τάχος*, and the adverb *τάχα*. All these formations are attested in Homer. Unattested are *s*-stem adjectives and the compounding first member in *-ι-*. The strong stem **t^hāk^h-* is probably preserved in the Eretrian PN *Τήχιππος* ‘with swift horses’, and only there.²⁸¹ In pre-Homeric Greek, however, the strong stem **t^hāk^h-* must also have been present in the comparative and superlative, as well as the neuter abstract. This suggests that some of the formations were re-created on the basis of the positive *ταχύς*, and perhaps also the adverb *τάχα*.

Another example is the PIE verbal root **pleth₂-* (Ved. *práthate* ‘spreads’, intransitive), from which the following Greek forms were derived: *πλατύς* ‘wide’, *πλάτος* ‘flat open surface’, compounds in *-πλατής*, and *πλαταμών* ‘flat stone or rock’. Except for *πλατύς*, one would expect an *e*-grade in all attested formations, but apparently the entire system has been reshaped on the basis of the *u*-stem adjective. Note that *πλαταμών* (with root-final *-α-* < **h₂*) has a direct cognate in Ved. *prathimán-* ‘extension’: even this inherited formation, which stands isolated within Greek, replaced the root **-e-* by *-α-*.

These examples warn us that many forms with *-ρα-*, *-λα-* or *-αρ-*, *-αλ-* do not continue a pre-form with **r* or **l*. In order to judge the provenance of Caland forms and their pertinence as evidence for **r* or **l*, it is important that we obtain a clear picture of the expected root vocalism or ablaut paradigms of the Caland formations in PIE and Proto-Greek. This is the objective of the present section.

²⁸⁰ I leave most of the secondary Caland suffixes out of consideration at this point; some of them will be commented on later in this chapter.

²⁸¹ This interpretation is appealing in view of Hom. *ταχέ’ ἵππῳ* ‘swift horses’, *ταχέες δ’ ἵππῃες*, etc. For this reason, the etymology proposed for *ταχύς* by de Lamberterie (1990: 584ff.) seems less attractive to me, but this does not matter for the present argument.

4.1.1. *u*-stem adjectives

The Greek reflexes of PIE *u*-stem adjectives preserve traces of an original proterodynamic (PD) ablaut paradigm: strong stem **CéC-u-*, weak stem **CC-éu-*. Although both Greek and Indo-Iranian generalized the zero grade of the root in most *u*-stem adjectives and preserved only the suffixal ablaut, the reconstruction of a regular PD paradigm for the proto-language is widely accepted (cf. Meissner 2006: 35, Clackson 2007: 112, Beekes 2011: 221).²⁸² Evidence for the presence of an *e*-grade root in the PIE paradigm has been preserved in various different daughter languages:

- Lat. *brevis* ‘short’ < **mreg^hwi-* << **mrég^h-u-*
- Lat. *gravis* ‘heavy, important’ < **g^wreh₂-wi-* << **g^wréh₂-u-* (Greek βαρύς and Ved. *gurú-*, Av. *gouru-* point to **g^wrH-u-*)²⁸³
- Arm. *mełk* ‘soft’ < **meldwi-* << PIE **mél-d-u-* (Lat. *mollis* is ambiguous between zero grade and full grade; zero grade in Ved. *mṛdú-* ‘soft, weak’, etc.)
- Hitt. *tēpu-* ‘little, few’ < **d^héb^h-u-*
- Hitt. *daššu-* ‘well-nourished, heavy, strong, etc.’ < **déns-u-* (**d_ṇs-u-* can be excluded, cf. Kloekhorst, *EDHIL* q.v.).

Greek also provides evidence for the presence of an original *e*-grade within the paradigm. The difference between δασύς and δαυλός can only be explained if we depart from an ablauting *u*-stem adjective **déns-u-*, **d_ṇs-éw-* (section 9.1). Willi (2002) convincingly compared εὐθύς ‘straight at’ (also Hom. ἰθύς ‘id.’ < **eit^hu-* < PGr. **ieut^hu-* by dissimilation) with Lith. *judùs* ‘belligerent’.²⁸⁴ He explains the full grade of εὐθύς (also presupposed by ἰθύς) by assuming that it replaced the regular outcome **ύθύς* < **(H)iud^h-u-* on euphonic grounds. It is much easier, however, to depart from an ablauting paradigm PIE **(H)ieud^h-u-*, **(H)iud^h-eu-*.²⁸⁵ Since the verbal root **(H)ieud^h-* is unattested in Greek, it is unlikely that the full grade was secondarily introduced.²⁸⁶

In one instance, all IE languages agree in having a full grade root: **sueh₂d-u-* ‘agreeable, sweet, savory’, continued in Gr. ἡδύς, Ved. *svādú-*, Lat. *suāvis*, OE *swōt*, etc.²⁸⁷ In this case, there was a clear motive for generalizing the full grade: after the loss of laryngeals, the outcome of the zero grade **suh₂d-* was **sūd-* in most languages, which yielded an anomalous kind of ablaut. As de Lamberterie (1990: 38) points out, influence of verbal forms on the adjective must always be reckoned with. For instance, Lith. *platùs* ‘extended’ beside *iš-plečìu* ‘I stretch out’ follows the model of e.g. *badùs* ‘sharp’ : *bedù* ‘I sting’. In other words, Lith. *platùs* does not allow us to reconstruct an *o*-grade root allomorph in the PIE paradigm. Similarly, one may think that ἡδύς was influenced by the verb ἡδομαι ‘to be pleased, enjoy oneself’. But this explanation is not very likely for most cognates of ἡδύς, because a corresponding primary verb is absent in many cases. This makes **sueh₂d-u-* another probable piece of evidence for root ablaut in the *u*-stem adjectives.

²⁸² A different view is taken by de Lamberterie (1990, e.g. 953), who argues that the full grade root of certain *u*-stem adjectives was introduced from a coexisting verbal root with full grade forms. Meier-Brügger (2010: 354) does not take a stance on the original paradigm, and Fortson (2010) does not comment on it at all.

²⁸³ On Lat. *gravis*, see Fischer (1982).

²⁸⁴ The intermediary stage **eit^hu-* is attested in the derivative εἰθυ[ν]ν ‘fine’ (Chios, 5th c.), Willi (2002: 129).

²⁸⁵ Willi compares εὐρύς ‘broad’, which would have replaced **ύρύς* by the same euphonic principle. But εὐρύς is a notoriously problematic form, and this assumption is unnecessary for εὐθύς because a preservation of the root ablaut immediately solves the problem.

²⁸⁶ As argued by Willi, the adjective **(H)ieud^h-u-* was formed to the root **(H)ieud^h-* ‘to go straight at’, reflected in Ved. *yudh-* ‘to fight’, Lat. *iubeō* ‘to order’ (OLat. *ioubēre* ‘to sanction’), Lith. *jùsti* ‘to get moving’, *judėti* ‘to be agile, stir (intr.)’. The correctness of this identification is proven by Homeric phraseology: ἰθύς μάχεσθαι.

²⁸⁷ The reconstruction and morphological analysis of Hom. ὠκύς, Ved. *āśú-* ‘swift’ are not ascertained.

In general, the isolated instances of an *e*-grade root in a *u*-stem adjective (such as Lat. *brevis*) are too numerous to doubt the reconstruction of a proterodynamic paradigm for PIE. Although such an ablauting paradigm has not been preserved intact in any IE language, there are compelling reasons to assume that the *u*-stem adjectives retained their original PD ablaut in prehistoric Greek. The case of δασύς has just been mentioned. In this chapter, I will argue that traces of such ablaut are to be recognized in Greek adjectives like βραχύς, because this is the only way to explain the aberrant vocalization of ταρφύς ‘frequent’. Taking βραχύς as an example, I depart from the following PGr. paradigm:

m.	Ns. *mrék ^h u-s	n.	NAs. *mrék ^h u
	Gs. *mrk ^h éw-os		
	Np. *mrk ^h éw-es		Np. *mrk ^h éw-a

The distribution between strong and weak stems in the masculine and neuter gender recalls that of msc. Ns. πολύς, As. πολύν, ntr. NAs. πολύ (beside two different oblique stems) and msc. Ns. μέγας, As. μέγαν, ntr. NAs. μέγα (beside μεγαλ-). All the plural forms (e.g. Np. *mrk^héw-es) had the weak stem of the oblique singular in Proto-Greek (and perhaps already in PIE).

The Greek feminine may also contain unexpected traces of *e*-grade root vocalism. Most scholars reconstruct a separate feminine formation for the proto-language.²⁸⁸ However, there are several indications that the motional forms were first created in the separate daughter languages. First, Greek and Indo-Iranian form their motional feminine in different ways. Greek normally added the ablauting suffix N. *-īa, G. *-īās to the oblique stem of the non-feminine gender (with the suffix allomorph *-ew-). Indo-Iranian, on the other hand, builds the feminine on the synchronic stem of the NAs. msc. and ntr. (e.g. Ved. *urúh* → *urvī-*, or earlier PIIr. *prHú- > → *prHu-iH-, cf. Ved. *purú-*, fem. *pūrvī-* with a reflex of the laryngeal). Moreover, *u*-stem adjectives of two endings are attested in Germanic (Goth. *handus* ... *þaursus* ‘dry hand’, Luke 6.6) and Baltic (Old Lith. *platus žeme*, vs. Modern Lith. *platì žėmė* ‘wide earth’), that is, in the oldest attested phases of both branches.²⁸⁹ Homeric Greek also has motionless feminine forms like θήλυς ‘female’ and πολύς ‘much’ that have been plausibly analyzed as retained archaisms (cf. the material in Chantraine 1942: 252-4).²⁹⁰

The oldest situation of the feminine in Greek is hard to reconstruct with certainty, but the following scenario seems plausible to me. The preservation of an anomalous accentuation in Homeric θάλεια ‘abundant’, λίγεια ‘sonorous’, and λάχεια ‘hairy, wooded’, adjectives of which no corresponding masculine forms remain, shows that the fem. singular originally had root accent.²⁹¹ The accentual type of Classical βαρεῖα may be due to a paradigmatic levelling

²⁸⁸ Meier-Brügger (2010: 354, cf. also Sihler 1995: 350) discusses two possibilities for the formation of the feminine. On the combined basis of Greek and Indo-Iranian, one could assume that the original ablaut was *-éu-ih₂ : *-u-iéh₂-. Both branches would have generalized one ablaut form of the suffix. On the other hand, one could assume that the Vedic situation is older if one accepts that a trace of it is preserved in the Greek toponym Πλάταια, Πλαταιαί, if this is reconstructed as *pl^hth₂-u-i(e)h₂-. This second option is preferred by de Lamberterie (1990: 243-6). In my view, the assumed reconstruction of Πλάταια with a zero grade suffix is problematic, because I would expect such a form to vocalize in Greek as *pl^hth₂u-i(e)h₂- > *platu(i)a, *platu(i)ā-.

²⁸⁹ These examples were taken from de Lamberterie (1990: 886).

²⁹⁰ A different analysis of the feminines θήλυς and πολύς is given by de Lamberterie (l.c.).

²⁹¹ Of the three forms mentioned, only λίγεια appears in post-Homeric poetry (but not in prose); the by-form λιγυρός is not normal in prose either. It seems plausible that these forms escaped accentual levelling because they had ceased to be current in the Ionic-Attic vernacular. A different analysis is given by de Lamberterie (1990: 645). He departs from an older stage *θαλειά (with accent on the ending, like Ved. Ns.f. *svādvī*), and assumes that *θαλεῖα, *λαχεῖα, *λιγεῖα were replaced by the barytone forms after PNs with retracted accent. Although Θάλεια is attested as the name of a Muse, and Λίγεια as the name of a Siren, the assumed influence of

induced by the masculine oblique stem. In the feminine plural, traces of an older accentuation are preserved in Hom. *ταρφειαί* and *θαμειαί*, both ‘frequent’. Since these adjectives have lost their singular forms, their accentuation must reflect a more original situation.²⁹²

Taking *θάλεια* as an example, the masculine paradigm **d^hélh₁-u-*, **d^hlh₁-éu-* > PGr. **t^hélu-*, **t^haléw-* would have been levelled to **t^hálu-*, **t^haléw-*, and then to **t^halú-*, **t^haléw-* with columnization of the accent.²⁹³ The feminine can be mechanically reconstructed as **t^hálew-ja*, **t^halew-jãs*, but its accentual peculiarities can only be explained if the Ns. **t^hálew-ja* was based on the masculine strong stem **t^hálu-* (or its earlier form **t^hélu-*). This could imply that the original form of the feminine paradigm was Ns. **t^hálu-ja*, Gs. **t^halew-jãs*, and that it was created by adding the motional endings directly to the masculine stem-forms.²⁹⁴ This paradigm was then levelled out to **t^hálew-ja*, **t^halew-jãs*, the situation presupposed by Homeric accentual relic forms like *θάλεια* and *θαμειαί*.

In conclusion, I posit the following paradigm before the levelings which took place due to the vocalization of **r*:

m.	Ns. <i>*mrék^hus</i> Gs. <i>*mrk^héwos</i> Np. <i>*mrk^héwes</i>	n.	NAs. <i>*mrék^hu</i> Np. <i>*mrk^héwa</i>	f.	Ns. <i>*mrék^hewja</i> Gs. <i>*mrk^hewjãs</i> Np. <i>*mrk^hewjaí</i>
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4.1.2. Adjectives in -ró-

The *ró*-adjective (for the Homeric material, see Risch 1974: 68f.) presents no problems: as a thematic formation, it had no ablaut. The root was originally in the zero grade, as in *μακρός* ‘tall, long’ < **mh₂k-ró-* beside *μήκιστος* ‘longest’, *έρυθρός* ‘red’ < **h₁rud^h-ró-* beside *έρεύθω* ‘to redden, make red’. This fact may have helped the generalization of the zero grade root allomorph in the *u*-stem adjectives.

It may occur that one language has an adjective in -*ró-* when another language shows a formation in -*u-*: e.g. Hitt. *tēpu-* ‘small, little’ ~ Ved. *dabhrá-* ‘id.’, Hitt. *daššu-* ‘strong’ ~ Ved. *dasrá-*, Av. *daŋra-* ‘artful, skilled’. In some cases, both formations are attested in the same language, as in *ἐλαφρός* ‘nimble’, OHG. *lungar* ‘fast, cheerful’ ~ *ἐλαχύς* ‘small’, Ved. *raghú-* ‘fast’. The original distribution between these formations is unknown; it has been suggested that there was a tendency to avoid -*u-* when the root also contained this phoneme. This would explain cases like *έρυθρός*, *λυγρός*, *ύγρός*, but is not without exceptions: *εὐθύς*

personal names on the Homeric text seems problematic to me, because the accentual opposition between proper names and appellatives remained productive.

²⁹² Again, Hom. and Class. *βαρεῖαι* may have taken over the accentuation of the masculine forms. Note that *θήλειαι* ‘female’ generalized the root accent of the singular forms *θήλῃς*, *θήλεια*. Since *θήλεια* was created on the basis of *θήλῃς*, it could show that the base form of the root-accented feminine singular was the root-accented strong stem of the masculine. But this example has its own problems, because *θήλῃς* may in origin have been a substantive, like its counterpart *ἄρσῃν* ‘male’.

²⁹³ For the reconstruction of this root, see Hackstein (2002: 221).

²⁹⁴ It is remarkable that the suffix -*jãs* apparently attracted the accent from the suffix **-éw-*. Since this suffix was originally unaccented in the feminine forms, one could also assume that it was introduced from the masculine in all case forms. If so, the oldest fem. paradigm may have been Ns. **t^hrép^h-u-ja*, Gs. **t^hrp^h-u-jãs*. This situation could be indirectly reflected in *ἄγνια* ‘road’, Gs. *ἀγνιῆς*, Np. *ἀγνιαί*, and *ὄργνια* ‘fathom’, Gs. *ὀργνιῆς*, Np. *ὀργνιαί*. As de Lamberterie (1990: 724-5) has shown, the latter is a remnant of an old syntagm PGr. **órguia k^héh^h* ‘outstretched hand’, which contained the feminine of the *u*-stem adjective. The geminated **-ji-* underlying the normal form *ὄργνια* (Hom.+; Att. inscr. *οργνα*, G. *οργνας* is due to a later development **uija* > *ūa*) must then be due to secondary influence of another formation, perhaps the motional feminine of the perfect ptc. in -*vīa*. In other words, the relic forms *ἄγνια*, *ὄργνια* were levelled out in a different way from the feminine of *u*-stem adjectives, presumably because they could not be influenced by masculine forms with **-éw-*. It may be thought, finally, that the “epenthetic vowel” of the As. *ὀρόγνιαν* (Pi. *Pyth.* 4.228, cf. *πόδες ἐπτορόγνιοι* Sapph. fr. 110a, *ἐκατοντορόγνιον* Ar. Av. 1131) is a remnant of a more original paradigm Ns. msc. **orég-u-s*, Gs. **org-éw-os*.

‘straight at’ and Lith. *judùs* ‘belligerent’ derive from PIE **(H)ieud^h-u-*, and *-ró-* also occurs in roots which did not contain *-u-*, such as *μακρός* < **mh₂k-ró-* ‘tall’.

4.1.3. Primary comparatives and superlatives

According to the *communis opinio*, primary comparatives had a full grade root in PIE (with ablaut in the suffix), but the primary superlative had a zero grade root. This doctrine is found in Meier-Brügger (1992a: 84, less explicitly 2010: 357-58), Rix (1992: 168), Chantraine (1961: 109-10), and had been canonicized already in Schwyzler’s *Griechische Grammatik*:

“Die Wurzel hatte ursprünglich bei den Komparativen mit *-ίων* Starkstufe, bei den Superlativen auf *-ιστος* Schwachstufe, z.B. *κρατύς*, *κρέσσων* (wie *κρέτος*) *κράτιστος* (...). Doch zeigen die Superlative schon früh auch Starkstufe und Anfangsakzent: *φέριστος* (...); umgekehrt wurden die Komparative früh dem Superlativ bzw. Positiv angeglichen, z.B. dor. *κάρρων* kret. *κάρτων* statt *κρέσσων* nach *κάρτιστος*; *μάσσων* wie *μακρός* trotz *μήκιστος* *μήκος* (...)” (Schwyzler 1939: 538).

In Schwyzler’s view, the difference between *κρέσσων* and *κράτιστος* proves an original difference in root ablaut between the PIE comparative and superlative. At the same time, he assumes that in many cases, the superlative acquired the *e*-grade root of the comparative at an early date.²⁹⁵ In fact, this reconstruction of the PIE situation is based mainly on *κρέσσων* : *κράτιστος*, which is the only example of its kind in Greek. Furthermore, there is no convincing evidence for the assumed pattern in Vedic, where both the comparative and the superlative regularly have an *e*-grade root.²⁹⁶ Beside *κρέσσων* : *κράτιστος*, Greek has one other example of an ablaut difference between comparative and superlative: *μήκιστος* ‘longest’ beside *μακρός*, *μάσσων*.²⁹⁷ It is possible that *μάσσων* was influenced by the vocalism of the positive *μακρός*, and that it replaces an older **mākīōn* or its outcome. Following Brugmann, Seiler (1950: 75-6) assumed that *μήκιστος* was influenced by the *s*-stem substantive *μήκος*. Since this is hardly conceivable, *μήκιστος* also proves that the root of the superlative originally had full grade.²⁹⁸ The same applies to *κερδίων*, *κέρδιστος*, where the positive has been replaced by *κερδαλέος*, and *πλείων*, *πλείστος* < **pléh₁-ios-*, **pléh₁-istHo-* beside *πολύς*. These full grades were preserved because the positive did not have a zero grade when the levelling of root allomorphs took place. On the other hand, the zero grade root

²⁹⁵ In Ruijgh’s view (1992: 91 n. 50) the supposed leveling of ablaut grades started in cases like comp. **h₂er-ios-* : superl. **h₂r-is-tHo-* > PGr. **arīos-*, **aristo-*.

²⁹⁶ A review of these issues and the history of early research is found in Seiler (1950: 21-2), but he does not reach any significant conclusion. The idea that the PIE superlative had a zero grade root is based on Osthoff (*Morph. Unt.* 6: 70ff.), who pointed at the oxytone accentuation of a few Vedic superlatives (*kaniṣṭhā-* ‘youngest’, *daviṣṭhām* ‘far away’, etc.). In Classical Sanskrit, such forms are lost or replaced by root-accented forms. However, the final accent of these superlatives is not necessarily connected with their root vocalism: even if the suffix was accented (PIE *-tHó-*), the root may have had a full grade, because the superlative pre-form **CeC-is-tHo-* (or **-mHo-*) may have been derived from the weak stem of the comparative. The latter must be reconstructed as **CeC-is-* (cf. Goth. *mais* ‘more’ < **meh₂-is-*).

²⁹⁷ The Attic pairing of a comparative *ὀλίζων* beside a superlative *ὀλίγιστος* looks odd, but given that Homer has *ὀλίζων*, Attic *ὀλίζων* must rather be analyzed as secondary influenced by its counterpart *μείζων*, which itself replaces older *μέζων*.

²⁹⁸ Seiler’s assumption is both problematic and unnecessary. The problem is that a replacement of **μάκιστος* by *μήκιστος* would not only distantiate the superlative from comparative *μάσσων* and positive *μακρός*, but also entail a change in metrical structure. A replacement of **mākīōn* by **makīōn* must be preferred, because it did not lead to a change in metrical structure, and because influence of the vocalism of the positive on that of the comparative is well-paralleled. It is possible, of course, that the existence of *μήκος* helped to preserve the superlative *μήκιστος* against the pressure of *μακρός*, *μάσσων*.

vocalism of forms like βάθιστος, τάχιστος must have been influenced by that of the positive.²⁹⁹

Now turning to the primary comparative, its PIE pre-form used to be reconstructed with an accented, non-ablauting *e*-grade root (“Niemand bestreitet dies”, Seiler 1950: 21). In the last few decades, however, this has been contested by Beekes (e.g. 2011: 198), who reconstructs the oldest paradigm as hysterodynamic *CéC-*iōs*, C(*e*)C-*iés-m*, *C(*e*)C-*is-ós*. Indeed, an *e*-grade suffix in the accusative could be invoked to explain Lithuanian comparatives of the type *gerėsnis* ‘better’ (*gėras* ‘good’); moreover, Lat. *māiestās* ‘power’ is supposed to derive from earlier **mag-ies-tāt*- “the fact of being bigger”.³⁰⁰ But this does not yet prove that the root ablaut had been retained in Proto-Indo-European. At any rate, for the purpose of Greek we may depart from a late PIE paradigm *CéC-*iōs*, -*ios-m*, -*is-os*, with a non-ablauting root and HD ablaut in the suffix.

In conclusion, the pre-forms underlying the Greek primary comparative and superlative can be reconstructed as comp. *CéC-*iōs*-, superl. *CéC-*is-tHo*-, as was proposed already by Meillet and Brugmann.³⁰¹ This situation is preserved in Vedic and Avestan (e.g. Ved. *ugrá*- ‘strong’ : *ójiyas*-, *ójiṣṭha*-; *yúvan*- ‘young’ : *yáviṣṭha*-), and also reflected in a number of Germanic paradigms (the preserved reflexes of Verner’s Law in e.g. Goth. *juggs* ‘young’ ~ comp. *juhiza* < PGm **iungá*- beside **iúnh-is*-).

A final remark on a few cases of apparent *Schwebeablaut* between the positive and the forms of comparison. While *πλείων*, *πλείστος* < **pléh₁-ios*-, **pléh₁-is-tHo*- require the same full grade **pleh₁*- as the verb (Lat. -*plēre*, Ved. pf. *paprau*, and Hom. *πλήθω* unless this is from a zero grade), the positive shows a full grade **pelh₁*- / **polh₁*- in Gr. *πολύ* and Goth. *filu* ‘much’. A second case is Lat. *gravis* which, since Fischer (1982), is mostly taken to reflect a Ns. **g^wreh₂-u-s* > Plt. *graus*, which was subsequently remade into an *i*-stem *gravis*. This full grade is also found in the related word for ‘pressing stone’, Ved. *grávan*- < **g^wréH-uon*-, but a different vowel slot is found in the comp. Ved. *gárīyas*- < **g^wérH-ios*-. The existence of cases like **g^wreh₂-u*- / **g^werh₂-is*- might suggest that *u*-stem adjectives could have a different full grade slot as compared with cognate formations. But since the ablaut of *u*-stem adjectives and forms of comparison in Greek can be explained without invoking *Schwebeablaut*, I leave this theoretical possibility aside.

4.1.4. Compounding first members

According to Caland’s original formulation of his Law, forms in -*i*- were obligatory substitutes for adjectival formations in -*ró*- whenever these occurred as the first member of a compound. Well-known examples from Avestan are *dərəzra*- ‘firm’ beside *dərəzi-raθa*- ‘having a firm chariot’, *xruui-dru*- ‘having a bloody weapon’ beside *xrūra*- ‘bloody’. In principle, these forms in -*i*- take the zero grade of the root. Only a few examples have been preserved in Greek, and they are clearly residual forms. The productive way to form the first member of a possessive compound, already in Homeric Greek, is to use the stem of the adjective itself: cf. cases like *κρατερόφρων*, *βαρύκτυπος*. The most important examples of first members in -*i*- are the following (see Risch 1974: 219 for a few more uncertain items):

²⁹⁹ As we will see in chapter 5, the Homeric use of *κάρτιστος* instead of the vernacular form *κράτιστος* can only be understood if its pre-form was **kretisto*-. This form was avoided for metrical reasons, and remained avoided after the replacement with *krat*-. If the pre-form would have been **krtisto*-, this problem would not have existed.

³⁰⁰ But it seems hard to exclude inner-Baltic explanations for the Lith. comparative with -*es*- (note that Slavic has -*bs*-, continuing a zero grade **-is*-, and the Old Prussian forms go back on **-is*- too, cf. Stang 1966: 267-8). Rix (1976: 167) reconstructs a PD paradigm, but this does not explain the forms which reflect a zero grade suffix **-is*:- see Beekes (1985: 12-13).

³⁰¹ See Seiler (loc. cit.) for refs.

- | | |
|-------------------------------|---|
| - ἀργικέραυνος | (-αργής ‘bright’) |
| - δαίφρων ‘clever’ | (δήνεα ‘wiles’, ἀδηνής, πολυδήνης) |
| - θερσιεπής ‘speaking boldly’ | (names in -θέρησης) |
| - καλλιγύναικα | (περι-καλλής ‘beautiful’) |
| - Κρατι-, Καρτι- | κρατερός ‘impetuous’, dialectal -κρετής |
| - κυδιάνειρα | κυδρός ‘glorious’ (cf. -κυδής) |
| - λαθικηδής | adv. λάθρη ‘secretly’ |
| - πυκιμήδης | (έχε-πευκής ‘having a sharp point’) |

See also ἐρυσίπελας “red skin” (Hp.+), name of the skin disease *erysipelas*, and ἐρυσίβη ‘rust, red blight’ beside ἐρυθρός ‘red’.

In Homer, a direct relation with an adjective in *-ró- is found only in κυδιάνειρα : κυδρός ‘glorious’; relics of the historical situation may perhaps be seen in ἀργικέραυνος : ἀργός ‘bright’ (if this indeed dissimilated from *argró-, a much-debated issue), λαθικηδής : λάθρη ‘secretly’, and δαίφρων < *dhs-i- beside Ved. *dasrá-* ‘capable, skilled’ < *dhs-ró-. Risch therefore argued that the derivational association of -i- with other suffixes than -ró- (e.g. neuters in -s-) was a Greek innovation, due to the frequent association of such forms within the “Caland system”. In various unpublished works, Nussbaum took one further step and argued that *-ró- : *-i- need not be reconstructed for PIE either. Against this idea, it can be held that the isolated forms ἐρυσίπελας and ἐρυσίβη probably preserve a reflex of *h₁rud^h-i-, parallel to the inherited ro-adjective reflected in ἐρυθρός. In this context, the compounds with κραται- (also Κραται-, alternating with Κρατι-, Καρτι-) deserve attention. In chapter 5, I will argue that both κραται- and the names in Κρατι-, Καρτι- continue an inherited zero grade *k₂rth₁-i-. At the same time, I propose that κρατερός ~ καρτερός is the regular outcome of PIE *k₂rth₁-ró-. This is, then, a new piece of evidence in favor of an old-fashioned “Lex Caland” that was operative in the Proto-language.

Whatever the PIE situation may have been, a number of Greek examples point at a derivational relation between first members in -i- and s-stem adjectives. The full grade first member of θερσιεπής was probably formed beside names and compounds in -θερσής (cf. Θερσίλοχος), πυκιμήδης stands beside adjectives in -πευκής, and καλλιγύναικα beside περι-καλλής. If we assume that Caland’s original Law is correct, it is possible that a case like ἀργικέραυνος : -αργής, where the ró-adjective had been lost, triggered the new pattern.

4.1.5. Adverbs in -α

The adverbs in -α are listed in Risch (1974: 363), and have been discussed by Ruijgh (1980). In Ruijgh’s analysis, they contain a zero grade root when inherited, or adopt the vocalism of the corresponding adjective (as in ὤκα). Only younger formations may have the full grade of a corresponding verbal root, such as Myc. *e-ne-ka* (Hom. εἵνεκα with metr. lengthening and secondary aspiration) beside the root of aor. ἐνεγκεῖν ‘to carry’, and compounds in -ηνεκής.

Among the material gathered by Risch, the following evidence is found for adverbs in -α that stand beside related adjectival formations:

- λίγα ‘loudly, with a shrill voice’ : λιγύς ‘sonorous’
- τάχα ‘quickly’ : ταχύς ‘fast’, θάσσων, τάχιστος
- πύκα ‘densely; frequently’ : πυκ(ι)νός ‘dense’ (cf. πυκι-, -πευκής)
- μάλα ‘very’ : μᾶλλον ‘more’, μάλιστα ‘most’
- ἥκα ‘softly, lightly’ : ἥσσων ‘worse’, ἥκιστος ‘least’, adv. ἥκιστα

It is clear that μάλα may have influenced the vocalism of μάλλον and μάλιστα, which could replace an older *e*-grade form in view of the comparison with Lat. *melior*.³⁰² But it is difficult to find more evidence for such influence among the other examples. In ταχύς, θάσσων, τάχιστος beside τάχα, it seems most likely that the influence came from the adjective, and it also seems that λίγα was formed after λιγύς. An important form, to which I will return in chapter 5, is κάρτα ‘heavily, very’ (beside κρατύς, κρείσσων, κράτιστος, but not attested in Homer).

4.1.6. s-stems nouns and adjectives

There are no clear traces of ablaut in the neuter s-stems in Greek. As is well known, Schindler (1975) assumed an original proterodynamic paradigm for the proto-language, with strong stem *CéC-s, weak stem *CC-és-. An *o*-vowel was then introduced into the suffix of the NAs., as well as in the Gs. ending. Still in the (late) proto-language, the accented full grade root would have been generalized in many individual s-stem neuters. This would yield the normal Indo-European type Ns. *CéC-os, Gs. *CéC-es-os. According to Stüber (2002: 19-20 and 201), Schindler’s reconstruction could also explain the Vedic infinitives of the type *tujáse* if these continue an old s-stem dative **tug-és-ei* “for throwing”.³⁰³ Stüber (op. cit. 19) concludes that “für die Grundsprache ein intakter Wurzelablaut angenommen werden muss”. She also argues that the NAs. form of the suffix was already *-os everywhere in PIE (op. cit. 20-21). The last statement is controversial, in view of the reconstruct **kreu-h₂-s-* which most scholars suppose to underlie Ved. *kravís-* ‘raw flesh’ and Gr. κρέας ‘(piece of) meat’.³⁰⁴

Important observations on the ablaut of the s-stems in Greek have been made by Meissner (2006). It has sometimes been argued that the side by side of s-stem variants like πάθος and πένθος ‘suffering’ can be explained by an older, PIE situation with root ablaut (refs. *apud* Meissner 2006: 72). However, Meissner convincingly shows (2006: 65ff.) how post-Homeric βάθος replaces Homeric βένθος, and how πάθος could appear at the side of the more archaic form πένθος only at a later stage. This formal analysis is corroborated by a semantic analysis of πάθος and βάθος, as opposed to πένθος and βένθος: the former two are recent deverbal (παθεῖν) and deadjectival (βαθύς) formations, respectively, whereas the latter two function as plain substantives. Thus, Greek πένθος and βένθος may simply reflect a Proto-Greek paradigm with non-ablauting root.

It must be emphasized that neuter s-stems could be synchronically created beside intransitive verbal roots. For instance, instead of deriving Goth. *hatis* ‘hate’, W. *cawdd* ‘rage, grief’ together with Gr. κῆδος from an inherited ablauting neuter **kéh₂d-os*, **kh₂d-és-*, κῆδος may have been created within Greek beside the verb κηδομαι ‘to mourn, care for’. This would also explain the semantic divergence between Greek κῆδος and the s-stem forms in the other branches. Stüber (2002: 199-200) discusses this case together with two other examples: Indo-Iranian **várH-as-* beside **úrH-as-*, and the word for ‘mouth’ (Hitt. *aiš*, Gs. *iššaš*, Ved. Is. *āsá*, Lat. *ōs*, OIr. *á*). But: “Damit ist allerdings die Zahl derjenigen neutralen s-Stämme, für die Wurzelablaut gesichert ist, auch schon erschöpft.” The side-by-side of **várH-as-* and **úrH-as-* may well have an inner-Indo-Iranian explanation, and the reconstruction of the word

³⁰² This would answer the objection by de Vaan (*EDL* s.v. *melior*) that “the PIE etymology is weak, since Gr. μάλα shows no trace of an *e*-grade”. His other objections, viz., that “the root is not attested in other derivatives”, and that “Words for ‘good’ can have many origins, and are frequently renewed” are of course pertinent (though only for Latin, of course). It remains to indicate a plausible root for μάλα. In my view, **melh₁-* ‘to crush, grind’ is a good candidate; for further argumentation, see chapter 5.

³⁰³ Himself, Schindler expressed his doubts about this interpretation of the Vedic infinitives, because they are not necessarily old neuter forms. See Stüber (l.c.).

³⁰⁴ But it has been recently contested by Nikolaev (2010: 124-49), who discusses the entire evidence for Greek stems in -ας and arrives at the conclusion that *-s- was originally used to derive singulatives from collectives. In this case, the older form would be a collective **kreu-h₂* ‘blood, bloody stuff, raw meat’.

for ‘mouth’ is beset with difficulties (see Kloekhorst, *EDHIL* s.v. *aiš*). Even if the latter word preserves traces of original ablaut, it is quite conceivable that PIE eliminated all traces of root ablaut in the *s*-stem neuters, at least after Anatolian had branched off.³⁰⁵

In PIE, possessive *s*-stem compounds could be regularly derived from *s*-stem neuters. Well-known examples such as εὖ-μενής, δυσ-μενής ~ μένος, beside Ved. *su-mánas-*, *dur-mánas-* ~ *mánas* show that this procedure was inherited. Another example from Greek is πολυ-πενθής beside πένθος ‘suffering’ (both Hom.). The 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. αἰνοπαθής ‘who has suffered terrible things’ (Hom.). As Tucker (1990) and Meissner (2006) have shown, the derivation of *s*-stem compounds from intransitive verbs was highly productive in Greek.³⁰⁶ In such derivations, the second member of the *s*-stem compound naturally took the vocalism of the synchronic verbal stem: thus, αἰνοπαθής was derived from the aor. παθεῖν ‘to suffer, experience’. This is also the origin of forms with zero grade vocalism in the simplex: πάθος ‘experience’ came to be viewed as the regular neuter abstract formation beside παθεῖν ‘to experience’ and compounds like αἰνοπαθής. There is no reason, then, to assume root ablaut in the second member of *s*-stem compounds. In general, the derivational relation between *s*-stem neuters and adjectives has been overestimated in the evaluation of these Greek formations: a large number of *s*-stem adjectives derives from an intransitive verb.

4.2 Analogical restoration and replacement

Having reviewed the expected ablaut grades of the various Caland formations, we may now embark on a more detailed discussion of those forms that are of interest in the framework 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 how the *a*-vocalism of the root spread through the entire Caland system (section 4.2.1), discuss examples of the general tendency in Homer to avoid and replace *u*-stem adjectives (section 4.2.2), and discuss the origin of denominative verbs of the types θαρσύνω and θαρσέω (section 4.2.3).

4.2.1 The spread of *a*-vocalism across Caland formations

As we have seen, not every form with -αρ- or -πα- can be used as evidence for the outcome of **r*, because many of them contain a generalized *a*-vowel. The question to be answered in this section is from which form the *a*-vocalism started to proliferate in Ionic-Attic. Two important examples are κρέτος (Alc.), which was replaced by κράτος (Hom.+), and θέρσος (Alc. fr. 206.2), which was replaced by θάρσος (Hom.+) in the same way. The same replacement occurred in other derivations of these roots, such as the *s*-stem compounds and the stative verbs that derived from them (Tucker 1990: 54):

names in -κρέτης (Aeol., Arc.-Cypr.)	→ Ionic -κράτης, appellatives in -κρατής
names in -θέρσης (Hom.)	→ appellatives in -θαρσής (Hom.+)
κρέτησαι (Sapph. 20.5, Alc. 351)	→ κρατέω (Hom.+), ἐκράτησα (Class.)
θήρσεισ’ (Theoc. 28.3)	→ θαρσέω, θάρσησα (Hom.+).

³⁰⁵ Beside the *s*-stem νέφος ‘cloud’ (OCS *nebo*, Hitt. *nēpiš*, Ved. *nábhas-*), forms like Ved. *ám̐bhas* ‘water’, Arm. *amb* ‘cloud’ have been interpreted as the outcome of a zero grade root **nb^h-* with a re-introduced nasal. However, since an ablauting root existed in PIE (cf. Ved. *abhrá-* ‘(thunder-)cloud’, Av. *aβra-* ‘rain-cloud’ < **nb^h-ró-*, Lat. *imber* ‘rain (shower)’ < **nb^h-ri-*), it is hard to prove that the root ablaut was originally found specifically in the *s*-stem paradigm.

³⁰⁶ In fact, the derivation of *s*-stem compounds from intransitive verbal roots may have been regular already in PIE, cf. Rau (2009: 146-60).

Meissner (2006: 71) comments on this replacement as follows: “... 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 generalized (in the positive) the zero grade. These adjectives can be conceived as the more ‘basic’ form and it is easy to accept Risch’s suggestion³⁰⁷ 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.”

It is generally agreed that the root vocalism of *s*-stem neuters must have been influenced by that of *u*-stem adjectives. Not only may the adjectives be considered as more basic than adjectival abstract nouns, it also seems difficult to indicate another source of the *a*-vocalism in most cases.³⁰⁸ Meissner observes that πένθος could be preserved in Homer (and even later) because it was not accompanied by an adjective. It was eventually replaced by πάθος, but first after Homer, and only under the influence of the aorist stem παθε/o-. From this fact, he concludes: “The old suggestion that πάθος owes its existence to an ablauting paradigm *πένθος, gen. *πῆθέσος is hardly tenable.” (2006: 72). Another crucial example is κερδαλέος ‘wily’, κερδίων, κέρδιστος, where the *u*-stem adjective was eliminated so early from Proto-Ionic that it could not influence the root vocalism of the other forms anymore. The (presumably older) *u*-stem adjective is only preserved in the gloss κορδύς (Hsch.), of non-Ionic origin.

Which forms were the first to be conquered by the zero grade of the *u*-stem adjective? In my view, other adjectival forms must have been the first victims. A pair like βαθύς : βάθιστος is illustrative. While the pre-form *βένθιστος of the superlative has apparently been replaced already in Homer, the neuter βένθος was preserved. This may be due to its occurrence in formulaic material (e.g. |_B βένθεσι λίμνης, see Meissner 2006: 65-6). The neuter βάθος is first encountered after Homer. Not only the primary forms of comparison, but also a number of adjectives in -αλέος must have acquired the vocalism of the *u*-stem adjective early on: see section 4.2.2 below on θαρσαλέος, ἀρπαλέος, and similar forms.

The replacement in *s*-stems neuters like κράτος may have been preceded by the same replacement in the *s*-stem adjective (-κρατής). Such compounds may have been influenced by the *u*-stem adjective on the model of existing pairs like βαρύς : οἶνο-βαρής and ὤκυς : ποδ-ώκης. The *s*-stem simplex was replaced only as a second step. Indeed, *s*-stem compounds are attested in all four cases where an *s*-stem simplex is also affected by the replacement:³⁰⁹

πλατύς	-πλατής	πλάτος
κρατύς	-κρατής	κράτος
(θαρσαλέος)	-θαρσής	θάρσος
(ταρβαλέος)	-ταρβής	τάρβος

³⁰⁷ In fact, Risch did not conclude, as Meissner formulates it, “that the full grade was eliminated in favour of the zero grade under the pressure of the adjectives”. He merely gives a list (1974: 78-9) of generalized ablaut grades in Caland forms, irrespective of whether the old full grade or zero grade has been generalized.

³⁰⁸ The adverb in -α may have played a role in μάλα : μᾶλλον : μάλιστα, but the case is isolated because we only have adverbial forms here (see section 4.1.5).

³⁰⁹ On the possibility that θαρσαλέος replaced *θαρσύς, and on its opposite ταρβαλέος (for *ταρβύς), see later in this section. The form θρασύς ‘bold’ no longer belonged to the paradigm of θαρσ- ‘to persevere, be confident or courageous’, and therefore cannot be the source of the *a*-vocalism in forms like θαρσέω. See section 4.5.

A fifth case of *a*-replacement is thought to be θάμβος, -θαμβής (Tucker 1990, Barton 1993), but it is not certain that this root ever had forms with *e*-vocalism.³¹⁰

The inclusion of ταρβ- in this list requires some comments. The forms τάρβος ‘fear, fright’, ἀταρβής ‘fearless’, and ταρβέω ‘to fear’ are best derived from the PIE verbal root **terg^w*-. epic Skt. *tarjati* ‘to threaten’ (active morphology, hence causative semantics), Lat. *torvus* ‘grim’, and perhaps Hitt. *tarkuuant-* ‘looking angrily’.³¹¹ Beekes (*EDG* s.v. ταρβέω) objects to the etymology that “it is difficult to explain the element ταρβ- from the proposed IE forms, as a zero grade would give *τραβ-.” But as Tucker remarks (1990: 42-3), τάρβος may be a remodeling of *τέρβος, and the vocalism of the derivatives is identical to that of the *s*-stem.³¹² But why was the *a*-vocalism introduced? Following Meissner’s hypothesis that the original locus for the spread of *a*-vocalism was the *u*-stem adjective, it may be deduced that beside ἀταρβής ‘fearless’ there was a positive **terg^w-u-*, **trg^w-ew-* that had already been eliminated before our earliest Greek texts. The outcome of such a paradigm would have been a form *ταρβύς with generalized *a*-vocalism. In fact, an adjective ταρβαλέος is attested in the Homeric hymn to Hermes (*h. Herm.* 165) and in Sophocles (*Tr.* 957). It is quite possible that this form is secondary after θαρσαλέος, its opposite. Whether ταρβαλέος was an entirely novel creation or not is difficult to say; it seems more likely that it replaced an older form *ταρβύς, because that form would be the most straightforward source of the *a*-vocalism in τάρβος, ἀταρβής.³¹³

The *s*-stem forms in the above scheme cannot be used as evidence for the regular development of the syllabic liquids. The same goes for the stative verbs, which were regularly derived from *s*-stem adjectives (Tucker 1990, esp. pp. 57-63). Before treating the evidence for the *u*-stem adjectives, let us first discuss two categories of thematic stems by which they were replaced: adjectives in -ερός and in -αλέος. Once we will have established the derivational

³¹⁰ Tucker (1990: 42-3) proposes to derive θαμβέω, θαμβῆσαι ‘to be struck with amazement’ from an *s*-stem noun or adjective. She does so on the basis of the root vocalism of θαμβ-, which cannot represent the development of a syllabic nasal (assumed for the aor. ptc. ταφών ‘astonished’), but in her view must be analogical for *θεμβ-. A problem with θαμβέω, θαμβῆσαι is that its etymology is uncertain. Szemerényi (1954) argued that the entire group of θαμβέω, ταφών, τέθηπα ‘to be stupefied’ should be compared with PGm. **dumba-* (Goth. *dumbs* ‘mute’). Later discussions (Barton 1993, Hackstein 2002: 237-8) have tried to explain the difference between θαμβ- (with internal nasal) and θηπ- (with long vowel), but they are based on the assumption that Szemerényi’s etymology is correct. This is improbable, because it requires that Greek -μβ- derives from PIE **-mb^h*-. This is hardly possible in view of ὀμφαλός ‘navel, centre, hub’ < PIE **h₃nb^h-l-ó-*. The inclusion of τέθηπα would further require the operation of “Reverse Grassmann’s Law”, which is a highly doubtful concept. Beekes (*EDG* s.v.) convincingly argues that θαμβ-, ταφ- and θηπ- can be understood in the framework of Pre-Greek: interchanges between stops and prenasalization are common characteristics of substrate words. For these reasons, I would not base any theory about the derivational history of statives in -έω on θαμβέω, θαμβῆσαι.

³¹¹ Hitt. *tarkuuant-* may alternatively be derived from **drk^w-uent-*, cf. Hom. ὑπόδρα. The comparison of Middle Welsh *tarfu* ‘to disturb, trouble, scare’ with ταρβ- is not without problems either (cf. Matasović, *EDPC* q.v.).

³¹² According to Stüber (2002: 47-8), it is possible that “ταρβέω auf einen Essiv zu dieser Wurzel zurückgeht, und der Aorist τάρβησεν entsprechend auf einen Fientiv, oder dass zumindest eine dieser Bildungen ererbt ist, die andere dazu neu gebildet. Andererseits ist auch nicht auszuschliessen, dass τάρβος primär ist, und dass das Verbum vom Hinterglied °ταρβής abgeleitet ist (so LIV² 632, Anm. 1). Für die erste Lösung spricht allerdings der Wurzelablaut aller dieser Formen, da Nullstufe für Fientiv und Essiv regulär ist, nicht hingegen für *s*-Stämme.” In other words, if we assume (with the LIV²) only a primary *s*-stem neuter, we cannot account for the generalized zero grade reflex -αρ-. On the other hand, as appears from Tucker’s discussion (1990), there is hardly any evidence for inherited -ησ- formations in Greek. Even if the suffix may have been inherited (cf. Hitt. -ēšš-), most stative verbs in -ησ- have been formed beside *s*-stem compounds, following a process that became productive within Greek. Neither the discussion in the LIV² nor Stüber reckons with the possibility, suggested by Tucker, that τάρβος replaces an older form *τέρβος, just like κράτος for κρέτος, after an older positive adjective.

³¹³ It would perhaps be possible to argue that ταρβέω ‘to fear’ replaced older *τερβέω, with the *a*-vocalism of its opposite θαρσέω ‘to persevere, be courageous’. On ταρβαλέος, cf. *DELG* (s.v. ταρβέω): “la forme pourrait être ancienne”.

prehistory of these forms, we will be in a better position to judge their pertinence for the vocalization of **r̥*.

4.2.2 The avoidance and replacement of *u*-stem adjectives in Homer

The *u*-stem adjectives are unproductive in general in Alphabetic Greek, and even seem to be a recessive category in Homeric Greek. For instance, the inherited form βραχύς ‘short’ is unattested in Homer, who uses e.g. μικρός and ὀλίγος instead. In place of an expected *u*-stem adjective, we often find adjectives in -ερός in forms with a light root syllable, and adjectives in -αλέος in forms with a heavy root syllable. Most of the replacements by -ερό- and -αλέος are found only in Epic Greek or as incidental epicisms in Classical poetry, and did not take place in the Ionic-Attic vernacular. This suggests that the main motivation behind the concrete replacements was metrical. Another reason for the decline of the *u*-stem adjectives may have been their merger, in a number of case forms, with the *s*-stem neuters after the loss of intervocalic digamma. This could explain why only a relatively small number of them were preserved in spoken Classical Greek.³¹⁴

Starting with the adjectives in -ερό-, the most frequent token is καρτερός, κρατερός ‘vehement, steadfast, etc.’ beside the relic form κρατύς. Somewhat less frequent are γλυκύς ‘sweet, pleasant’ and its by-form γλυκερός.³¹⁵ It is not difficult to deduce the original distribution of the latter pair from the Epic Greek evidence. Of the positive γλυκύς, only forms of the strong stem are found in Homer: Ns. msc. γλυκύς, As. γλυκύν, and NAs. ntr. γλυκύ.³¹⁶ In Classical prose there is no trace of γλυκερός; the only current form is γλυκύς. Since the poetic variant γλυκερός is only found in dactylic and anapestic metres, its origin must be sought within Epic Greek. There, the creation of γλυκερός was favored by metrical considerations. The feminine forms of γλυκύς, and also the oblique forms of the masculine and neuter, are not attested in Homer. This is clearly related to the avoidance of *muta cum liquida* scansion (see section 6.5), which would have to be applied in order to fit γλυκεῖα into the hexameter. The feminine forms were therefore supplied from a newly created stem γλυκερός, which was analogical after the inherited pair κρατερός : κρατύς.³¹⁷ The productive artificial form γλυκερός could then also be used in forms of the masculine and neuter.

As will become clear in section 5.3.2, it is unnecessary to assume two different Caland suffixes -ρό- and -ερό-, because the latter may have originated in the outcome of **k̑rth₁-ró-* and subsequently been reinterpreted as an independent suffix. The regular outcome of **k̑rth₁-ró-* is καρτερός, whereas κρατερός must have introduced an analogical zero grade. The point of departure for the subsequent extension of adjectives in -ερός in Homer must have been precisely the pair κρατερός : κρατύς. Beside γλυκύς : γλυκερός, it also induced the creation of θαλερός ‘abundant’ beside the relic *u*-stem form θάλεια. In other words, θαλερός was probably an inner-Epic analogical creation and cannot be directly equated with Arm. *dalar* ‘green, fresh’.³¹⁸ On the other hand, τραφερός ‘thick, solid’ was not created beside the adjective ταρφός (which has a different vowel slot), but is better derived from *s*-stem

³¹⁴ In the Classical Attic vernacular, only the following 14 *u*-stem adjectives remain current: βαθύς, βαρύς, βραδύς, βραχύς, δασύς, δριμύς, εὐρύς, εὐθύς, θρασύς, παχύς, πλατύς, πραῖς, ταχύς, τραχύς.

³¹⁵ As de Lamberterie (1990: 470) shows, it is doubtful that there was a semantic difference between γλυκύς and γλυκερός.

³¹⁶ A comparative γλυκίων is also found (5x Hom.), but it must be a recent creation (note the zero grade root together with the unexpected Sievers reflex). The outcome of the expected form **gleuk̑ioh-* would be metrically awkward in Homer, because it could only be used in verse-initial position in view of the various caesuras and bridges.

³¹⁷ See chapter 5 for the etymology and reconstruction of κρατερός.

³¹⁸ The often-assumed direct correspondence between θαλερός and Arm. *dalar* is rightly criticized by Clackson (1994: 118-20), the main objection being that *dalar* cannot be derived from a form with **-ero-*.

compounds in -τρεφής (see below). Finally, it seems possible that μαλερός ‘vehement’ (Hom.+) was created as an adjective corresponding to the adverb μάλα, μᾶλλον, μάλιστα.³¹⁹

Let us now consider the replacement of *u*-stem adjectives by forms in -αλέος. It is generally accepted that adjectives in -αλέος could be synchronically created beside *s*-stem substantives.³²⁰ In Homer, we find examples like κέρδος ‘ruse, profit’ beside κερδαλέος ‘wily’, κάρφος ‘drought’ beside καρφαλέος ‘dry’. Although the ultimate derivational origin and the precise reconstruction of -αλέος remain obscure, it may be suspected that the oldest instances of the suffix are κερδαλέος and θαρσαλέος, because only these forms are normal in Classical prose.³²¹ Synchronically, a number of Homeric adjectives in -αλέος have taken the place of *u*-stem adjectives that would be expected on various grounds.³²² For instance, a reflexes *καρδύς is lacking in Early Greek Epic, but the gloss κορδύς (Hsch.), clearly of non-Ionic origin, suggests that this formation existed in an earlier phase of Greek.³²³

As with -ερό-, the reason for the proliferation of -αλέος in Epic Greek must have been its metrical convenience. Consider the case of θαρσαλέος ‘confident’ (16x Hom., also found in Classical Greek). In Homer, it appears beside the *u*-stem adjective θρασύς ‘bold’, but there are several reasons to suspect that an older form *θαρσύς once existed.³²⁴ Like γλυκερός, the form θαρσαλέος comes in extremely handy in the composition of Epic verse, because it consists of a dactylic sequence followed by a (potentially) heavy syllable. Since Epic poets frequently resorted to transformations of phraseological material, it was convenient if a certain adjective could be maintained in the same slot when it had to modify a noun with a different gender. This property is shared by all thematic formations, including the adjectives in -αλέος. The preserved suffixal ablaut of the *u*-stem adjectives, on the other hand, could be highly inconvenient: the masculine (neuter) and feminine have a different metrical structure in every single case form. To be sure, some Homeric *u*-stem adjectives with a heavy root syllable are very numerous as tokens, e.g. ὀξύς ‘sharp’ (144x) and ὠκύς ‘fast’ (122x). However, their distribution has some remarkable features, and they may be considered

³¹⁹ Since it is difficult to derive μαλερός from a PIE pre-form (**mlh₁-ró-* would yield ⁺⁺*mlēró-*, and a suffix -*eró-* cannot be assumed for the proto-language), a different scenario may be considered: perhaps, the pre-form **k₁ta* of the adverb κάρτα served as a model. A simple analogy with **k₁ta* : **k₁teró-* may have led to the creation of **maleró-* beside *mála*. Note that μάλα and κάρτα both mean ‘very, heavily’. See section 5.2.8.

³²⁰ E.g. Tucker: “their vocalism or phonological shape suggests that they were created on the basis of *s*-stem nouns” (1990: 55-6). Rau observes that this process “generally results from the derivational association of morphologically unrelated formations” (2009: 128 n. 9). A number of adjectives in -αλέος have not been built on *s*-stems, but acquired the suffix by association with semantically close forms with -αλέος, such as ἄσταλέος, ἄζαλέος (both ‘dry’, after καρφαλέος), μυδαλέος (‘moist’, the opposite of the former). Further, ὀπταλέος and λεπταλέος are clearly secondarily derived from *to*-stems, like ἄσταλέος.

³²¹ Another old form could be σμερδαλέος ‘terrible, sharp’ (of auditive and visual impressions). I would tentatively suggest to derive this from the root *(*h₂*)*merd-* ‘to bite, sting’ (Lat. *mordeō*), especially given the fact that this root seems to have been used to denote sharp, biting odours (Lat. *merda* ‘shit’, Lith. *smirdėti* ‘to stink’). If Greek ἀμέρδω ‘to deprive of eyesight’ is related, the same root was also used for sharp visual impressions. In σμερδαλέος, however, the retention of word-initial **sm-* remains problematic.

³²² It is possible that the forms in -αλέος could also once be derived from *u*-stem adjectives. But given the absence of a clear etymology for this suffix, this must remain mere speculation.

³²³ All forms of the Caland system κέρδος ‘ruse, profit’, νηκερδής, κερδαλέος ‘artful’, κερδίων ‘better, more useful’, κέρδιστος are attested in Homer (κέρδιστος only at *Il.* 6.153). The preservation of the *e*-grade throughout the Caland system must be related to the absence of an inherited *u*-stem adjective. That such a form once existed is suggested by the gloss κορδύς· πανούργος ‘criminal’ (Hsch.), as first argued by R. Schmitt, and followed by de Lamberterie (1990: 867ff.). Given its *o*-reflex, the form may belong to an Aeolic or Arcado-Cyprian dialect. The corresponding Ionic form did not exist anymore when κερδαλέος was created, or otherwise its *a*-vocalism would have spread to the other Caland forms. It seems, then, that κερδαλέος is one of the oldest instances of the suffix, and that it was created beside a form with *e*-vocalism itself: either the *s*-stem neuter, or the compounds in -κερδής.

³²⁴ See section 4.5.

preserved archaisms in view of their frequent occurrence in formulaic cola.³²⁵ This motivates why *θαρσαλέος* ousted **θαρσύς*, which as we will see is the expected form of the inherited *u*-stem adjective.

On the model of *θαρσαλέος* beside *θάρσος* and related Caland forms, other adjectives in *-αλέος* could be created and enter the competition with existing *u*-stem adjectives, or supply a new adjective beside Caland forms which had no old positive. We have already encountered *ταρβαλέος* ‘fearful’ (only post-Hom.), which stands beside the Tucker-stative *ταρβέω* and the *s*-stems *τάρβος* and *-ταρβής* (all Hom.+). Since the etymology predicts an *e*-grade in these formations (PIE **terg^w-*), their *a*-vocalism must have been imported. A *u*-stem adjective would be the obvious candidate, and *ταρβαλέος* may have replaced such an adjective.³²⁶

As a second example, it is commonly accepted that *ἀρπαλέος* ‘with pleasure, eager’ (3x Hom.) derives from **walpaleo-* by liquid dissimilation, and contains the root PGr. **welp-* (*ἐλπομαι* ‘to hope, expect, look forward to’).³²⁷ Since this word does not show the expected zero grade reflex *-λα-* < **l*, and since the general *a*-vocalism of the root has to be explained, we may assume that *ἀρπαλέος* replaces an earlier *u*-stem adjective **walpu-*, from **welp-u-*, **wl̥p-ew-*. This explains how the root **walp-* could come into being in the positive. Subsequently, **walp-* could also spread to the superlative *ἄλπιστος* (attested in A., Pi.).³²⁸

A final and more complicated example is *ἀργαλέος* ‘grievous, painful’. Beside the comparative *ἄλγιον* (adv.) and the superlative *ἄλγιστος* ‘most grievous’, two different positives are found in Homer: *ἀλεγεινός* ‘grievous, causing distress’ (Hom., further only 1x Hes., 1x Pi.) and *ἀργαλέος* ‘painful’ < **alg-aléo-* (Hom., very frequent). The zero grade is further found in *ἄλγος* ‘suffering’ (mostly plur. *ἄλγεα*), *θυμαλγής* ‘causing pain to the heart’, and the stative verb *ἀλγέω* (Hom. only aor. *ἄλγησε*) ‘to suffer pains’.³²⁹ Except in *ἀλεγεινός* and the compound *δυσηλεγής* ‘bringing sharp grief’, the zero grade *ἀλγ-* has been generalized everywhere.³³⁰

The expected full grade of the root was further preserved, in Homeric Greek, in the *s*-stem compound *ἀπ-ηλεγέως* ‘ruthlessly’ < “without taking care”. It is also attested in the verbs *ἀλεγύνω* ‘to take care of, attend (a meal)’, and in *ἀλέγω*, *-ίζω* ‘to care, worry about’.³³¹ This is a clear instance of a semantic differentiation promoted by a formal difference. The connection between this system of forms and *ἀλέγω* is occasionally doubted (e.g. by *EDG* and *DELG* s.v. *ἄλγος*),³³² but in my view it is proven by the existence of *ἀλεγεινός* ‘grievous’,

³²⁵ Since the first syllable of *ὀξύς* and *ὠκύς* is hardly ever placed in the biceps, these two forms are mostly found after the bucolic diaeresis. Moreover, the feminine of *ὀξύς* (and, to a somewhat lesser degree, *ὠκύς*) is heavily underrepresented. This can be connected to their formulaic behavior: for *ὀξύς*, cf. the cola *ὀξὺν Ἄρηα, ὀξὺν ἄκοντα, ξίφος ὀξύ, φάσγανον ὀξύ, ὀξεῖ δουρί, ὀξεῖ χαλκῷ*, all of which belong to traditional war epic.

³²⁶ The adverb *ὀτραλέως* ‘quickly’ (post-Hom. also adj. in *-αλέος*) may have been formed beside *ὀτρύνω* ‘to spur on’ after the semantically close model of *θαρσαλέος* : *θαρσύνω*. Note that *ὀτρύνω* has no convincing etymology (criticism of the traditional comparison with Skt. *tvarate* and OHG *dweran* in Beekes, *EDG* s.v. *ὀτραλέως*).

³²⁷ The forms and their etymology are discussed in section 10.2.

³²⁸ Another thematic form of the positive is the hapax *ἐπαλπιος* (Pi.), which may be analogical after *σμερδνός* beside *σμερδαλέος*.

³²⁹ From Aeschylus onwards, we find a new denom. verb *ἀλγύνω* ‘to cause suffering’, formed beside *ἄλγος*.

³³⁰ Perhaps *τανηλεγέος θανάτοιο* ‘death bringing long grief(?)’ also belongs here, but the meaning is not entirely clear and some previous scholars have read *τ’ ἀνηλεγέος θανάτοιο*.

³³¹ Mostly with negation: ‘to neglect’, cf. also (οὐκ) *ἀλεγίζω* ‘id.’.

³³² Chantraine (*DELG* s.v. *ἄλγος*) prudently formulates: “il faut alors admettre que la notion de ‘tenir compte, se soucier de’ a pu aboutir à celle de souffrir par un développement imprévu (euphémisme?)”. But in fact, there are good parallels for this semantic development, such as G. *Sorge*, Du. *zorg*, meaning both ‘care’ and ‘worry’, beside MoE. *sorrow* (cf. Beekes *EDG* s.v. *ἄλγος*). Against Seiler’s (1950: 85) comparison of *ἄλγος* with Lat. *algeō*, *algidus* ‘cold, freezing’, Chantraine remarks that a semantic development ‘cold’ > ‘pain’ is much less likely than that to ‘fright’. The derivation of *ἀλέγω* ‘to care about’ from *λέγω* ‘to gather, count’ with copulative *ἀ-*, which would be the consequence of separating *ἀλέγω* from *ἄλγος*, has recently been defended again by de

which constitutes a semantic bridge between the formal variants ἄλεγ- (otherwise only ‘care about’) and ἄλγ- (otherwise only ‘suffer’).³³³ In Attic, ἀλεγεινός was replaced by ἄλγεινός (mostly poetic, but also in Th., X., Pl.) by a simple levelling of the root allomorph.

If the original root ablaut was ἄλεγ- / ἄλγ-, it is necessary to ask on what basis expected full grade forms like *ἄλέγιστος were eliminated. Since we also find ὀλίγιστος ‘least’ in Homer, the metrical structure of the root is not a sufficient reason. From a semantic point of view, the grades of comparison ἄλγιον, ἄλγιστος can be paired with the s-stem neuter ἄλγος and the Homeric compound θυμαλγής. It is unlikely that the zero grade originated in the s-stem forms or in the grades of comparison (cf. section 4.1 above).³³⁴ Indeed, ἀργαλέος has the zero grade, but if this form was derived from an s-stem form, the question remains whence the s-stem forms obtained their zero grade root.

The absence of an inherited *u*-stem adjective of this root is not a coincidence. In Homer we only find the secondary positives ἀλεγεινός < *aleges-nó- and ἀργαλέος < *alg-aléo-. Both mean ‘grievous, painful’, but only the latter was productive in Classical poetry. Since compounds in -ής do not only pair with s-stem simplexes, but also with *u*-stem adjectives, it is attractive to think that a *u*-stem adjective existed as a positive beside the primary grades of comparison and the Caland forms in -ηλεγής.³³⁵ With root ablaut, the original paradigm would have been Ns. *alégus, Gs. *algéwos. After it regularized its weak stem, the ensuing *algús was replaced by the metrically convenient form in -αλέος. The existence of an earlier non-ablauting *algús could also be supported by the compound θυμαλγής, which may have been created on its basis.

Further remains of the synchronically missing *u*-stem adjective may be found in the neuter plural ἄλγεα ‘pains, grievous experiences’, which may originally be the substantivization of a collective “worrying things”. For such a substantivization, we may compare Meissner’s analysis of Dp. τάρφεισι ‘in the thicket’ and Np. βράχεα ‘shallows’ as substantivizations of *u*-stem adjectives (Meissner 2006: 108-12, see section 4.3 below on τάρφεισι). Indeed, the most frequent forms of ἄλγος in Homer are the NAp. ἄλγεα (68x) and Dp. ἄλγεσι (11x). Moreover, all formulae with ἄλγος contain one of these forms; the NAs. ἄλγος has no formulaic attestations at all, and occurs a mere 13x. Since ἄλγεα and ἄλγεσι would also be the regular *u*-stem forms, I suggest that the singular ἄλγος was backformed on the model of κῆδος : κήδεα, posterior to the loss of intervocalic digamma. The formula |_B κῆδος ἰκάνει (3x *Il.*, beside only one other instance of the Ns. κῆδος in the *Od.*) may have formed the basis for |_B ἄλγος ἰκάνει (1x *Il.* 1x *Od.*, beside 10x non-formulaic ἄλγος), especially given the existence of verse-final κήδε’ ἔθηκεν, κήδεα τεῦχεν, κήδεα λυγρά (beside ἄλγε’ ἔθηκεν, etc.).³³⁶

In conclusion, the generalization of the root shape ἄλγ- for expected *ἄλεγ- in the grades of comparison ἄλγιον, ἄλγιστος and the s-stem adjective θυμαλγής strongly suggests

Lamberterie (see *DELG*, Supp. s.v. ἀλέγω). It seems doubtful to me, however, that there ever was a verbal prefix ἄ- < *sm- in the prehistory of Greek. For this reason, the derivation of both ἀλέγω and ἄλγος from a root *h₂leg- seems preferable.

³³³ Cf. *DELG* s.v. ἄλγος: “cette étymologie ... rend compte de la forme ἀλεγεινός”.

³³⁴ Since there are otherwise no clear traces of root ablaut in primary Greek s-stem nouns, I reject the assumption of a paradigm *h₂leg-(o)s, *h₂lg-es-(o)s, in the spirit of Schindler (1975), of which ἄλγος would continue the old weak stem.

³³⁵ A concise discussion of the relation between ποδώκης and ὠκύς is given by Meissner (2006: 182-86). It is quite possible that ποδώκης is an artificial nominative beside the Gs. ποδώκεος for older *ποδ’ ὠκέος. He concludes that the “denominal (or more precisely non-deverbative) Greek compounds in -ης are (...) not derived from adjectives in -υς. They are entirely dependent, semantically and morphologically, on neuter nouns in -ος.” (o.c. 186). But in the present case, we may be dealing with original *deverbative* adjectives (cf. ἀλέγω).

³³⁶ It is interesting that the root ἄλγ- occurs only once in the extant works and fragments of Pindar (in the form ἄλγος), whereas it is highly frequent in the tragedians. If the latter group of authors is Homerizing in this case, the absence of ἄλγ- form Pindar may suggest that the neuter s-stem ἄλγος is an artificial creation of Epic Greek.

that a positive of the adjective with the root ἄλγ- once existed. The root shape of this positive could influence that of the other Caland forms. The source of ἄλγ- must have been the *u*-stem formation **algu-*, **algew-* ‘painful’ whence **alg-aléo-* could be created. The *u*-stem was later reanalyzed as an *s*-stem neuter ἄλγεα, with collective meaning ‘pains, sufferings’, after which a new singular ἄλγος was created. This analysis of ἄλγεα as a secondary *s*-stem is supported by Meissner’s analysis of τάρφεισι and βράχαι. It allows us to explain why ἄλγος has a zero grade root, and why its singular is rare.³³⁷

Although the exact morphological origin of the adjectives in -αλέος is unknown, at least some of the forms θαρσαλέος, ταρβαλέος, ἀρπαλέος, and ἀργαλέος may have replaced now-lost *u*-stem formations in the way just described.³³⁸ Most formations in -αλέος may be comparatively recent creations of Epic Greek, but κερδαλέος and θαρσαλέος also occur in prose. A final remark about the derivation of -αλέος. The compounded *s*-stem adjectives played a central role in Homeric derivational morphology. As Tucker (1990) has convincingly shown, the Homeric stative verbs in -έω were more often derived from *s*-stem compounds than from *s*-stem neuters. For this reason, one may wonder whether adjectives in -αλέος could be derived from the compounded counterparts of *u*-stem adjectives, the *s*-stem adjectives. This would work well for the compounds in -κερδής, -ταρβής and -θαρσής (all attested in Homer beside a formation in -αλέος). Moreover, an *s*-stem ἀελπής is attested in the *Od.* beside the intransitive verb ἔλπομαι, ἔολπα, whereas an *s*-stem neuter of this root is unattested. This would explain the creation of **welpaléo-*, subsequently replaced by **walpaléo-* after **walpu-*. Finally, the compounding second member -πενκής could explain the full grade root of the adjectives πενκάλιμος, πενκεδανός (see Risch 1974: 105 and 106), and a second member *-λευγής could explain λευγαλέος beside other forms with zero grade root (e.g. λυγρός ‘miserable’).

In all these cases, the full grade roots were not influenced by a positive with zero grade root, because the metrical utility of the forms depended on their heavy root syllable. The only problematic case for this proposal is ἀργαλέος beside -αλγής, where the compound originally had -ηλεγής and is preserved as such in Homer. Thus, although adjectives in -αλέος are productive beside *s*-stem neuters already in Homer (cf. κάρφος beside καρφαλέος), it is possible that they were productive only beside compounded *s*-stem adjectives at an earlier stage.

4.2.3 Derivational history of the factitives in -ύνω

Homer has a remarkable asymmetry between κρατέω ‘to be impetuous, have κράτος’ (with the vocalism of κράτος, -κρατής) and καρτύνω ‘to provide with κράτος’. The Ionic vernacular does not have the same asymmetry, because it simply uses κρατύνω as a factitive verb. In Homeric καρτύνω, -αρ- is obviously metrically convenient, but this would not have been a sufficient motivation to create the form, as the following argument shows.

The aorist (ἐ)κράτησα ‘obtained power, was victorious’ is entirely absent from Homer. Since it was frequent in later poetry (e.g. in Pindar), and since the other members of the small group of stative verbs are frequent in the aorist, (ἐ)κράτησα must have been avoided for metrical reasons. A replacement with unaugmented ⁺⁺κάρτησα could have been metrically useful, but this was apparently not a viable option. In order to see why, we have to inquire into the possible models for an analogical creation of ⁺⁺κάρτησα. If κρατέω was derived from the *s*-stem neuter κράτος, one would expect to encounter ⁺⁺ἐκάρτησα in Homer, because

³³⁷ If the only forms to be preserved of the *u*-stem adjective were substantivized neuter plurals, it can be assumed that the substantivization took place before the levelling of root ablaut in the adjective.

³³⁸ The two formations are commonly assumed to have remained in competition in θρασύς : θαρσαλέος. But this is doubtful, because their lexical meaning was different already in Homer, and because θαρσαλέος probably ousted an earlier **θαρσύς* (see further section 4.5).

κάρτος does exist as an artificial by-form of κράτος. On the other hand, the absence of ⁺⁺κάρτησα would make excellent sense if this stative verb was derived not from the *s*-stem abstract κάρτος, but from the *s*-stem adjectives in -κρατής, as proposed by Tucker (1990). Since there are no compounds in -καρτής, the form ⁺⁺κάρτησα could not be created.³³⁹

We will encounter many other cases where metrical convenience was not a sufficient reason for replacing -ρα- with -αρ-. For this reason, it can be excluded that καρτύνω was created by a simple reshuffling of the vernacular form κρατύνω.³⁴⁰ In my view, we need a real analogical model to explain the alternation, or else the concrete Homeric distributions are left unexplained. So: what was the derivational base form of καρτύνω?

In her 1981 article, Tucker has summarized her views on the spread of the Greek factitive verbs in -όω, -ύνω, and -αίνω.³⁴¹ Among the verbs in -ύνω, there are three types, distinguished according to their base form: (1) factitives based on *u*-stem adjectives (βαρύς ‘heavy’ → Hom. βαρύνω ‘to weigh down on’), (2) factitives based on *s*-stem nouns (μῆκος ‘length, extension’ → Att. μηκύνω ‘to lengthen’), and (3) factitives based on *o*-stem adjectives (λεπτός ‘thin, delicate’ → Att. λεπτύνω ‘to make thin’). As the chronology of the attestations shows, the -ύνω factitives originated beside *u*-stem adjectives (apart from βαρύνω, e.g. Hom. βαθύνω, ιθύνω). By comparing deadjectival verbs in -ύω, which were also derived from *u*-stem adjectives but do not have factitive meaning (cf. ιθύω ‘to go straight’ as opposed to ιθύνω ‘to direct’), Tucker concludes “that it is the nasal morph which confers the factitive value” (1981: 23). Types (2) and (3) are generally considered to be later derivational patterns.

In the published version of her dissertation, Tucker (1990) argues that the pairing of factitives in -ύνω and *s*-stem neuters, which becomes productive in Attic, may have started already in Homer. She remarks (p. 47) that there are “two -ύνω verbs for which the only clear connection is with *s*-stem nominal forms”: ἐντύνω beside τὰ ἔντεα, and ἀλεγύνω beside ἀλεγεινός, δυσ-ηλεγής. In this connection, she points at θαρσύνω and καρτύνω as further possible examples of derivations from *s*-stems. The Homeric adjectives θαρσύς and κρατύς have a different vowel slot in comparison with θαρσύνω and καρτύνω, while the correct vowel slot is found in the corresponding *s*-stem neuters θάρσος and κάρτος. If it is possible to derive θαρσύνω and καρτύνω from the *s*-stem neuters, the distribution of -ρα- and -αρ- over the attested forms would make sense.³⁴²

Although this is definitely an improvement over the view that the interchange between -ρα- and -αρ- is metrically conditioned, there are severe problems with Tucker’s suggestion. First of all, the evidence for a pairing between verbs in -ύνω and *s*-stem neuters already in Homer is hardly probative. On a synchronic level, ἐντύνω beside τὰ ἔντεα cannot be reanalyzed as a derivational relation, because τὰ ἔντεα had specialized to a concrete meaning ‘gear, tools, weapons’, whereas ἐντύνω means ‘to prepare’.³⁴³ Further, ἀλεγύνω ‘to prepare a meal’ cannot count as evidence either, because ἀλεγεινός, δυσ-ηλεγής have a markedly different meaning ‘painful, grievous’. Instead, ἀλεγύνω may be a cross between ἀλέγω ‘take care of, worry about’ and ἐντύνω, ἀρτύνω ‘to prepare (a meal)’ (cf. Chantraine’s judgment “après ἐντύνω”, *DELG* s.v. ἀλέγω).

³³⁹ To make things even worse, a form like κραταιός was not avoided, nor reshaped to ⁺⁺καρταιός, but simply tolerated together with its aberrant scansion. An explanation for these distributions is given in chapter 6.

³⁴⁰ This view is extremely widespread, see e.g. Strunk’s casual remark regarding καρτύνω that “inlautendes -αρ- < *-r- vor Konsonant (...) auch sonst gelegentlich statt oder neben -ρα- vorkommt.” (1975: 286).

³⁴¹ The classical study of Greek denominatives is Fraenkel (1906).

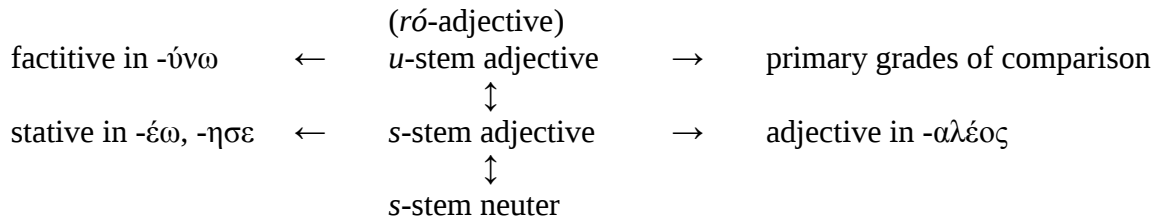
³⁴² For καρτύνω, the same suggestion was made already by Strunk (1975: 296): “Vermutlich ist κάρτος sogar die wirkliche morphologische Basis für die epische Verbalableitung.”

³⁴³ The root of ἔντεα has no convincing etymology: pace *DELG* (s.v. ἔντος), the connection with ἀνύω ‘to accomplish’ *snh₂-u- can no longer be maintained because that root ended in a laryngeal.

Tucker tries to point out a pivotal form, that is, a verb in -ύνω beside an *s*-stem and a *u*-stem adjective. The only example in Homer is τὸ εὖρος ‘breadth’ beside εὐρύς, εὐρύνω. Her idea is, apparently, that a pairing εὖρος → εὐρύνω may have secondarily replaced the derivational scheme εὐρύς → εὐρύνω. But again, there are serious objections. First, εὖρος occurs only once (*Od.* 11.312) in Homer, whereas εὐρύς is frequent. Second, it is questionable whether the scheme εὐρύς → εὐρύνω could fall into disuse as long as the *u*-stem adjective existed.

I agree with Tucker that καρτύνω cannot be directly derived from κρατύς (because the latter has a different vowel slot) and that its base form must have been 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 origin of θαρσύνω : θάρσος itself? *A priori*, one expects a secondary association of *s*-stem nouns and -ύνω verbs to have started in one or two cases where the *u*-stem adjective had been lost or replaced by a different form. Subsequently, a derivational relation between an *s*-stem abstract noun ‘X-ness’ beside a factitive in -ύνω ‘to provide with X-ness’ could be easily established. The root θαρσ- would make an excellent starting point for this reanalysis, because there are several independent indications that θαρσαλέος ousted an older form *θαρσύς (below, section 4.5). Furthermore, the connection between θάρσος and θαρσύνω ‘to encourage, reassure’ is synchronically perspicuous in Homer, and θαρσύνω is semantically close to καρτύνω.

In sum: the later, Classical derivational pattern κάλλος → καλλύνω has not yet acquired full productivity in Homeric Greek, but it is already present in an embryonic stage, due to the pair θάρσος : θαρσύνω and the absence of an adjective *θαρσύς. The derivational relations that applied in (pre-)Homeric Greek are shown in the following scheme:



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

The following *u*-stem adjectives with a root /CLaC-/ are attested in Homeric Greek and Classical Ionic-Attic: βραδύς ‘slow’, βραχύς ‘short’, θαρσύς ‘bold’, κρατύς ‘impetuous’, πλατύς 1. ‘broad’ 2. ‘salty’.³⁴⁴ In Homer, βραχύς is absent, and none of the other adjectives is frequent; as we have seen, this is due to their metrical inconvenience. An adjective βλαδύς ‘weak’ is frequently cited, but it is attested only as a gloss βλαδεῖς (Hsch.) beside 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. Examples are Lejeune (1972: 196, citing βλαδαρός ~ ἀμαλδύνω and θαρσός), Rix (1992: 65, citing πλατύς), Sihler (1995: 94-5, citing θαρσύς, βλαδύς, and πλατύς).³⁴⁵

It is often assumed that the root of these *u*-stem adjectives had no ablaut. But as we have seen in section 4.1, the *u*-stem adjectives did have root ablaut in PIE. I assume that this

³⁴⁴ κρατύς occurs only in combination with Ἀργεῖφόντης, epithet of Hermes. Its meaning cannot be determined with certainty; my ‘impetuous’ is based on considerations which will be further elaborated in section 5.1.3.

³⁴⁵ Lejeune cites “θαρσύς, θαρσός” as a doublet, but the first form does not exist. *DELG* (s.v. θάρσος) remarks that a form θαρσός “a dû exister comme l’indiquent divers composés et le verbe dénomminatif en -ύνω.” As we will see below, this is probably closer to the truth, but the form should be asterisked in any case: *θαρσός. Sihler not only cites θαρσός (which he adopted from Lejeune?), but also “Lesb. θορσέως”, which does not exist at all. The latter form is correctly cited by Lejeune as θορσέως, which is attested only in Joh. Gramm. 2.11, where it is cited as “Aeolic”.

ablaut remained intact until Proto-Ionic. This allows us to explain the vowel slot of βραχύς and κρατύς by comparing cognate forms with a full grade root, such as Lat. *brevis* and Lesb. κρέτος. The outcome -ρα- in βραχύς and κρατύς is due to the analogical introduction of the full grade slot of the strong stem (**mrek^hu-*) into the vocalized zero grade of the weak stem (**mark^hew-* >> **mrak^hew-*).³⁴⁶ For the same reason, πλατύς is not a cogent example for the regular vowel slot, because -λα- could be analogical after the full grade **πλετ-* (see section 4.1). For βραδύς, there is no clear evidence for the full grade slot.³⁴⁷ Therefore, βραδύς, βραχύς, κρατύς, πλατύς can be left out of the compelling evidence for the regular reflex of the syllabic liquid.³⁴⁸

However, θρασύς (beside θέρσος) and βλαδεῖς (beside μέλδομαι) seem to be strong examples of the regular vocalization of the liquid. They seem to point to -ρα- as the regular reflex of **r* and -λα- as that of **l*. However, as we will see in section 4.5, θρασύς is an extremely problematic form in several respects. A complete discussion of the evidence for **l* will be postponed to chapter 10.

It is remarkable that one other *u*-stem adjective with an original syllabic liquid is ignored by the historical grammars: ταρφύς ‘numerous’. Beside it stands the rare adjective τραφερός ‘solid, thick’ (Hom.+). The parallellism of these two forms calls to mind the doublet κρατερός ~ καρτερός. In my view, a correct understanding of the origin of ταρφύς and τραφερός is crucial for establishing the regular development of **r*. There are two questions:

- (1) why do we find -αρ- in ταρφύς, as against -ρα- or -λα- in *all* other *u*-stem forms?³⁴⁹
- (2) how did the difference between ταρφύς and τραφερός arise?

4.3.1 **r* > *αρ* is regular in ταρφέες

The Homeric adjective ταρφύς ‘numerous, thick’ modifies nouns for ‘snowflakes’ (e.g. ταρφειαὶ νιφάδες *Il.* 19.357),³⁵⁰ ‘arrows’ (e.g. ταρφέας ἰοὺς *Il.* 15.472),³⁵¹ and appears as an adverb ταρφέα (< ntr. NAp.) in the meaning ‘repeatedly, time and again’, e.g. ταρφέα τε στρέφεται στίχας ἀνδρῶν πειρητίζων, ‘(the boar) turned round again and again, putting the ranks of men to the test’ (*Il.* 12.47).³⁵² As I have argued in section 2.1, the comparison of Mycenaean *ta-pa-e-o-te* with ταρφύς is too uncertain to be used in this discussion.

De Lamberterie (1990: 676ff.) has adduced strong arguments for deriving ταρφέες from the intransitive verb τρέφομαι, pf. -τέτροφε ‘to form a layer, become thick, coagulate’.

³⁴⁶ In *u*-stem adjectives of the structure **CLeC-u-* and **CeLC-u-*, the generalization of *a*-vocalism at the expense of the *e*-grade of the strong stem may also have been favored by the prior generalization of *a*-vocalism in roots containing an internal nasal, *-*h*₂-, or an older cluster **CRHu-*. This yielded formations with Proto-Greek **CaCu-*, as in the following nine adjectives: βαρύς ‘heavy’, παχύς ‘dense’, ταχύς ‘quick’, τανυ- ‘thin’, δασύς ‘dense’, θάλεια ‘copious’, θαμύς ‘dense’, βαθύς ‘deep’, λάχεια ‘wooded’.

³⁴⁷ For the Homeric superlative βάρδιστος, which can be explained in more than one way, see section 4.4.4.

³⁴⁸ For the same reason, the gloss κορδύς (Hsch.) beside κερδίων, κέρδιστος can play no role at this stage of the discussion: κορδύς may replace the regular outcome **κροδ-*, in an Aeolic dialect, of the oblique stem after an older strong stem **κερδύς*. However, κορδύς could also contain the regular reflex of a zero grade in Arcadian (on which see section 3.5).

³⁴⁹ An exception must be made for the gloss κορδύς (Hsch.), see above.

³⁵⁰ The full comparison in *Il.* 19.357-60 is: ὥς δ’ ὅτε ταρφειαὶ νιφάδες Διὸς ἐκποτέονται ψυχραὶ ὑπὸ ριπῆς αἰθρηγενέος Βορέας, ὥς τότε ταρφειαὶ κόρυθες λαμπρὸν γανόωσαι νηῶν ἐκφορέοντο καὶ ἀσπίδες ὀμφαλόεσσαι. Cf. also *Il.* 12.156-8: νιφάδες δ’ ὥς πίπτον ἔραζε, ἄς τ’ ἄνεμος ζαῖς νέφεα σκιδόντα δονήσας ταρφείας κατέχευεν ἐπὶ χθονὶ πουλυβοτείρῃ.

³⁵¹ Also in οὐκ ἄν τοι χραίσμησι βιὸς καὶ ταρφέες ἰοί (*Il.* 11.387), and τοὺς δ’ ἤδη ἐδάμασσε βιὸς καὶ ταρφέες ἰοί (*Od.* 22.246). De Lamberterie (1990: 665-666) remarks that this use is intimately related with the previous, the image being that of a ‘rain of arrows’. Therefore, ταρφειαὶ νιφάδες ‘thick snow’ may well be the older syntagm.

³⁵² Further occurrences of the adverb in Homer: τὰ δὲ δράγματα ταρφέα πίπτει (*Il.* 11.69), οἷσιν [with their bows] ἔπειτα ταρφέα βάλλοντες Τρώων ρήγνυντο φάλαγγας (*Il.* 13.718: the unexpressed object of βάλλοντες ‘shooting’ are arrows), ὃ δ’ ἐγγύθεν ὀξὺ λεληκὼς ταρφέ’ ἐπαῖσσει (*Il.* 22.141-2: cf. the boar in 12.47), ὀρχεῖσθην δὴ ἔπειτα ποτὶ χθονὶ πουλυβοτείρῃ ταρφέ’ ἀμειβομένω (*Od.* 8.378-9, about the feet of dancers).

Numerous traces of this older meaning are preserved in derivatives of τρέφω. The phrase τρόφι κῦμα is convincingly interpreted by de Lamberterie as ‘crest of a wave’ (i.e. the foamy layer which agglomerates on top). Comparing ταρφειαὶ νιφάδες with the Lith. verb *dribti* ‘to fall in heaps, stick (of snow)’ (1990: 681), he argues that the application of the root **d^hreb^h-* to falling snow may be inherited phraseology. The development of meaning from ‘thick’ to ‘frequent’ is common. For instance, English ‘thick’ may also be used as an adjective or adverb denoting a frequent occurrence, as in *thick and fast*, or *thick and threefold*, and in Dutch, *dikwijls* means ‘frequently, often’.

A striking fact about the distribution of the forms is that ταρφύς only appears in the plural in Homer. What is more, before the end of the classical period, the singular form ταρφύς is attested only in Aeschylus (*Sept.* 535, and possibly in *Pers.* 926).³⁵³ The adverb ταρφέως (only in B. 13.53) may be secondary for the original ntr. NAp. form ταρφέα (Hom.+). Apart from these cases, the singular is only found as the quotation form of the adjective in Grammarians. Like Homer, Hellenistic Epic only uses the plural form. The fact that the singular stem of ταρφύς is not attested in Homer suggests that it is an analogical creation in Aeschylus, and that Homer used ταρφέες only as a *plurale tantum*.

Most dictionaries (e.g. *LSJ*) cite another form with the root shape ταρφ-: the neuter s-stem τάρφος. However, as Meissner has demonstrated (2006: 110-11), a form τάρφος is only found in Grammarians, and the literary attestations of “τάρφος” are again exclusively in the plural. In Homer, we find twice the Dp. (βαθείης τάρφεσιν ὕλης, *Il.* 5.555, transformed to βαθέης ἐν τάρφεσιν ὕλης in *Il.* 15.606), and in Apollonius Rhodius once the Np. (μνιόνετα βυθοῖο τάρφεα, 4.1238). It is therefore possible to assume that these forms are substantivizations of the *u*-stem adjective, with a corresponding accent retraction.³⁵⁴ This hypothesis is confirmed, as Meissner remarks, by the parallel case of τὰ βράχεια, attested from Th. and Hdt. onwards in the lexicalized meaning ‘shoal, sandbank’. The lack of contraction of -εα in this form in Classical Attic proves that this must be an old *u*-stem form, with subsequent retraction of the accent.³⁵⁵ 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’, as attested in Hdt. 4.179.

It may be concluded that the singular τάρφος is a ghost form, and that the root shape ταρφ- is originally *only* attested in the plural forms of the *u*-stem adjective. We are now in a better position to judge the origin of -αρ- in ταρφέες.³⁵⁶ Since the root τρεφ- (PIE **d^hreb^h-*) had a full grade II, the outcome ταρφ- cannot be explained by analogy: it must be the regular outcome of Proto-Greek **t^hrp^héwes*. The strong stem forms could not analogically influence the regular outcome of **r* in **t^hrp^héwes* because they were no longer present. We may conclude that ταρφέες provides compelling evidence for a regular development **r* > αρ in Ionic-Attic.

4.3.2 Derivation of Hom. τραφερός

Before the end of the classical period, the adjective τραφερός is attested only in the formula ἐπὶ τραφερὴν τε καὶ ὕγρην (*Il.* 14.308, *Od.* 20.98, *h. Dem.* 43) “both over the solid land and the waters of the sea” (Wyatt), literally ‘on the solid and the liquid’. After that, τραφερός first

³⁵³ The two Aeschylean passages are discussed by de Lamberterie (1990: 671). In *Pers.* 926, ταρφύς τις is a plausible conjecture for γὰρ φύστις, because φύστις would be a *vox nihili*.

³⁵⁴ In Homer, following the loss of intervocalic digamma, the *u*-stem adjectives already generalized the s-stem Dp. ending -εσι by a proportional analogy with the identical Np. in -εα.

³⁵⁵ From an older s-stem form, one would expect Att. ⁺⁺βράχη (Meissner 2006: 108-109).

³⁵⁶ 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 merely show the embarrassment of earlier scholars in regard of the reflex -αρ-.

reappears in Hellenistic poetry.³⁵⁷ Still later, Oppian is especially fond of the word in his *Halieutica*. 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).³⁵⁸ The juxtaposition of ὑγρός and τραφερός as thematic opposites is paralleled by the following Homeric comparison (*Il.* 5.902-4, Paeëon healing Ares):³⁵⁹

ὥς δ' ὅτ' ὁπὸς γάλα λευκὸν ἐπειγόμενος συνέπηξεν,
 ὑγρὸν ἐόν, μάλα δ' ὄκα περιτρέφεται κυκώοντι,
 ὥς ἄρα καρπαλίμως ἦσατο θοῦρον Ἄρηα.

“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.”

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. Obviously, τραφερός may owe its existence to the much more frequent form κρατερός, which was also used in the meaning ‘solid, hard’ (see chapter 5 for its reconstruction and its relation to the doublet καρτερός). But was there a model for the creation of τραφερός?

At first sight, the most logical option would be a proportional analogy with the *u*-stem adjective: κρατύς : κρατερός = ταρφύς : X. A similar analogy led to the creation of θαλερός (beside *θαλύς) and γλυκερός (beside γλυκύς), see section 4.2.1. However, the *u*-stem adjective derived from τρεφ- is ταρφύς, not ⁺⁺τραφύς. Departing from a paradigm PGr. msc. Ns. **t^hrép^hu-s*, Gs. **t^hrp^h-éw-os*, one could try to explain the deviant vocalism of τραφερός by assuming that the form was created beside a now-lost strong stem *τραφύ- that replaced the strong stem **t^hrép^hu-*. It would have to be supposed, then, that the strong stem *τραφύ- was subsequently eliminated together with the other singular forms, and that only the reflex of the weak stem of the *u*-stem adjective remained alive in the plural ταρφέες, ταρφειαί, ταρφέα.

In reality, such a scenario is highly unlikely. A paradigm **t^hrép^hu-*, **t^hrp^h-éw-* which developed by regular sound change to **t^hrép^hu-*, **t^harp^h-éw-* would hardly be remodelled to **t^hrap^hú-*, **t^harp^h-éw-*. An analogical change is expected either to normalize the paradigm to other existing ablaut patterns (i.e. **t^hrép^hu-*, **t^hrap^h-éw-* after e.g. **plétu-*, **platéw-*, later leveled to **t^hrap^hú-*, **t^hrap^h-éw-*) or to eliminate the ablauting strong stem immediately (i.e. **t^harp^hú-*, **t^harp^h-éw-*). In the first case we cannot explain ταρφέες, and in the second it is impossible to account for τραφερός. It is therefore better to explain ταρφέες by departing from a defective plural paradigm.

Fortunately, there is an alternative pivotal form for the creation of τραφερός: *s*-stem compounds in -τρεφής. As a bonus, the semantics of this model are preferable. First, -κρατής is still a productive formation, whereas κρατύς is a relic form. Secondly, the meaning ‘to coagulate, become thick or solid’ required by τραφερός is attested for compounds in -τρεφής (e.g. ἀπαλοτρεφής *Il.* 21.363 ‘well-fed’, of swine with a thick layer of fat). The remains of the *u*-stem adjective ταρφέες have no trace of this meaning, probably because the semantic development ‘thick’ > ‘frequent, in large numbers’ took place before the vocalization of **r*. An early semantic change in ταρφύς would also explain why the singular form was eliminated. It could be objected to this derivation of τραφερός that the Homeric form is -κρατής, not -κρετής. However, the proportional analogy (κρατερός : -κρετής :: X : -τρεφής) may have operated before the *a*-vocalism spread from κρατερός or κρατύς to the other formations based on the root **kret-*. Thus, the assumed analogy is chronologically in order.

³⁵⁷ ὑγρή τε τραφερή τε (A. R. 2.545/6), ὑγρῆς 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’.

³⁵⁸ LSJ (s.v. τραφερός) remarks that τραφερός is from τρέφω in the meaning ‘to make thick’. The connection with τρέφομαι ‘to curdle’ is further substantiated by glosses like τραφερόν· πηκτόν. τρόφιμον. λευκόν. ξηρόν. πεπηγμένον (Hsch. τ 1284).

³⁵⁹ And note the oxymoron βλάστε μὲν ἐξ ἁλὸς ὑγρᾶς νῆσος “from the liquid sea an island sprung” (Pi. *Ol.* 7.69).

In conclusion, the plural forms of ταρφύς are a precious vestige of the regular development of **r* in Proto-Ionic. The different root shape of τραφερός is best explained by a proportional analogy with compounds in -τρεφής, which took place within Epic Greek.

4.4 The *u*-stem adjectives of the structure **CLaC-u*-

Unlike ταρφέες, other adjectives of the structure **CLaC-u*- do occur in the singular. The “deviating” vocalization -αρ- in ταρφύς can only be explained, as far as I can see, by assuming that the vocalization -ρα- in the “normal” forms κρατύς, βραχύς, βραδύς is due to the analogical remodeling of an originally ablauting paradigm:

(stage I) Proto-Greek		(stage IIa) Proto-Ionic (late 2 nd mill.)		(stage IIb)		(stage III) Homer
<i>*krét-u-s</i>	=	<i>*krétus</i>	=	<i>*krétus</i>	>>	<i>kratús</i>
<i>*k_grt-éw-os</i>	>	<i>*kartéwos</i>	>>	<i>*kratéwos</i>	>	<i>⁺⁺kratéos</i>

Of course, the elimination of the full grade in favor of the vocalized zero grade is part of a general tendency to generalize the weak stem in *u*-stem adjectives. As we have seen, the *a*-vocalism subsequently conquered most other Caland forms: its most prominent victim was the *e*-grade root in the forms of comparison. The following table contains a schematic overview of the Ionic forms to be discussed in the following sections and in the next chapter:³⁶⁰

PIE root	<i>u</i> -stem adjective	forms with the same vowel slot	forms with a different vowel slot
<i>*d^hers-</i>	θρασύς	θρασυ- in cpds.	θαρσαλέος, θάρσος, cpds. -θήρσης (names) / -θαρσής, θαρσέω, θαρσύνω
<i>*pleth₂-</i>	πλατύς	τὸ πλάτος, cpds. in -πλατής, πλαταμών (all post-Hom.)	None
<i>*g^wred-</i> (<i>*g^werd-</i>)	βραδύς	hapax βραδίων (Hes.), otherwise βραδύτερος, -τατος (class.)	βάρδιστος
<i>*mreg^h-</i>	βραχύς (Pi.+)	[hapax βράσσων] βράχιστος (Pi.+)	None
<i>*meld-</i>	βλαδεῖς (Hsch.)	βλαδαρός, βλαδάν, etc. (only Hsch.)	ἀμαλδύνω
<i>*d^hreb^h-</i>	ταρφύς	[τάρφος]	τραφερός, -τρεφής
<i>*k^hreth₁-</i>	κρατύς	κρατερός, κράτος, -κρατής, κράτησε (post-Hom.), κρέσσων, κράτιστος	καρτερός, κάρτιστος, κάρτος, καρτύνω (Hom.+), κάρτα (class.)

Table 4.1: reflexes of *u*-stem adjectives with a root *CLaC*- in Ionic-Attic

³⁶⁰ Unless it is attested in Homer, the first attestation of each form is indicated.

4.4.1 πλατύς

The adjective πλατύς ‘broad, extended; flat’ is cited as a prime example of the development of the syllabic liquids in almost every manual.³⁶¹ It is quite well-attested from Homer onwards, and also attested in Lesbian poetry (πλάτυ, Alc. fr. 74). Homer does not attest the feminine, obviously for metrical reasons, and uses εὐρεῖα instead. The forms of comparison were secondarily recreated as πλατύτερος, -τατος.³⁶² Other 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.). Outer-Greek cognates of the s-stem neuter are found in Ved. *práthas-*, Av. *fraθah-* ‘breadth’, OIr. *leth* (n. s-stem) ‘side’. It is further attractive to compare πλαταμών, with the same replacement of the root vowel, to Ved. *prathimán-* ‘extension’. We will see that -λα- may have been the regular outcome of **l̥* (chapter 10). However, since the evidence does not entirely exclude that -αλ- was the regular reflex, -λα- in πλατύς may theoretically be explained in the same way as κρατύς and βραχύς.

4.4.2 κρατύς

The adjective κρατύς is only attested in the formula |_H κρατὺς Ἀργεῖφόντης (4x Hom., 5x *h. Herm.*). An explanation of the reflex -ρα- has been given above. It deserves attention that κρατερός cannot be used as evidence for the development of **r̥* either: the Classical Ionic-Attic form καρτερός must contain the regular reflex, and κρατερός may be due to the influence of κρατύς. A more extensive discussion of the root κρατ- ~ καρτ- will be provided in chapter 5; for the reflex -ρα- in Homeric κραταιός, κραται-, see section 6.7.3.

4.4.3 βραχύς

Βραχύς is unattested in Homer (on the hapax comparative βράσσων *Il.* 10.226, which may belong to βραδύς, see immediately below).³⁶³ The adjective is first attested in Sappho (adv. βρόχε’ fr. 31.7) and, in its Ionic form, in Pindar. After that, it remains the common word for ‘short’ (of time). Some remains of the superlative βράχιστος are attested (*Pi. Isth.* 6.59, *S. Ant.* 1327 and *OC* 1115, *Ar. Lys.* 715), but the forms of comparison have generally been replaced by βραχύτερος, -τατος in classical prose (Hdt.+). On the question whether βραχίων ‘(upper) arm’ is related, see section 6.8.4.

In view of Latin *brevis* ‘short’, the PIE root was **mregʰ-*. Compare, further, Ved. *múhur* ‘instantly’, Av. *mərəzu-jīti-* ‘short-lived’, OHG *murg(i)* ‘short’, Goth. *ga-maurgjan* ‘to shorten’ (denom. verb), all with a reflex of the zero grade. The ensuing paradigm PGr. **mrekʰ-u-*, **mṛkʰ-ew-* generalized the weak stem **mrokʰ-* (Aeolic) and **markʰ-* >> **mrakʰ-* (Ionic). The initial μρ- was preserved dialectally until a rather late date, as evidenced among other forms by Thess. Μροχῶ (*SEG* 24: 406.1, ca. 460-450 BC).³⁶⁴

³⁶¹ It is quite possible that πλατύς ‘brackish’ is a different adjective, both synchronically and historically: see de Lamberterie (1990: 452-63). Proponents of an identification of the two 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 ἄλμυρός ‘salty’. Cf. Frisk s.v. πλατύς 2. and Mayrhofer *EWAia* s.v. *paṭu-* (both embracing this view), *DELG* s.v. 2 πλατύς (doubting it). Against this, Lamberterie remarks that πλατύς only denotes brackish, not salty water.

³⁶² A comparative πλατίον ‘broader’ may be attested in Epich. fr. 101 Kaibel, but this form is probably secondary for the expected **πλάσσον << *πλέσσον, which was metrically awkward. Cf. section 4.2 on γλυκίων.

³⁶³ It seems that (σ)μικρός ‘short’, ὀλίγος ‘small’, and μίνυνθα ‘for a short time’ (cf. μινύθω ‘to become less’) are used instead of βραχύς in Epic Greek. This may have a metrical cause (see section 4.2.2); note, further, that the superlative βράχιστος could not be used at all in the dactylic hexameter.

³⁶⁴ On the preservation of -μρ-, see chapter 7.

4.4.4 βραδύς

While βραδύς is rare in Homer, it is a normal word in the classical language, both in Attic prose and in poetry (trag., com.).³⁶⁵ Primary forms of comparison are only marginally attested. The comparative βράδιον (Hes. *Op.* 528) can be analogical after the positive, because in an inherited form one would expect to find *-ζ-* < **-d̥i-* after a light root syllable. As Seiler (1950: 43 and 56f.) remarks, an inherited **βράζων* may underlie the hapax βράσσων (*Il.* 10.226), if this acquired its *-σσ-* from the opposite θάσσων ‘faster’.³⁶⁶ The superlative is attested only twice as βάρδιστος (*Il.* 23.310, 530). Apart from these forms, the grades of comparison have been generalized as βραδύτερος, βραδύτατος. The neuter *s*-stem βράδος (hapax at *X. Eq.* 11.12) is certainly a nonce formation.³⁶⁷

Βραδύς may refer either to physical slowness (in running or racing) or to lack of mental alertness. It has clear cognates in Baltic: Lith. *gurdūs* ‘weak, slow, uncommunicative’, Latv. *guņds* ‘tired, weary’, both from **g^wrd-u-*.³⁶⁸ However, the reconstructed root is peculiar, because it violates the constraint that a single PIE root may not contain two *mediae*. Nevertheless, it can hardly be doubted that the form is inherited, given the perfect formal and semantic match between Greek and Baltic.³⁶⁹ As far as I have been able to discern, no other word denoting physical slowness can be reconstructed for PIE.³⁷⁰ This makes it quite possible that **g^wrd-u-* was the PIE adjective for ‘slow’.

In view of its isolation in derivational terms, one could be tempted to take βραδύς as an example for the regular vocalization of **r*. On the other hand, a full grade of the root may have been around in the Proto-Ionic adjectival paradigm. This full grade may also have remained alive in the grades of comparison. It is difficult, however, to establish the original full grade slot. The fact that Homer has the superlative βάρδιστος could be taken to imply that the root was **g^werd-*, if this form replaced earlier **βέρδιστος*. However, alternative scenarios cannot be excluded out of hand.

First, it has to be noted that βάρδιστος could also be an Epic creation. Chantraine (1942: 24) already remarked that **βράδιστος* “ne pouvait entrer à aucune place du vers homérique”.³⁷¹ While metrical utility alone was not a legitimate reason to substitute *αρ* for *ρα*, we could perhaps assume that βάρδιστος is analogical for **βράδιστος* after the example of Hom. κάρτιστος beside κρατύς. Note that both adjectives are used as technical terms 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),³⁷² and the horses of Antilochos are called

³⁶⁵ Only 3 attestations in Homer: βραδύς (*Od.* 8.329 and 330), βραδέες ... ἵπποι (*Il.* 8.104).

³⁶⁶ The text at *Il.* 10.226 runs: βράσσων τε νόος λεπτή δέ τε μῆτις. Normally, βράσσων is taken to be a comparative of βραχύς ‘short’, but semantically βραδύς would fit much better (cf. Nordheider, *Lfgre* s.v. βράσσων).

³⁶⁷ In μήτε τῷ ἄγαν ταχεῖ μήτε τῷ ἄγαν βραδεῖ (*X. Eq.* 11.12), one would expect that βραδυτής ‘slowness’ (Fr. *lenteur*) was used to denote the fact of being slow. It is probably a nonce formation based on τάχος (cf. de Lamberterie 1989), and can therefore be left aside for purposes of reconstruction.

³⁶⁸ Perhaps, Slavic **g^wrdь* > Ru. *górdyj* ‘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 ascertained (cf. de Lamberterie 1990: 594-5).

³⁶⁹ One may compare the situation with that of PIE **b*, for which there is hardly any evidence and where the reduction of certain specific clusters may perhaps explain **b* in initial position, as proposed by Lubotsky in two recent lectures. Although we do not know what actually happened in the prehistory of **g^wred-*, I would not exclude a similar reduction of an initial cluster in this case.

³⁷⁰ Words for ‘slow’ are frequently derived from a meaning ‘quiet, peaceful’. Within Greek, cf. ἡρέμα ‘quietly, slowly’, ἥσυχος ‘id.’. In Homer, ἥκα, ἥκιστος (no etymology) also denotes quietness in general rather than low speed in particular.

³⁷¹ Cf. also Chantraine & Goube (*ad Il.* 23.530). No comments on this issue are found in Seiler (1950: 56f.), nor in Frisk or *DELG* (s.v. βραδύς), Kirk et al. or Ameis-Hentze (*ad loc.*), Nordheider (*Lfgre* q.v.).

³⁷² See also the formula κρατερὸν μένος, applied to mules with stamina (*Il.* 17.742). For further connections of the root κρατ- with horse-riding, see the next chapter.

βάρδιστοι θείειν (*Il.* 23.310) by his father Nestor. Moreover, if βράσσων does indeed replace *βράζων, then the original form of the comparative (with an *e*-grade root) must have been **g^wred-íos-*.

Finally, the form βραδυτής must be taken into consideration. It occurs in Homer (*Il.* 19.411) and remains alive in the classical language. The accented suffix -τής only occurs in four Greek -της abstracts (Pike 2011: 148). Since the *s*-stem abstract τάχος may denote both speed and swiftness, whereas the -της abstract βραδυτής is the regular way to express ‘slowness’ (cf. de Lamberterie 1989), it is likely that βραδυτής is older than ταχυτής ‘swiftness’, which has the same accentuation. But this does not imply that βραδυτής is the regular outcome of a PGr. **g^wrdu-tāt-*: it is possible that the form was secondarily derived from (or influenced by) the positive βραδύς.

In summary, neither βραδύς nor βάρδιστος provides unambiguous evidence for the regular vocalization of **r*, because the original full grade slot of the root is unclear. Given that the Homeric superlative βάρδιστοι could be an analogical or even artificial creation, it cannot be excluded that original full grade was **g^wred-*.³⁷³ In that case, the original adjectival paradigm may have been PIE Ns. **g^wréd-u-s*, Gs. **g^wrd-éu-s*, which yielded βραδύς, -έος after the series of levelings discussed above.³⁷⁴

4.4.5 *βλαδύς and ἀμαλδύνω

Before discussing the attestations of *βλαδύς, let me first comment on a peculiarity shared by this adjective and θρασύς. In these two adjectives, it seems that the reflex of the weak stem was generalized without influence of the vowel slot of the full grade form (PGr. **t^hers-*, **meld-*). In other words, the analogical development from stage IIa to IIb in the above scheme (section 4.4) seems not to have taken place. If so, θρασύς and *βλαδύς would seem to be the regular outcomes of non-ablauting adjectives **t^hrs-ú-* and **mld-ú-*. There is no reason, however, to assume a difference in ablaut behavior between the various adjectives of the structure **CLC-u-*.³⁷⁵

There is another reason to doubt that θρασύς and *βλαδύς are the regular outcome of the original *u*-stem paradigms: the factitive verbs ἀμαλδύνω ‘to erode, weaken’ and θαρσύνω ‘to encourage’. As we have seen in section 4.2.3, Homeric verbs in -ύνω are productively derived from *u*-stem adjectives. Therefore, ἀμαλδύνω and θαρσύνω seem to imply the earlier existence of *(ἀ)μαλδύς and *θαρσύς. In both cases, two different reflexes of one and the same ablauting paradigm would have been preserved: PGr. **méldu-*, **mldéw-* would have split into *μαλδύς ~ βλαδύς, and **t^hérsu-*, **t^hrséw-* into *θαρσύς ~ θρασύς. Such a scenario is questionable (see section 4.3.2 on the paradigm of ταρφύς).

Returning to *βλαδύς, let us discuss the attested forms. An adjective *βλαδύς is only found in the gloss βλαδεῖς (Hsch.).³⁷⁶ Further traces of a zero grade root βλαδ- are found, but again only in glosses (Hsch., β 54-59):

³⁷³ Theocritus has not only the Homeric superlative βάρδιστος, but also the comparative βαρδύτερος, which is certainly an artificial creation, too.

³⁷⁴ A second possibility would be that there was *Schwebeablaut* between the positive and the grades of comparison (cf. cases like PIE **pelh₁-u* beside **pleh₁-is-*), but such an assumption is ultimately hard to prove, and unnecessary.

³⁷⁵ It would presuppose that the full grade strong stem was eliminated at an early date. The case of ταρφέες (which has plural forms only) is different. It is true that we only have the plural of *βλαδύς, in the gloss βλαδεῖς. However, this may be due to coincidence; other glosses with βλαδ- are attested in the singular.

³⁷⁶ De Lamberterie (1990: 356-8) convincingly argues that the restitution of βλαδύς for transmitted βραδύς in the text of Hp. *Aēr.* 20 is unnecessary. For the possibility that βλαστεῖν ‘to sprout’, βλαστόν ‘sprout’ are related, see section 10.4.2.

βλαδά· ἄωρα, μωρά. AS ὠμά ('untimely, sluggish')
 βλάδαν· νωθρῶς ('slothful')
 βλαδαρά· ἄωρα, μωρά, ὠμά
 βλαδαρόν· ἐκλελυμένον, χαῦνον ('flaccid, porous')
 βλαδόν· ἀδύνατον ('powerless, weak')
 βλαδεῖς· ἀδύνατοι ἐξ ἀδυνάτων.³⁷⁷

The denominative verb ἀμαλδύνω is attested from Homer onwards, but in various different meanings. The philological evidence for this verb has been extensively discussed by de Lamberterie. After an examination of his arguments, I reached the following conclusions:

(1) In Homer, ἀμαλδύνω occurs in the *Iliad*, three times in a similar context. On each occasion, the Achaean wall is 'reduced to dust, corroded' (by erosion of wind and water). The meaning 'to make invisible', found in post-Homeric poetry, is ultimately based on reinterpretations of the Homeric meaning. In the Hippocratic Corpus, ἀμαλδύνω means 'to weaken' (vel sim.); sometimes, ἀμαλδύνω is even used as an equivalent of ἀμβλύνω 'to make blunt' (cf. de Lamberterie 1990: 364-8).

(2) The ἀ- of ἀμαλδύνω may be secondary after ἀμαθύνω 'reduce to sand' (Hom.+), which may itself owe its factitive suffix -υν- to ἀμαλδύνω (de Lamberterie 1990: 363).³⁷⁸ It is noteworthy that the ἀ- of the gloss ἀμέλδεν· τήκειν. στερίσκειν 'to melt; deprive of' (Hsch.) beside μέλδομαι 'to become soft by boiling or heating, be cooked' (*Il.* 21.363, Nic.), which is derived from the same root as ἀμαλδύνω, was also secondarily added.³⁷⁹

(3) As de Lamberterie shows (1990: 372-3), the PIE root was **meld-* rather than **mled-* in view of Gr. μέλδομαι 'to be cooked', PGm. **(s)meltan-* 'to melt', Arm. *melk* 'soft' < **meldwi-*.³⁸⁰ The Armenian word may also show that the root did not have an initial laryngeal. The full grade of Ved. *ví mradā* (RV, hapax), *úrṇa-mradas-* 'soft like wool' must then be an innovation of Indo-Aryan.³⁸¹

(4) It follows that ἀμαλδύνω points to the earlier existence of an adjectival stem **(ἀ)μαλδύ-* 'reduced to dust' (de Lamberterie 1990: 364).

A semantic problem must now be taken into account. All cognate forms of the adjective PIE **mld-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-*

³⁷⁷ The alphabetical order of these glosses (βλαδεῖς after βλαδόν) seems to confirm that βλαδεῖς is from a *u*-stem adjective **βλαδύς*. In the literature, βλαδαρός is sometimes cited as attested in Galen (e.g. Rau 2009: 153), but the form is actually a conjecture for attested βλαβεραί (de Lamberterie 1990: 356). De Lamberterie also includes the gloss βλάζειν· μωραίνειν 'to act foolishly', but its appurtenance to **βλαδύς* seems uncertain to me.

³⁷⁸ I would add to this that other adjectives like ἀμαλός 'weak' (*Il.*+, no etymology), ἀπαλός 'soft, tender' (Hom.+), ἀμαυρός 'dark, unseen, invisible' may have played a part in the reshaping of an earlier **μαλδύνω*.

³⁷⁹ The second glossation στερίσκειν could suggest that the verbal root of ἀμέρδω 'to deprive (of eyesight)' was involved in the reshaping of μέλδομαι. But this is not certain, because the glossator may have been confused by the similarity between ἀμέρδω and ἀμέλδω.

³⁸⁰ Differently, Hamp (1988: 89), according to whom Arm. *melk* is a "revocalization" of **małk*. Mayrhofer (*EWAia* s.v. *MRAD*) reconstructs PIE **(h₂)mled-* for 'to become weak, dissolve', beside **merd(H)-* "zerdrücken, zerreiben". For the semantic distinction, he compares Lat. *mordeō* 'to bite'. I would rather reconstruct the second root as **h₂merd-* in view of Gr. ἀμέρδω 'to deprive (of eyesight)', originally of sharp or biting sensual impressions; see *LIV*² s.v.

³⁸¹ Within early Vedic, *MRAD* 'to soften' can be semantically distinguished from *MARD* 'to crush', even if both roots were confused early on (Mayrhofer *EWAia* s.v. *MRAD*). It does not seem wise to base a conclusion regarding the original full-grade slot on the Indo-Aryan evidence, because this branch lost not only the difference between *l* and *r*, but also the word-initial preconsonantal laryngeals. As a result, the full grade slot could become a useful means to distinguish between two roots that had merged as a result of regular sound change. In this case, the roots **meld-* 'to become weak' (~ Lat. *mollis*) and **h₂merd-* 'to crush, bite' (~ Lat. *mordeō*) could only be kept separate by the creation of a novel full grade. Therefore, *mrad-* may be a recent reshaping of Indo-Aryan date, motivated by the merger of **r* and **l* and the loss of the word-initial laryngeals.

‘to crush’, which is synchronically distinct from *mrād-* ‘soft’. De Lamberterie (l.c.) answers this problem by assuming that the meaning ‘to reduce to dust’ displayed by the Homeric factitive is old, claiming that this meaning “reflète directement le sens fondamental de la racine **mel(H₂)-* ‘broyer, moudre’ (...)”. This means, however, that he has to ascribe the meaning ‘weak, soft, tender’, attested in all branches that have the *u*-stem adjective, to a secondary development from ‘crushed, pulverized’. But it does not seem very likely to me that this semantic development took place independently in at least three branches.

It is possible that the roots **meld-* and **melh₁-* were identical in a pre-stage of PIE. In PIE itself, however, the semantics of **meld-* ‘to be weak or soft’ were already different from those of **melh₁-* ‘to crush’.³⁸² Therefore, I depart from the assumption that the precursor **(ā)μαλδύς* had the meaning ‘weak, soft’, like all its cognates. This meaning developed within Greek to ‘flaccid, porous’, as attested in the gloss *βλαδαρόν· ἐκλελυμένον, χαῦνον*.³⁸³ From a *u*-stem adjective with this meaning, the factitive verb **(ā)μαλδύνω* could be formed in the meaning ‘to make porous’, i.e. ‘to corrode’, attested in Homer with the Achaean wall as its object. This shows how both *ἀμαλδύνω* and the glosses with *βλαδ-* can be derived from a PIE root **meld-* meaning ‘to become weak’.

It remains to explain the difference in vocalization between **(ā)μαλδύ-* and **βλαδύς*. A proterodynamic adjective **mēld-u-*, **m̥ld-éu-* ‘soft, weak, mollified’ can be reconstructed for the proto-language.³⁸⁴ It cannot be assumed, however, that both **μαλδ-* and **βλαδ-* were ever present in the same *u*-stem paradigm, at least not within the same dialect. After the vocalization **l̥ > λα*, one expects that this paradigm was remodeled either to (1) **mēldus*, Gs. **maldéwos* >> **maldús*, Gs. **maldéwos*, or directly to (2) **mladús*, Gs. **mladéwos*. If we depart from scenario (2), we could explain **βλαδύς*, but not *ἀμαλδύνω*. Moreover, other *u*-stem adjectives like *βραδύς*, *βραχύς* and *κρατύς* underwent scenario (1). If (1) applies, *ἀμαλδύνω* receives a straightforward explanation, but this would leave **βλαδύς* unexplained.

I can see two possible ways out of this dilemma. First, it is possible that the glosses with *βλαδ-* are not from Ionic, but from a different dialect. Although the glosses are Ionic-Attic on a default interpretation, there is nothing to conclusively prove their Ionic origin. Since most of the post-Homeric occurrences of *ἀμαλδύνω* are found in the Hippocratic Corpus, it is possible that the forms with *βλαδ-* are also from this collection of works, of which a considerable number are now lost. The lexical meanings attested in the glosses, such as ‘flabby’ and ‘porous’, would be compatible with medical terminology. In that case, it may be wondered whether *βλαδαρός* and other forms could be of Doric origin: after all, Hippocrates and his pupils lived and worked on the island of Kos. This speculation may receive some support from the adjective *πλαδαρός*. One of its meanings is ‘flaccid’, the meaning attested for the gloss *βλαδαρός*, and *πλαδαρός* is also attested in the Hippocratic corpus (and nowhere else before the end of the Classical period). It is possible, therefore, that *πλαδαρός* replaced the older form *βλαδαρός* in Ionic-Attic, perhaps influenced by the verb *πλάσσω* ‘to knead (a weak mass)’. In this case, *βλαδαρός* could perhaps be a Doric form of the same adjective, and *πλαδαρός* could contain an indirect trace of the regular outcome of the non-ablauting zero grade root **m̥ld-* in Ionic. If this is correct, a non-Ionic origin of the gloss *βλαδεῖς* cannot be excluded either.

Secondly, it is not certain that the root shape *βλαδ-* arose in the *u*-stem adjective. In the adverbs in *-α* (see section 4.1.5, and cf. the regular outcome in *κάρτα*), where the zero grade is expected from an etymological point of view, an outcome *βλαδ-* < **m̥ld-* would have been protected against the analogical influence of full grade forms. A form *βλαδά* is indeed

³⁸² Cf. the translations of the root meanings in the *LIV*², **meld-* ‘weich werden’ versus **melh₂-* ‘zerreiben, mahlen’. I would rather reconstruct the latter as **melh₁-* in view of e.g. Myc. *me-re-ti-ri-ja* ‘female grinders’.

³⁸³ Note that G. *weich* may mean both ‘weak, soft’ and ‘flaccid’.

³⁸⁴ See above on Lat. *mollis* ‘soft, gentle’ < **mēldw-i-*.

attested among the glosses from Hsch. Although the precise scenario by which the other adjectival glosses came into being must remain unclear, it cannot be excluded that some of them were backformed to this adverb.³⁸⁵

In conclusion, *(ἄ)μαλδύς, presupposed by the factitive verb ἄμαλδύνω ‘to corrode’, is the expected continuant of the inherited *u*-stem adjective **meld-u-*, **m̥ld-ew-* ‘weak, flaccid’ in Ionic-Attic. The ἄ- of ἄμαλδύνω may have been secondarily introduced from a different lexeme, and the outcome -αλ- is due to paradigmatic leveling. The glosses with βλαδ- are not easy to explain, but I have made two suggestions: the form βλαδεῖς could be non-Ionic-Attic, or it may be secondary beside other formations where βλαδ- would be expected, such as the adverb βλαδά or the thematic adjective βλαδαρός. Neither of these suggestions is entirely satisfactory, but it must be stressed that *βλαδύς would not be the expected outcome of **meld-u-*, **m̥ld-ew-* in any case.

4.5 θρασύς and θαρσύνω

The adjective θρασύς ‘bold’ is attested from Homer onwards, in poetry and prose alike. Since the full grade of the root is θερσ-, θρασύς < **d^hrs-ú-* seems to be a strong counterexample against the claim that **r* > -αρ- is the regular Ionic-Attic development. We have seen in the previous section, however, that θρασύς behaves differently from *u*-stem adjectives with a similar root structure: the zero grade reflex does not show the influence of the original full grade root θερσ-. Given the leveling that led to κρατύς, βραχύς, and βραδύς, one would expect an ablauting **d^hérs-u-*, **d^hrs-éu-* to end up as ⁺⁺θαρσύς. Although some historical grammars cite such a form³⁸⁶, it is unattested as an appellative; there are only a few personal names with θαρσυ-, but not in Ionic-Attic.

Let us now consider the derivational system of this root in its entirety, first in Homeric, then in Classical Greek. The semantics of the attested formations play a key role, because they may help us to establish the historical and synchronic derivational relationships.

4.5.1 The roots θρασ- and θαρσ- in Homeric Greek

The following table contains the attestations of the two root shapes θρασ- and θαρσ- in Homeric Greek.

³⁸⁵ βλάδαν· νοθρῶς ‘slothful’ (adv.) may perhaps have acquired its -v from the following word; βλαδαρά, βλαδαρός may perhaps have added -ρό- to the adverb βλαδά (cf. λιπαρός ‘fat’ beside λίπα in Homer, Risch 1974: 363), or may have undergone influence of semantically close adjectives in the meaning ‘flaccid, sluggish’, especially πλαδαρός (only in medical literature). Finally, βλαδόν· ἁδύνατον could be corrected to βλαδύν (as suggested by both Frisk and *DELG*, but rejected by de Lamberterie). If so, all forms can be reduced to a *u*-stem adjective and an adverb in -α. But it must be admitted that the evidence is very shaky and can be analyzed in various ways. De Lamberterie (1990: 362) also points at the gloss ἁβλαδέως· ἡδέως ‘in a pleasant way, agreeably’ (Hsch.). The meaning ‘pleasant’ could be derived from ‘soft’, in which case the addition of ἄ- would have to be secondary (cf. on ἄμαλδύνω). Both for semantic and formal reasons, this seems preferable over assuming a privative *s*-stem compound **ḡ-m̥ld-es-*: a zero grade root **m̥ld-* would be unexpected as the second member of a compound.

³⁸⁶ Lejeune (1972), Sihler (1995); Chantraine’s reference (*DELG* s.v. θάρσος) to a “θαρσύς (attesté en composition)” may give rise to confusion.

θρασ-	Θερσ-, θαρσ-
θρασύς ³⁸⁷	
θρασυκάρδιος, θρασυμέμνονα, PN Θρασυμήδης (10x), Θρασύμηλον (1x).	PNs Θερσίλοχος, Θερσίτης
	θαρσύνω ‘to instill courage’
	θάρσυνος ‘confident’ (2x) ³⁸⁸
	θαρσαλέος ‘tenacious, persevering, audacious, etc.’
	πολυθαρσής (3x) PNs Ἀλιθέρσης, Πολυθερσεΐδης (<i>Od.</i>).
θράσος ‘courage’ (only <i>Il.</i> 14.416)	θάρσος ‘courage, perseverance’ (12x)
	θαρσέω ‘to hold on, keep the courage’ (24x: 2s. pres. ἰπν. θάρσει 16x, aor. θαρσησ-)

Table 4.2: *θρασ-* vs. *θερσ-*, *θαρσ-* in Homer

From this table, it becomes apparent that there are no true doublets in Homeric Greek. The only exception is the neuter θάρσος, beside which the hapax θράσος may be analyzed as a nonce formation on the model of κράτος ~ κάρτος.³⁸⁹ All instances of θαρσ- can be explained as analogical zero grades, or they secondarily introduced -α- into a pre-form with *θερσ-. The full grade root of θέρσος, attested in Alcaeus, has been replaced by θάρσος in Ionic-Attic. Similarly, πολυθαρσής replaces -θερσής, which is preserved in Homer only in the personal names Ἀλιθέρσης and Πολυθερσεΐδης. Leaving θράσος aside, then, it is remarkable that the root allomorph θρασ- is limited in Homer to the *u*-stem adjective θρασύς and the compounds with first member θρασυ- (including personal names).³⁹⁰ This distribution calls for an explanation.

In his extensive treatment of the semantics of the root θερσ-, de Lamberterie (1990: 854) draws attention to the use of θαρσαλέος, not θρασύς, as the adjectival counterpart of the Caland formations θάρσος ‘confidence, courage’, πολυθαρσής ‘very courageous’, θαρσέω ‘to

³⁸⁷ Forms of comparison of θρασύς are not attested in Homer (or in Early Greek Epic generally). Their absence could be explained if we assume that they were formed with the suffixes -τερο- and -τατο- already at an early date: the forms θρασύτερος and θρασύτατος contained a tribrachic sequence. But it is also possible that they are later creations of the Classical vernacular. The hapax comparative θράσιον (*Alcm.* fr. 87) must be a secondary formation: it has the wrong Sievers alternant, and an inherited primary comparative would have had the original full grade slot of the root **d^hers-*.

³⁸⁸ θάρσυνος ‘confident’ is a quasi-hapax in all of Greek (it occurs only twice in Homer). Its derivational morphology is unclear; suggestions are listed in Risch (1974: 150-51), with further literature. Since θάρσυνος agrees in meaning with the other θαρσ- forms, it was perhaps created as a metrical by-form for πίσυνος ‘confident’ (*Hom.*+), which is the only comparable formation and has the same meaning.

³⁸⁹ As we will see in chapter 5, only the alternation κράτος ~ κάρτος has a real linguistic basis in Epic Greek. In derivations from the root καρτ- ~ κρατ-, the regular zero grade outcome καρτ- spread from κρατερός ~ καρτερός to other forms where it is not expected on etymological grounds, like κάρτος and κάρτιστος. The root shape θρασ-, on the other hand, is limited to θρασυ- in Homer. De Lamberterie (1990: 852) calls θράσος “un pur doublet du terme usuel θάρσος.” In the sense that there is no semantic difference between θράσος and the normal form θάρσος in Homer, I agree with this claim. But I disagree with the assumption that -αρ- and -ρα- may appear interchangeably as outcomes of a zero grade (“θαρσ- et θρασ- (...) n’étaient à l’origine que des doublets”, 1990: 849), because this supposition does not explain the distribution of the two root shapes in Homer.

³⁹⁰ In compounds and personal names, the allomorphy between Θερσι- and Θρασυ- clearly has a metrical background in Homer (Θερσι- in front of a short root syllable, or with elision in front of a vowel, Θρασυ- in front of a heavy root syllable starting with a consonant). This distribution seems older than the vocalization of **r*, because Θερσι- was probably created on the basis of -θερσής. This shows, on the one hand, that **r* could not be metrically lengthened, and on the other hand that Θρασυ- replaced an older Θρασι- or **t^hrsi-*, as one expects in any case.

be confident', and θαρσύνω 'to encourage, reassure'. This is suggested by the following items of Homeric phraseology:

(1) θαρσαλέον νύ οἱ ἦτορ ἐνὶ φρεσὶν (*Il.* 19.169)

(2) θάρσυνον δέ οἱ ἦτορ ἐνὶ φρεσὶν (*Il.* 16.242)

(3) θαρσύνονθ' ἐτάρους καὶ ἐποτρύνοντα μάχεσθαι (*Il.* 13.767, 17.117 and 683).

The comparison between (1) and (2) suggests that θαρσύνειν ἦτορ is equivalent to θαρσαλέον ποιεῖν ἦτορ. In addition, the juxtaposition of θαρσύνω 'to instill courage' and ἐποτρύνω 'to incite' in (3) brings to mind the pair ὀτραλέως 'lively' : ὀτρύνω 'to incite', which was probably an analogical creation beside θαρσαλέως : θαρσύνω.

De Lamberterie's observation is corroborated by a closer consideration of the two Homeric forms and their semantics. While there are some differences in the use of θαρσαλέος and θρασύς, it is usually claimed that there was no tangible semantic or lexical distinction in Homer.³⁹¹ But if this were correct, the absence of a derivational relation between θρασύς and θαρσύνω would be hard to understand. In my view, θρασύς only means 'bold; reckless' in Homer, and was carefully distinguished from θαρσαλέος 'persevering; audacious; confident', θάρσος 'perseverance; confidence, courage', and the corresponding denominative verbs.³⁹² The phraseological difference between θρασύς and the group of θαρσαλέος, θάρσος, θαρσύνω, θαρσέω goes even further: while the latter forms are frequently opposed to words for fear (δέος, δεῖδω) or restraint (αἰδώς), θρασύς is never used in the same way.³⁹³

The lexical isolation of θρασύς in Homer, which has not been duly noted before, is of considerable importance. It shows that the phonological difference between θρασ- and θαρσ- was accompanied by a semantic difference, and that θαρσ- and θρασ- are synchronically two distinct roots in Homeric Greek. The derivational relation between θαρσαλέος and θάρσος, and especially the absence of such a relation between θρασύς and θάρσος, strongly suggests that the *a*-vocalism in θάρσος and related forms was not introduced from θρασύς, but from a different form.

4.5.2 The roots θρασ- and θαρσ- in Classical Greek

The attested formations and the distribution of the allomorphs θρασ- and θαρσ- in Classical Greek (Ionic and Attic) are listed in the following table. It is necessary to distinguish Ionic from Attic, and poetic forms from prose forms.³⁹⁴

³⁹¹ Classical Attic distinguishes θαρσαλέος 'self-assured' and θάρσος 'courage, (self-)confidence' from θρασύς 'reckless' and θράσος 'arrogance'. This semantic specialization is generally thought to be of post-Homeric date (cf. de Lamberterie 1990: 849), and supposed to have developed by the lexicalization of a pragmatic difference between a pejorative acception 'reckless' and a laudatory meaning 'courageous'.

³⁹² Cf. DELG, s.v. θάρσος: "L'adj. θρασύς se trouve chez Hom. au sens de «brave», comme épithète d'Hector et d'autres héros, de πόλεμος «le combat courageux», enfin comme épithète de χεῖρες «des mains intrépides» (...). Toutefois dans le grec postérieur l'emploi de θρασύς s'est trouvé réservé au sens de «audacieux (en mauvaise part), téméraire, arrogant» (attique) (...). Cette spécialisation est secondaire comme le prouvent les faits homériques et les composés anciens avec θρασύς au premier membre (...)." In my view, the translations proposed by Chantraine are untenable: instead of "combat courageux", I would prefer to translate πόλεμον θαρσύν as 'violent war', θρασειῶν ἀπὸ χειρῶν as 'from their dauntless hands', and as 'reckless' (G. *dreist*) when Hektor or his charioteers are qualified as θρασύς. To be sure, θαρσαλέος also retains traces of this older meaning (cf. de Lamberterie 1990: 853-4), but the important point is that θρασύς never means 'confident, courageous'. I hope to bolster this lexical claim in the near future by discussing all Homeric attestations of θρασύς and θαρσαλέος in a separate publication.

³⁹³ For the opposition with δέος, δεῖδω, etc. see e.g. *Il.* 17.117-8, 24.171, *Od.* 4.825, 6.140, 9.376-7, 17.449, 18.330-1 and 390-1, 19.91. For Thucydides, Huart has 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" (1968: 426).

³⁹⁴ As de Lamberterie (1990: 849) remarks, "[Il convient] de mener l'étude sémantique en distinguant les époques et les genres littéraires".

θρασ- ‘reckless’	θαρσ- ‘courage’
θρασύς ‘bold, reckless, audacious’ (poetry and prose)	
first member θρασυ- (poetry, Pi.+), also frequent in PNs	θερσι-επής ‘with audacious words’ (B.), PN Θέρσανδρος (Pi., Hdt.+) ³⁹⁵
forms of comparison θρασύτερος and θρασύτατος (Hdt., Th., X., etc., never in poetry)	
θρασύνω ‘to embolden’ (Attic, Hp.)	θαρσύνω ‘to encourage’ (general in Ionic prose, Attic poetry, and Th.), θαρρύνω (X.)
	θαρραλέος ‘self-assured, assertive, confident’ (Attic; θαρσ- in Th., Hp. and poetry)
Only κυνο-θρασής ‘impudent as a dog’ (A.)	εὐ-θαρσής ‘courageous’ (A.)
θράσος ‘audacity, impudence’ (Attic, e.g. Ar., X., Pl., but never in Ionic)	θάρσος (Pi., trag., Hdt., Thuc., Pl.), Att. θάρρος (X., Pl.)
	θαρσέω (Att. θαρρέω) especially frequent in impv. θάρρει ‘hold on!’

Table 4.3: *θρασ-* vs. *θαρσ-* in Classical Greek prose and poetry

In Classical Greek, the root allomorph *θρασ-* is found not only in *θρασύς* and the first member *θρασυ-*, but also in the grades of comparison *θρασύτερος*, *θρασύτατος*, in the denominative verb *θρασύνω*, and in the abstract *θράσος*. It is remarkable that Classical prose, unlike Homeric Greek, has the morphological doublets *θρασύνω* ~ *θαρσύνω* (Attic *θαρρύνω*) and *θράσος* ~ *θάρσος* (Attic *θάρρος*).³⁹⁶ As we will see in the next chapter, the situation for *κρατ-* ~ *καρτ-* is exactly the reverse: Epic Greek has the doublets *κρατερός* ~ *καρτερός* and *κράτος* ~ *κάρτος*, whereas Classical prose has no such doublets at all. This purely formal point already suggests that the alternation *θρασ-* ~ *θαρσ-* in spoken Classical Greek reflects a linguistically real phenomenon.

In comparing the Classical alternation *θράσος* ~ *θάρσος* with the Homeric one in *κράτος* ~ *κάρτος*, we have to be careful. Whereas the Homeric alternation is utilized for metrical purposes, the roots *θρασ-* and *θαρσ-* (*θαρρ-*) are semantically distinct in Classical Attic. As is well-known,³⁹⁷ Attic prose generally makes a distinction between *θράσος* ‘audacity, boldness, recklessness’ and *θάρσος* ‘courage, (self-)confidence’, and also between *θρασύνω* ‘to embolden’ and *θαρσύνω* ‘to encourage, give confidence’.³⁹⁸ This distinction is

³⁹⁵ Names in *θρασυ-* are common in inscriptions, and compete with names in *θερσι-* (for an overview, be it an outdated one, see Bechtel 1917: 207 and 211-213). For the idea that their distribution is metrically conditioned, see above. In the extant Odes of Pindar, we find 14 compounds with *θρασυ-* (including 7x a proper name), as against 7 attestations of the adjective *θρασύς*.

³⁹⁶ From now on, I will cite only forms with *-ρσ-*, and refrain from citing the Attic forms with their proper dialectal outcome *-ρρ-*.

³⁹⁷ A clear overview of the semantics of *θρασύς* and related forms can be found in de Lamberterie (1990: 849-59). See also Huat (1968: 426-431), with special focus on Thucydides; a more summary discussion is found in Meissner (2006: 70-71).

³⁹⁸ This semantic distinction has generally been interpreted as a difference between pejorative (*θράσος*) and laudatory (*θάρσος*) values. Cf. Huat (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 (l.c.) formulates it, “The negative connotation becomes more frequent in Attic, and as early as in tragedy the meaning ‘arrogant’, ‘audacious’ prevails (...). Thus, *θράσος* follows *θρασύς*

also broadly respected in Classical poetry, even if there are some instances where *θρασ-* is used instead of expected *θαρσ-*, perhaps for metrical reasons.³⁹⁹ Clearly, *θράσος* and *θρασύνω* were productively created on the basis of *θρασύς* ‘daring, reckless’. The innovative character of Att. *θράσος* is corroborated by its absence from Ionic.

For *θρασύς*, the Homeric meaning ‘bold, daring’ continues to be the normal one in early Classical poetry, also in poetic compounds with *θρασυ-* (see de Lamberterie 1990: 851). But in Classical prose, ‘audacious’ becomes the predominant meaning. Huart (1968: 430) observes that *θρασύς*, like *θράσος*, does not yet exclusively have a pejorative meaning in Thucydides.⁴⁰⁰ But again, this does not imply that Thucydides made no distinction between *θρασύς* and *θαρσαλέος* (as Huart claims): in my view, the difference between *θρασύς* ‘bold; reckless’ and *θαρσαλέος* ‘confident, self-assured’ had already been lexicalized in Thucydides, and even in the Ionic vernacular of Homer’s day (see above).⁴⁰¹

Both Ionic and Attic retain the Homeric verb *θρασύνω*, but we also find *θρασύνω*, based on the adjective *θρασύς* (or perhaps on *θράσος*). It is noteworthy that this allomorphy does not extend to the *-έω* verb, which only appears in the form *θαρσέω* ‘to be confident or reassured’. In Attic, ‘to be(come) bold or audacious’ was expressed not by ⁺⁺*θρασέω*, but by the middle *θρασύνομαι*. This shows, from a different angle, that the only old denominative verbs are *θαρσύνω* and *θαρσέω*, and that *θρασύνω* was a more recent creation, as one already expects on the basis of the lexical differences. This has the important consequence that Homeric *θαρσύνω* is not a metrical replacement of a vernacular form **θρασύνω* ‘to encourage’. We may conclude with some confidence, then, that *θαρσύνω* was not derived from *θρασύς*.

This analysis of the Ionic-Attic material leads to the following overview. The root *θαρσ-* had a productive meaning ‘to be confident, have courage’ and is found, from Homer onwards, in *θαρσαλέος*, *-θαρσής*, *θάρσος*, *θαρσέω*, and *θαρσύνω*. The root *θρασ-* had a distinct meaning ‘bold, reckless’ in Homer, where it occurs only in *θρασύς* and compounds with *θρασυ-*. In Classical Greek, it develops the meaning ‘audacious’ and appears, beside *θρασύς* and *θρασυ-*, in the comp. *-τερος*, superl. *-τατος*, the factitive verb *θρασύνω* ‘to embolden’ and the abstract *θράσος*.⁴⁰² On the basis of the preceding two sections, it can be concluded that the Homeric situation is old:

not only in form but in meaning as well.” De Lamberterie (1990: 856-7) argues that the pejorative connotation may have developed, in particular, in the frequent combination of *θρασύς* with words that are ‘impudent, impertinent’. However, Huart (1968) has shown convincingly that this specific distinction between pejorative and laudatory uses does not hold in Thucydides. On the other hand, he goes too far when he concludes that Thucydides made no distinction at all between the two forms. In my view, Thucydides observes a difference between *θράσος* ‘boldness, audacity’ (frequently with the connotation of surplus, ‘recklessness’), whereas *θάρσος* means ‘confidence, assurance’ (either justified or unjustified, see Huart 1968: 427).

³⁹⁹ De Lamberterie (o.c. 856) mentions A. *Supp.* 772, where *πρὶν ὄρμῃ ναῦν θρασυνθῆναι* means ‘before the ship has reached a safe haven’, and where “on attendrait plutôt une forme en *θαρσ-*”.

⁴⁰⁰ About *θρασύς*, Huart (1968: 430) remarks: “... chez les prosateurs postérieurs à Thucydide, 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.

⁴⁰¹ As for *θαρσαλέος*, see de Lamberterie (1990: 855): “elle désigne toujours l’assurance, la confiance en soi, par opposition à la crainte”. That *θαρσαλέος* is semantically distinct from *θρασύς* is explicitly remarked by Plato, *Leg.* 649c (see *DELG* s.v. *θάρσος*), although *θαρραλέος* does not mean ‘self-confident’ there, but is rendered with *ἀναίσχυντος* ‘audacious’.

⁴⁰² As we have already remarked, poets like Pindar and Aeschylus show some tendency to use forms with *αρ* and *ρα* interchangeably.

Meaning:	‘bold, reckless’	>	‘courageous, self-assured’
adjective	θρασύς		θαρσαλέος
compounds	θρασυ-, θερσι-		
s-stem			θάρσος, -θαρσής
stative and factitive			θαρσέω, θαρσύνω

Table 4.4: The synchronic paradigms of θρασ- and θαρσ- in Homer

4.5.3 Reconstruction

Let us now review the reasons for assuming an older *θρασύς. First of all, as was already proposed by Chantraine (*DELG*, s.v. θάρσος), the factitive verb θαρσύνω seems to presuppose that the *u*-stem adjective had this form.⁴⁰³ This argument has met with objections. Both Tucker (1990) and Strunk (1975) argued that Hom. θαρσύνω may also have been derived from θάρσος. However, we have seen (section 4.2.3) that the basis for such a derivation, as early as Homer, is very small. The main question is: how did the patterning of factitives in -ύνω beside *s*-stem neuter abstracts originate? Homeric καρτύνω cannot have been derived from the *u*-stem adjective, because a form ⁺⁺καρτύς did not exist. The derivation of καρτύνω on the basis of Epic κάρτος, however, presupposes the existence of a model. In the absence of alternatives, it is attractive to think that the pair θαρσύνω : θάρσος was all-important in the emergence of the new derivational pattern. The pivotal role of θαρσύνω is also illustrated by the pair ὀτραλέως ‘quickly’ : ὀτρύνω ‘to incite’, which is clearly based on θαρσαλέος : θαρσύνω. For these reasons, it seems that θαρσύνω presupposes an earlier *θρασύς, which was lost after Homer.

Secondly, we have seen that the expected outcome of an ablauting adjective **d^hérs-u-*, **d^hrs-éu-* would indeed be *θρασύς. If we assume that this form was supplanted and ousted by θαρσαλέος, all pieces suddenly fall into place. Derivational schemes like θαρσαλέος → θαρσύνω and θάρσος → θαρσύνω could emerge only after *θρασύς had fallen in disuse. Although the origin of -αλέος is unclear, θαρσαλέος may have been one of the first instances of such an adjective. In contrast with the *e*-vocalism of κερδαλέος (beside κέρδος) and σμερδαλέος, the *a*-vocalism of θαρσαλέος must have been influenced by *θρασύς. This is the only way to explain the spread of *a*-vocalism through the derivational system. It would be problematic to assume that θρασύς influenced the vocalism of *θέρσος and derivationally related forms prior to the rise of a semantic difference, because one expects such analogical influence to reduce the number of different root shapes, not to increase them.⁴⁰⁴ The derivational isolation of θρασύς in Homer only adds to our suspicion.

If this is correct, why is the *u*-stem adjective attested only as θρασύς, and how did this form come into being? It seems that its deviant root shape can only be explained as the regular outcome of a pre-form **t^hrsú-*. On the other hand, it can be excluded that both θρασύς and *θρασύς resulted from the same original *u*-stem paradigm (see section 4.4.5). The root shape θρασ- was old and frequent in personal names and appellative compounds with θρασυ-

⁴⁰³ “Le verbe dénominatif confirmerait l’existence de *θρασύς et se présente sous deux formes: θαρσύνω (att. θαρρ-) «encourager, donner confiance», etc. (Hom., ion.-att., etc.) et θαρσύνω «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.” (*DELG* s.v. θάρσος). Although I agree with Chantraine concerning *θρασύς, I disagree that *θρασύς and θρασύς were simply doublets: “... la forme [θρασύς] pouvant être analogique de θαρσύς (attesté en composition) qui présente le traitement -αρ- de **r*, θέρσος, etc. (...)”, where Chantraine refers to Lejeune (1972) for explanation of the double reflex of **r* by liquid metathesis.

⁴⁰⁴ The discrepancy between the vowel slots of θάρσος and θρασύς, in connection with the spread of the *a*-vocalism, was first taken seriously by Tucker (1990).

(θρασυμήδης, θρασυμένων, etc.; frequent from Homer onwards, cf. de Lamberterie 1990: 851).⁴⁰⁵ Unlike in the *u*-stem paradigm, the reflex of **t^hrsu-* in these forms could not be influenced by the full grade **t^hersu-*. It may therefore be wondered whether θρασυ- < **t^hrsu-* originated in these compounds. Note that the compounds retain an older meaning of the root **d^hers-*, ‘to persevere, be intrepid’, as opposed to θαρσ- ‘courage, confidence’.⁴⁰⁶ This still does not explain, however, why we find the reflex θρασυ- rather than θαρσυ-. This could theoretically be mended by assuming that the change **r* > -ρα- was conditioned by the following -σ-, a possibility which I will further discuss in section 9.1.

But even if compounds and personal names with θρασυ- were highly frequent, it seems somewhat *ad hoc* to assume that θρασύς was backformed from them. Moreover, as we will see in chapter 9, θρασύς is the only relatively strong piece of evidence in favor of a conditioned change **r* > -ρα- in front of -σ-. In view of the problematic status of θρασύς, it may be worthwhile to consider whether this form may have arisen within Epic Greek. This option will be further explored in chapter 6, where I propose that -ρα- was the regular outcome of “Epic **r*”, i.e. **r* which was retained in Epic Greek after the vernacular vocalization to -αρ-. The formula θρασειάων ἀπὸ χειρῶν will play a crucial role in the argument, because it may contain the direct reflex of a pre-form **t^hrsewiāōn*.

Some of the above considerations may appear far-fetched, but they arise from an attempt to take the the distribution of θαρσ- and θρασ- over the attested forms at face value. Excepting proper names and a few Classical poets, the difference between θρασ- and θαρσ- was never a matter of free allomorphy, neither in Homer nor in Classical prose. To summarize the preceding argument: the derivation of θρασύς as the regular outcome of a (non-ablauting) adjectival stem **t^hrsú-* is problematic for several reasons. The expected Proto-Ionic reflex of the adjective **t^hersu-*, **t^hrsew-* is **θαρσύς* ‘bold, intrepid, assertive’, whence θαρσύνω was derived. This form was ousted, in Homer but probably also in the Ionic vernacular, by θαρσαλέος. The vernacular root θαρσ- then developed the meaning ‘courageous, confident’, but the older root meaning was preserved in poetry in θαρσαλέος, the compounds in θρασυ-, and θρασύς. It remains to explain the origin of θρασύς; the possibility that it originated in Epic Greek will be further explored in section 6.7.8.

4.6 Conclusions

Departing 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 **r* or **l*. This holds for the following categories:

- (1) *s*-stem neuters like πλάτος, θάρσος, κράτος, which originally had a full grade root and introduced the zero grade of the adjective;
- (2) *s*-stem adjectives like -πλατής, -θαρσής, -κρατής and the stative verbs in -έω that were derivationally connected to them;
- (3) the *u*-stem adjectives πλατύς, κρατύς, βραχύς, βραδύς, which generalized the full grade slot from the strong stem.

Furthermore, the regular outcome of the *u*-stem paradigm **meld-u-*, **m^ld-eu-* is contained in the factitive verb ἀμαλδύνω, rather than in the gloss βλαδεῖς. Again, the underlying adjectival

⁴⁰⁵ Names in θρασυ- are also common in inscriptions (see the overview in Bechtel 1917: 211-213). In the extant Odes of Pindar, there are 14 compounds with θρασυ- (including 7x a proper name), as against a mere 7 instances of θρασύς. The grades of comparison θρασύτερος, -τατος are attested first in Classical Greek and need not be old.

⁴⁰⁶ An overview of these compounds, including their semantics, is given by de Lamberterie (1990: 851). In my view, Chantraine is mistaken when he posits an original meaning ‘confidence’: “Le sens originel du radical «avoir confiance» a tendu en attique à être coloré différemment dans les formes en θαρ- ou en θρα-, les premières étant prises en bonne part, les secondes en mauvaise part” (DELG s.v. θάρσος).

stem *(ᾰ)μαλδν- owes its vowel slot to a leveling of the older root ablaut. It is possible, but not certain, that βλαδ- is the Ionic outcome of *m₁ld-.

Only one *u*-stem adjective shows the regular reflex of *_r: the *plurale tantum* ταρφέες < PGr. *t^h_rp^h-éw-es, where the strong stem was eliminated at an early date together with the entire singular. We have seen that τραφερός can be analyzed as an analogical formation based on κρατερός. In the next chapter, we will see that the regular reflex *_r > -αρ- is also found in καρτερός and κάρτα.

Chantraine's idea to posit an earlier adjective *θαρσύς may explain various peculiarities: the replacement of θερσ- with θαρσ- (rather than ⁺⁺θρασ-) in various derivatives, the central role of θαρσαλέος within the derivational system, and the limitation of the root allomorph θρασ- to θρασύς. It is therefore attractive to assume that θαρσαλέος, whatever its origin, replaced older *θαρσύς, the expected outcome of the inherited adjectival paradigm.

Most adjectives in -αλέος were derived not from *s*-stem neuter abstracts, but from compounded *s*-stem adjectives. A number of adjectives in -αλέος may have replaced earlier *u*-stem adjectives for metrical reasons. For this reason, apparent zero grade forms like θαρσαλέος, ταρβαλέος need not contain the direct outcome of a pre-form with *_r: the *u*-stem adjective which they replaced may have levelled its vocalism at an earlier stage. The derivation of factitives in -ύνω from *s*-stem abstracts probably started in the pair θαρσύνω : θάρσος after the older form *θαρσύς had been replaced by θαρσαλέος.