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Ἄτλας ἀστεμφής: Traces of local particles in Greek compounds and the origins of intensive alpha¹

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Abstract: In Greek compounds, non-privative ἀ- is normally derived from copulative *sm̥- (cf. Vedic sa-, sam-) or from *η-, allegedly the zero grade of the preposition ‘in’. In this paper, I propose that various such compounds contain traces of local particles. A reconstruction with ἀν- (the apocopated form of ἀνα-) is proposed for the nominal compounds Ἄτλας, ἀστεμφής, ἀσπερχές, while PIE *h₂ed- (as in Latin *ad*, Gothic *at*) is recognized in ἄχρι, ἀσπάζομαι, ἀθρέω, ἀτενής, ἀσελγής, and ἀχανής. The remaining body of evidence for intensive and copulative alpha is also scrutinized. I argue that Greek preserves traces of *sm̥- not only as a nominal prefix, but (like Indo-Iranian) also as a preverb. I see no compelling reason, however, to posit PIE *η- as the zero grade of ‘in’.

1. Introduction: the origins of intensive alpha

The Greek compositional prefix ἀ- is used in a number of quite different ways. Apart from the productive ‘alpha privativum’ (α στερητικόν), a number of Greek words have been analyzed since antiquity as containing ‘alpha copulativum’ (α ἀθροιστικόν) or ‘alpha intensivum’ (α ἐπιτατικόν). The boundaries between the last two categories are not always clear, and there is no scholarly agreement on the origin of intensive alpha. Did it arise from a specific use of copulative alpha (PIE *sm̥-), or does it continue certain local particles² (notably *η- ‘in’, the alleged zero grade of ἐν-)?

In this paper, I will propose a new etymological analysis for a considerable number of words thought to be formed with copulative or intensive alpha. These proposals will have implications for the phenomenon of alpha intensivum itself. By way of introduction, let us

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² Throughout this paper, I will use the term ‘local particle’ to refer to adverbials such as ἀνά, ἐν (or their prehistoric predecessors) that could be used as prepositions or postpositions, preverbs, or as independent adverbials.

first consider the synchronic functions and historical differences between the various α - prefixes in more detail.

Copulative alpha is originally aspirated (α -) and derives from PIE $*sm-$ ‘one, same, together’. Etymologically, it corresponds directly to the Vedic prefix and preverb $sám$ ($sam-$, $sa-$) ‘together; completely’.³ Due to the effects of Grassmann’s Law and psilosis, forms with α - came into existence as well, e.g. ἄλοχος ‘bedmate’, ἀτάλαντος ‘equal, like’ < ‘of the same weight’.⁴ The copulative prefix appears in a number of different compound types. Cases like ἄλοχος are possessive compounds meaning ‘having the same X’. In other compounded adjectives, the prefix denotes a being together, e.g. ἀθρόος ‘compact, thronged’ or the determinative compound ἅπας ‘entire, (pl.) all together’. As I will argue below, there are also traces of deverbal compounds. Thus, copulative alpha is an unproductive relic, and it appears in various different types of formations.⁵

On the other hand, there is *alpha intensivum*, which is supposed to “strengthen the force of compounds” (thus *LSJ* s.v. α -, III.), and which is never aspirated. The handbooks and lexica cite examples like ἀσπερχές ‘furiously’ (to σπέρχω ‘to hurry, rage’) and ἀτενής ‘intense’ (to τείνω ‘to stretch’). It is clear that the prefix α - in such forms cannot be analyzed as privative, but otherwise the ‘intensive’ semantics is not well-defined.⁶ The origin of *alpha intensivum* is debated, too. How can we explain the existence of a compositional prefix α - homonymous with α - ‘un-’, but with a diametrically opposed function? Nowadays, it has become something of a standard procedure to admit two possible origins for this ‘intensive alpha’, without making a clear decision: it is considered either to have the same origin as copulative alpha, or to derive from a zero grade $*\eta-$ ‘in’, or both.⁷ Let us consider both scenarios more closely.

³ On $sám$, $sam-$ vs. $sa-$, see Wackernagel (1905: 73–77).

⁴ Cf. also ἄκοιτις ‘wife’, ἀδελφεός ‘brother’, ἀκόλουθος ‘accompanying’, and some other examples (Schwyzer 1939: 433). Homer also has three words with copulative α - (ἄπατρος, ἄτριχες, οἰετέες); these are commonly thought to be Aeolisms, but one could also assume a Mycenaean origin.

⁵ Cf. Debrunner (1917: 30), “von frühester Zeit an nur noch erstarrte Beispiele”.

⁶ Cf. Beekes (1969: 24).

⁷ See e.g. Leukart (1986: 342), Peters (1999), Nikolaev (2015), who all mention both possibilities without making a decision.

1.1 *Alpha copulativum* = *intensivum*?

Various handbooks have settled on the opinion that *alpha copulativum* and *intensivum* are in origin the same prefix.⁸ A bridge between both variants has been recognized in a small number of possessive compounds where α - can be rendered with πολυ-, such as ἄβιος ‘rich’ = ‘having much βίος’ (Harpocration, Hsch.).⁹ As for the semantics, endocentric compounds ‘being together with X’ are supposed to have developed into possessive compounds meaning ‘with much X’.¹⁰ Cases like ἀσπερχές ‘furiously’ are then interpreted along the same lines (< ‘having much *σπέρχος’).¹¹

This scenario is, however, not without difficulties. First of all, possessive compounds with α - = πολυ- are hardly attested in early sources, but mainly in lexicographers. This casts doubt on their antiquity. Secondly, the lack of initial aspiration of intensive alpha has to be explained either by Grassmann’s Law or by assuming an Ionic or epic origin. This is possible for a good number of cases, but as Seiler (1958: 3) remarks, if ἀτενής has copulative alpha, it is difficult to explain why it mainly occurs in Attic prose writers and in Aristophanes.¹²

Thirdly, some of the best cases for intensive alpha can be analyzed more naturally as deverbal compounds. To back up the assumption that ἀτενής is based on a neuter *τένος, one might adduce (with Sommer 1909: 22) the Latin substantives *tenor*, *-ōris* ‘sustained movement, course’ and *tenus*, *-oris* ‘cord used in bird-catching’. However,

⁸ E.g. DELG, GEW, and Risch (1974: 216 with n. 29): “Sehr zweifelhaft ist die Existenz eines α intensivum”.

⁹ Also in a few Homeric hapaxes (e.g. ἄξυλος, allegedly ‘with much timber’); these will be discussed in more detail in section 4.2 below.

¹⁰ In the words of Frisk (GEW s.v. α -): “Aus der Bedeutung ‘zusammen, mit etw. versehen’ erwuchs wahrscheinlich das sog. α ἐπιτατικόν (intensivum)”. Cf. also DELG (s.v. α -): “cet α - copulatif présente dans certains exemples une valeur intensive (...), l’idée de «ensemble, pourvu de», etc. se prêtant à s’infléchir en ce sens”.

¹¹ This final point is, however, usually not made explicit. The clearest statement I have found is by Solmsen (1909: 22), who paraphrases ἀτενής, ἀχανής, ἀσπερχές, and ἀστεμφής as “mit Spannung, Gähnen, Andringen, Stütze versehen, darüber in hohem Masse verfügend”, respectively.

¹² Solmsen (1909: 22–24) defended the idea that ἀτενής was borrowed from Ionic into literary Attic. Chantraine (DELG s.v. α -) sees no problem either in assuming that the psilotic form spread to Attic. As for ἄπεδος ‘flat, level’, this form occurs in Herodotus, Thucydides, and Xenophon, and is quite clearly a copulative compound based on πέδον ‘bottom, ground’ meaning ‘having one bottom’. In this case, the genre distribution (only historiographers) and chronology of the authors in question (first Herodotus) can be used as arguments to back up the assumed borrowing from Ionic. For ἀτενής, however, such arguments are not at hand.

it is quite implausible that the forms ἀχανής, ἀσπερχές, ἀστεμφής were all derived from unattested *s*-stem neuters *χάνος, *σπέρχος, *στέμφορ. They rather look like deverbal formations, and this is indeed how they are analyzed by Blanc (1994; fthc.).¹³ If this is true, a copulative analysis of ἀχανής, ἀσπερχές, ἀστεμφής requires that we assume the existence of a preverb ἄ- (e.g. *ἄ-σπέρχω), analogous to the use of Skt. *sám* ‘completely’ as a preverb, the meaning of which developed from ‘together’. It is not quite certain, however, that a similar development is responsible for the ‘intensive’ function of the alleged Greek reflex *ἄ-.¹⁴

In sum, deriving ‘intensive’ ἄ- from copulative *ἄ- is not impossible, but it comes at the cost of certain additional assumptions. It is therefore not surprising that alternative derivations have been proposed for specific cases of ‘intensive’ alpha.

1.2 ἄ- reflecting *η- ‘in’?

There is an old suggestion that some cases of intensive ἄ- continue a zero grade of the preposition ἐν.¹⁵ Schulze (1888: 263–264) drew attention to ἄκαρος (or rather ἀκαρός), a form which is explained as ἐγκέφαλος in the *Etymologicum Magnum* (45.13), as well as to ἀλέγω in the sense ‘to count among’, which he compared to λέγω ‘to count’ in combination with the preposition ἐν. For the adjective ἀτενής, Solmsen (1909: 21–22) cautiously suggested to reconstruct a possessive compound *η-tenes- ‘mit Spannung versehen’, in view of the compound verb ἐντείνω ‘to stretch tight’ and Lat. *intentus* ‘strained, tense, keen at’. Solmsen eventually rejected this in favor of copulative *sm-, but his suggestion was taken up and reinforced by Seiler (1958).¹⁶

Although the view that ἄ- reflects a zero grade corresponding to ἐν- is widely accepted today,¹⁷ there are two potential problems with it.

¹³ I would like to thank A. Blanc for kindly giving me access to the manuscript of his forthcoming monograph.

¹⁴ Typologically, one might think of a perfectivizing function (cf. the use of the preverb *sv* ‘together’ as a perfectivizer in Slavic languages, or the semantics of Germ. *zusammen-* in verbs like *zusammenbrechen*). I do not think that such a grammaticalization would be a likely development within the aspectual system of early Greek, but that is another issue that cannot be dealt with here.

¹⁵ Solmsen (1888: 97 n. 1), Schulze (1888: 263–264), Solmsen (1909: 17–24), Seiler (1958). The idea is widely accepted today.

¹⁶ For other examples (many of them unlikely) that have been suggested to contain *η- ‘in’ in the early scholarly literature, see Seiler (1958: 2). For further discussion of some of these examples, see 4.1 below.

¹⁷ See fn. 8.

First, if one accepts Benveniste's constraint that all PIE roots started with a consonant, the following objection to reconstructing a vowel-initial particle **en* for PIE might be raised. If the local particle 'in' should be reconstructed as **h₁en-*, with a zero grade **h₁η-*,¹⁸ this zero grade would not yield the outcome *ǎ-*, but rather *ěv-* by Rix's Law.¹⁹ It is possible, to be sure, to assume that functional elements like local particles may have formed an exception to the constraints for lexical roots. However, given that some local particles clearly derive from lexical material, this would not be my default assumption.²⁰

A second and in my view more disturbing objection is that the zero grade **η-* 'in' would be homonymous with the negative prefix **η-* 'un-'. Those who derive intensive *ǎ-* from **η-* have to assume that this homonymy already existed in the PIE parent language, and that it was retained in various words down into historical Greek.²¹ In general, homonymy may well be tolerated, but if so, there are often other indicators (apart from the phonology) that guide speakers to the correct interpretation: syntax, word order, and pragmatic factors. The problem with assuming two homonymous, productive compounding prefixes **η-* is that both appear under very similar syntactic circumstances; in practice, this was bound to lead to confusion. Taking into account that a tonic full-grade allomorph **én* was always available, it would be highly surprising if this **én* was not made productive early on, as a means to disambiguate.²²

¹⁸ Thus Beekes (*EDG* s.v. *ěv*).

¹⁹ Rix (1970). In my view, Nikolaev's attempt (2010: 328–333) to reformulate Rix's Law for nasals is unsuccessful. Concerning *ἄκαρπος*, Peters (1986) argues that *ǎ-* may even derive from **h₁η-* if the initial laryngeal was lost in a compound, but this would be a rather costly assumption, given that the evidence for such laryngeal loss is meagre.

²⁰ Dunkel (*LIPP* I, 31) defends the idea that local particles do not conform to Benveniste's root structure constraints. This position is based on his acceptance of certain etymologies (for *ǎ-* as a reflex of 'in', cf. *LIPP* II, 234 n. 84 on *ἄκαρπος* 'brain'). The significance of *ἄκαρπος* in the context of this question is downplayed by Peters (1986), who argues that the initial laryngeal of **h₁η-* may have been lost in composition. For more details, see section 4 below.

²¹ Dunkel (*LIPP* I, 30) admits the existence of homonyms among the PIE particles. I think he is right in principle to include this possibility, but I disagree with the scale on which he admits the phenomenon.

²² Here, we should note that a zero grade form of 'in' certainly existed in PIE, in view of the Balto-Slavic forms (Lith. *j-*, probably also OCS. *ъ* 'in'). However, if the local particle was indeed **h₁en-* (zero grade **h₁η-*), the problem of homonymy did not exist until the loss of initial laryngeals. The Slavic languages generalized the sentence negation *ne* as a negative prefix *ne-* in nominal compounds, and I am inclined to see a motivation for this replacement precisely in the loss of the initial laryngeal of **h₁η-*.

After these general objections, let us discuss the key example ἀλέγω in more detail. Schulze (1888: 263–264) already pointed out two instances of ἀλέγω that have a markedly different meaning: not ‘to care, worry’ but ‘to count among’.²³ He posited two etymologically distinct verbs: ἀλέγω ‘to care, heed, worry’ has the full grade corresponding to ἄλγος ‘sorrow’ and is related to Latin *neglegō* ‘to neglect’, while ἀλέγω ‘to count among’ is derived from λέγω ‘to gather, collect’ with ἀ- reflecting the zero grade of ἐν-. Schulze’s main argument for the reconstruction **η-leg-e/o-*, reiterated by Seiler (1958), is the collocation ἀλέγω ... ἐν, where the preposition is thought to have been reintroduced after the reflex of **η-* had become part of the verb.²⁴

Thus, at first sight ἀλέγω seems a good example for **η-* as a zero grade of ‘in’, no matter whether we accept Schulze’s separation of two verbs or follow Seiler.²⁵ However, another possibility (that has to my knowledge not been envisaged yet) is to reconstruct copulative ἀ-. In order to judge the likelihood of such a proposition, let us consider now whether there is more evidence for copulative alpha as a preverb.

Key examples in this respect are ἀολλής ‘gathered together’ and cognate forms, Ionic ἀλής ‘id., in close formation’, Elean ἀφλανέως ‘all together’, and ἀλανέως· ὅλοσχερῶς. Ταραντῖνοι ‘completely’ (Hsch.). They clearly derive from a pre-form **ση-w/nes-*. As I have

²³ The attestations are Pi. *O.* 2.78 and Alc. fr. 1.2.

²⁴ Unlike Schulze, Seiler also claimed that all different meanings of ἀλέγω should be derived from this **η-leg-e/o-*. Although this is not the place to elaborate on this, I take the opportunity to remark that, in my view, ἀλέγω ‘to count among, subsume under’ (which I reconstruct as **ση-leg-*, for which see below) is in origin a different verb from ἀλέγω ‘to care, heed, worry’ (**h₂leg-*); and that their phonological identity is due to the merger of the reflexes of **h₂* and the syllabic nasals, as well as subsequent psilosis. This separation is contested by de Lamberterie (*DELG Supp.* s.v. ἀλέγω), who points at the verse εἰ δέ μοι οὐκ ἐπέεσσ’ ἐπιπείσεται, ἀλλ’ ἀλογήσῃ ‘if he will not obey my words, but will disobey’ (*Il.* 15.162, repeated in inflected form at line 178). The denominative verb ἀλογέω is derived from a privative compound **ἄλογος* ‘who does not heed’ (it would have to be very old, because normally λέγω does not mean ‘to heed’). In Lamberterie’s view, both this verse and Lat. *neglegere* are “formules anciennes”, which would prove the connection between ἀλέγω ‘to heed, take care’ and λέγω ‘to gather, collect’. However, while I agree that Lat. *neglegere* is best compared directly with Greek οὐκ ἀλέγω, I fail to understand why **ἄλογος* would prove the original identity of ἀλέγω and λέγω, or why the verse-end of *Il.* 15.162 would have to be very old. One might also argue that Homeric **ἄλογος* ‘not taking account, disparaging’ presupposes the existence of λόγος in a sense like ‘account’ or ‘esteem’, which is attested from Heraclitus (late 6th c.) onwards for the simplex.

²⁵ The only alternative reconstruction I have come across is **ad-leg-e/o-*, mentioned by Klingenschmitt (1982: 150), though without any arguments. This is, however, impossible because the resulting geminate *-ll-* would either be retained or reduced with compensatory lengthening.

argued before (van Beek 2013: 308–309), this pre-form can be related to a present stem **w_lne/o-* ‘to throng’ that also underlies Homeric εἶλομαι ‘id.’ (reflecting **welne/o-* with an analogical full grade). To be more precise, **sm-w_ln-es-* was derived from a compound verb **sm-w_lne/o-* ‘to flock together’. Thus, the adjective ἀολλής and its cognates are precious evidence for the existence, in Proto-Greek, of a preverb **sm-* meaning ‘together’ and directly comparable to the Sanskrit preverb *sám*.

A second instance of a preverb **sm-* ‘together’ might be ἀβολέω ‘to meet’, a verb occurring in Hellenistic poetry that is semantically equivalent to Homeric ἀντιβολέω. Its ἀ- is normally analyzed as copulative (cf. *GEW* s.v., following Schwyzler 1939: 433). The verb would probably have been based on a nominal form **ἄβολος* ‘getting together’, but such a derivative has to be deverbal itself and thus presupposes the prior existence of **ἄ-βάλλω*.²⁶

In this light, it becomes an attractive possibility to also assume a preverb ἀ- in ἀλέγω, given its meaning ‘to count among’. This would presuppose that the form is psilotic, but that would not be an insuperable problem in a poetic verb. I conclude that a pre-form **sm-leg-e/o-* (with subsequent psilosis) is possible in terms of phonology, and is semantically at least as attractive as Schulze’s reconstruction **η-leg-e/o-*.

1.3 ἀ- reflecting other local particles

If a key example like ἀλέγω can be given an alternative explanation, and in view of the problems connected with the assumption of two homonymous prefixes **η-* ‘un-’ and **η-* ‘in’ for the proto-language, we should ask whether the latter assumption is really necessitated by the Greek evidence. It would be attractive to have a scenario in which the polysemy of ἀ- in certain compounds is due to more recent sound developments – as happened to copulative ἀ- after psilosis and Grassmann’s Law. There are, however, instances of ἀ- that are not easily derived from copulative ἀ-, and for which other possible pre-forms have to be considered.

Indeed, long ago there has been an attempt to recognize ἀ- in a number of verbs as a reflex of the preverb ἀν-, the apocopated variant of ἀνα- ‘up, along’. Against Solmsen’s suggestion (1888: 97 n. 1) to recognize the zero grade of ‘in’ in ἀσπαίρω ‘to twitch’ and ἀσκαρίζω

²⁶ Possibly, the adjectives ἀπλός ‘simple, uncompounded’, ἀθρόος ‘compact’, and the adverb ἅπαξ ‘one time’ are also deverbal, even if the root etymology of their second members is not entirely clear.

‘to jump up’, Kretschmer (1895: 566) made the following objection: “man sieht nicht ein, was in verben, die “aufzucken, emporspringen” bedeuten, eine praeposition “in” zu tun hat. Eher würde ich darin die praeposition ἀνά suchen, und in der that kann ja auch das hom. ἀσπαίρω aus *ἀν-σπαίρω entstanden sein (...)”. Kretschmer further elaborated this idea later on (1923: 189–190), adducing ἀσπάζομαι ‘to greet, welcome’ as another example.

Phonetically, these proposals are unobjectionable because nasals are lost before /sC/ clusters by regular sound change. In reality, however, Kretschmer’s examples have their problems. The best example is ἀσπαίρω ‘to twitch, struggle’, which is compared to the well-attested PIE root meaning ‘to kick with the foot’ (e.g. Lith. *spirti*, *spiriù* ‘id.’, Skt. *sphurāti* ‘id., to spur on’, Lat. *spernō* ‘to spurn, reject’). Since ἀσπαίρω seems the only old form in Greek,²⁷ a question is how to explain the Greek ἀ-. The assumption of a prothetic vowel (Frisk *GEW* s.v.) can no longer be upheld. Moreover, as Lubotsky (2006: 1008) points out, ἀ- cannot reflect *h₂ in view of the absence of a reflex in Arm. *spārnal* ‘to threaten’ and Hitt. *išparranzi* ‘they trample underfoot’. Hence, Kretschmer’s derivation from *ἀν-σπαίρω ‘to kick upwards, kick again’ deserves serious consideration. It yields an appropriate basic meaning: the Greek verb can be used to describe the convulsions of a dying person. If ἀσπαίρω was the only old form, this would explain why the preverb ἀνα- was not restored.

Problematic, however, is the irregular correspondence between π and ph in Skt. *sphurāti*. Lubotsky (2006) tentatively explains the Indo-Aryan aspirate by assuming that the PIE root was actually *T_{sper}H- (rather than *sperH- or the like), assuming that “t- first became t^h-, and the resulting cluster *t^hsp- then yielded *hsp- > *sp^h-” (2006: 1008). If this is correct, Kretschmer’s attractive reconstruction *ἀν-σπαίρω could be maintained. It is, however, difficult to find further corroboration for the phonetic development assumed by Lubotsky.²⁸ Without a convincing explanation of the Indo-Aryan voiceless aspirate, the appurtenance of ἀσπαίρω to this root remains uncertain.²⁹ It is better, then, not to base any conclusions on ἀσπαίρω.

²⁷ The attested variants σπαίρω and ἀσπαρίζω are normally viewed as late and secondary: cf. *DELG* and *EDG* (both s.v. ἀσπαίρω).

²⁸ I find it difficult to accept Lubotsky’s suggestion (2006: 1009) that the initial vowel of ἀσπαίρω arose from *hsp- in a word-initial consonant cluster which itself reflects PIE *Tsp-, because of the absence of other examples for such a development in Greek.

²⁹ In fact, the *LIV*² reconstructs *sp^herH- in order to account for the Indo-Aryan aspirate, and hence rejects the derivation of ἀσπαίρω from this root, stating that the

The same holds for ἀσκαρίζω ‘to throb, jump’³⁰ (Hippon., Cratin.+) beside σκαίρω ‘to skip, frisk’ (Hom.+; mostly of domestic animals). While Kretschmer’s idea (1895: 566) to derive ἀσκαρίζω from *ἀν-σκαρίζω makes semantic sense, we should note that the etymology is unclear because there are no suitable Indo-European comparanda. Furthermore, the etymological dictionaries agree that the ἀ- of ἀσκαρίζω may have arisen under the influence of ἀσπαίρω. Indeed, given the semantic proximity of these verbs, this cannot be excluded. Finally, as we will see below, Kretschmer’s analysis of ἀσπάζομαι inspires little confidence.³¹

Even if none of Kretschmer’s examples is decisive, it is legitimate to search for ἀ- recovering a local particle *ἀν- in other compounds. This will be done in section 2 of this paper. Next, in section 3, I will explain a number of other cases of intensive ἀ- as continuing the PIE preverb *h₂ed- ‘to’. Finally, in section 4 the remaining evidence for copulative and intensive ἀ- will be evaluated in the light of these new proposals.

2. Evidence for ἀ- from *an- ‘up; along, across’

Before discussing the evidence for ἀ- reflecting an apocopated form ἀν- ‘up; along, across’ in compounds, let us briefly consider the distribution of apocope in this particular local particle. Under which conditions may we expect to find the apocopated form?

In Greek, apocope is not equally widespread in all local particles, nor does it occur in equal distribution in all dialects. As is well-known, Aeolic dialects (especially Thessalian) have apocope on the most extensive scale, while Arcado-Cyprian and West Greek are more restrictive, and Ionic-Attic practically avoids it. Considering individual local particles, apocope is most widespread across the dialects for ἀνά and παρά: the forms ἄν (Aeolic and Arcado-Cyprian ὄν, Arcadian also υν) and πάρ are normal in all dialects except for Ionic-Attic, and both occur irrespective of the following consonant. It is therefore

initial ἀ- remains unexplained. It does not, however, mention Kretschmer’s proposal.

³⁰ The intermediate stage in the development from σκαίρω to ἀσκαρίζω might be a compound *ἀν-σκαρής (cf. the privative compound ἀσκαρές: ἀκίνητον καὶ ἄσκαρθμος Hsch.), given that verbs in -ίζω are frequently derived from s-stem nouns and adjectives.

³¹ There have been other attempts to recognize compounds with ἀν-, e.g. Solmsen’s reconstructions (1902–1903) of ἀπριχάομαι and ἀπρωδέω, but these do not inspire confidence either.

unsurprising that of all the local particles, ἀνά has by far the most cases of apocope in Homer. We find ἄν and ἄν- not only as productive forms, but also in lexicalized and isolated compounds such as ἀμφοδόν ‘openly’, ἀμπερές (in διὰ δ’ ἀμπερές ‘straight through’), ἄνδιχα ‘in two, asunder’ (also διάνδιχα ‘id.’), and ἀντολαί ‘sunrise’.³²

These distributions may be taken to suggest that monosyllabic ἄν (and/or its variant ὄν) did not first arise by the inner-Greek phonetic process commonly called apocope, but that it was inherited from Proto-Greek, at least as a doublet.³³ It is, however, not essential for present purposes to insist on this: in any case, we may expect to find fossilized relics of ἄν- in Homer (and perhaps even in Ionic-Attic prose),³⁴ especially in forms that were no longer etymologically perspicuous. Among compounds starting with ἀ-, one phonetic context suggests itself in particular: in all Greek dialects, ἄν- regularly lost its nasal before *s* plus occlusive.³⁵ In our first example, however, a different development is involved.

³² In verbal compounds, too, apocopated ἄν- is attested both in archaic and productive forms: cf. especially ἀμπεπαλόν ‘brandishing’ and ἄμπνυε, ἄμπνυτο ‘recovered breath’ (beside ἀναπνέω), ἀνδύεται ‘withdraws’ (to ἀναδύω), ἀμπείραντες ‘fixing on a spit’ (beside πείρω ‘to pierce’). It is noteworthy that the Aeolic (Thess., Lesb.) form ὄν does not appear in epic Greek, not even in petrified formations. In my view, therefore, apocopated ἄν is best taken as an archaism of a continuous Ionian tradition.

³³ See Günther (1906: 62–64) and Hermann (1915: 356). The latter remarks that the spread of apocope may have been furthered by the existence of inherited doublets like ἄν (ὄν): ἀνά, πάρ : παρά, and perhaps also πέρ : περί. The distribution between such variants cannot be determined with certainty, but one could surmise that ἄν (etc.) would be original in composition, while ἀνά (*ἄνα) may have been the prosodically independent form. As for the cognates of ἄν : ἀνά, there is Proto-Germanic *ana ‘on, at’ (Goth. *ana*, OE. *on*, etc.), which could be reconstructed as **h₂en-o* (for this *-o*, cf. Myc. *pa-ro* beside παρά). If so, Greek ἀνά may have been influenced by the opposite κατά (cf. Schwyzler 1939: 622). For secondary *-a* in Greek local particles, cf. also διά < **dis* + *-a* (cf. Lat. *dis*, OHG *zir*), as well as μετά beside **me(t)-* in Phrygian μεβερετ ‘carries away’.

³⁴ There is some direct evidence for compounds with ἄν- before a consonant in Ionic and Attic prose, but its probative value is limited. Solmsen (1902–1903: 134) mentions the forms ἀμβολάδην, ἀμβώσας, ἀμπαύομαι, ἄμπωτις (Hdt.), as well as ἀμβάτης, ἀμβολαί (X.), which also occur in tragic dialogue. One could perhaps derive all these forms from the epic language, if one were so inclined, but the forms could also be archaisms of Ionic-Attic itself. Other possible relics of ἄν- and παρ- before a consonant are found in personal names like Ἀνδοκίδης, Παρμενίδης, which have every appearance of stemming from the Ionic-Attic vernacular. Cf. Kretschmer (1909: 51–52) for a discussion of the material.

³⁵ Cf. Lejeune (1972: 138–139).

2.1 Ἀτλας

Ἀτλας, gen. Ἀτλαντος is the name of a mythical figure (a Titan) who carries the heavens or supports the pillars that uphold the heavens. Already at an early date, Atlas functions as a personification of the *axis mundi* in cosmology.³⁶ Besides, the name belongs to several mountains of conical shape, which typically fulfill the same function in cosmologies across the world. In architecture, the plural Ἀτλαντες is used to denote monumental statues (like *telamones* or *karyatides*) that serve as supports. Thus, the primary function of Atlas was to carry the heavens. There is good reason, then, to hypothesize with Chantraine and Frisk (*DELG* and *GEW*, both s.v. Ἀτλας) that -τλαντ- contains the root of τλῆναι ‘to endure, dare’, because the etymological meaning of PIE **telh₂-* is ‘to lift up, carry’.³⁷

If this is correct, the first issue to be discussed is the function of the initial alpha. Both Chantraine and Frisk state that the alpha is copulative, but give no further justification. This is problematic because the expected meaning of a pre-form PGr. **sm-tlānt-* with a verbal second member would be ‘who carries together’ (cf. ἄθροος ‘thronged together’). Schwyzler (1939: 433 n. 2, with reference to Solmsen 1909: 24) proposed an interpretation “der allein / aus eigener Kraft trägt”, but to ascribe such a meaning to copulative alpha would be a case of special pleading.³⁸

In various publications, Beekes has argued for a Pre-Greek origin of Atlas.³⁹ Following Furnée, he notes that a suffix *-ant-* occurs in a number of other Greek words and names with an atypical root structure and no decent Indo-European etymology, and for this reason he ascribes this suffix to Pre-Greek. Indeed, other Greek names in -αντ- that are suspect of borrowing are Ἀβαντες, Γίγαντες, κορύβαντες. He also remarks (*EDG* s.v.) that one does not expect an Indo-European name for a Titan, but this argument is rather weak, if only because the association of Atlas with the Titans may well be secondary (cf. West 1966 on Hes. *Th.* 509).

³⁶ A detailed study of Atlas as a personification of the *axis mundi* is Tièche (1950).

³⁷ See *LIV*² s.v. **telh₂-* ‘aufheben, auf sich nehmen’; the meaning ‘to lift, carry’ is also preserved in Greek in τελαμών ‘carrying strap’. As Frisk (*GEW* s.v. ταλάσσαι) remarks, the semantic slot ‘to lift up’ in Greek was secondarily occupied by ἀείρω.

³⁸ Beekes (1995[1996]: 12¹) calls this interpretation (which he wrongly ascribes to Solmsen) “bizarre”.

³⁹ See Beekes (1995[1996]: 12¹), *EDG* s.v. Ἀτλας and p. xxxvi, and also Beekes (2014: 32 and 161).

While I agree with Beekes that the assumption of copulative alpha is a “desperate guess” (*EDG* s.v.), in my view the root etymology connecting Ἄτλας with τλῆναι can be maintained. I propose to derive the element Ἄ- from the preverb ἀν- ‘up’, yielding a compound meaning ‘who lifts up’. This fits the semantics excellently: as just noted, Atlas upholds or supports the heavens. Moreover, the same combination of preverb and root yielded the intransitive verb ἀνατέλλω and its derivation ἀνατολή. Both forms have cosmological connotations: they may denote the rise of any heavenly body above the horizon. The reconstruction **an-tlānt-* > **an-tlant-* (Osthoff’s Law) presupposes that the verb could still be used transitively before the name Ἄτλας was lexicalized, but this does not seem to create any decisive chronological problems.

In terms of phonetic developments, we should note that a sequence ἀντλ- would normally be retained: cf. ἄντλον ‘bottom of a ship, keelwater’. For the specific case of Atlas, however, I would propose a dissimilation of the difficult cluster *ntl* against the following *nt*, ἀντλαντ- becoming ἀτλαντ- in the oblique cases.⁴⁰ There are no direct parallels for such a dissimilation, but since the semantic side of this etymology is so fitting, and given the rarity of the cluster -ντλ-, it seems justified to make this assumption. One might also object that restoration of the preverb ἀν- would be expected, but against this it can be held that the synchronic meaning of the root aorist ἔτλην (ἀνέτλην) was either ‘to endure, bear, suffer’ or ‘dare’, but never ‘to lift up, carry’ a physical object. In fact, to express the latter meaning (the etymological root meaning of **telh₂-*), Greek uses verbs like ἀνέχω or ἀείρω.

It remains to discuss one final potential objection. It has been assumed that the oldest form of Atlas is represented in Ἀτλᾶγενέων, epithet of the Pleiades at Hes. *Op.* 383. The first member Ἀτλᾶ- would suggest, according to Schwyzler (1939: 526), that the *nt*-stem is a secondary reshaping.⁴¹ If that is true, it may seem problematic that the first syllable of Ἀτλᾶ- has also lost its nasal. However, in defense of the present proposal, it can be said that Ἀτλᾶγενέων is a hapax (so possibly a metrically-induced nonce formation), and that even if the formation is genuinely old, the dissimilation may easily have spread to this epithet once it had occurred in the common form Ἀτλαντ-. Finally, the fact that there are two *variae lectiones*, Ἀτλαιγενέων

⁴⁰ And, before the second compensatory lengthening took place, also in the nom. sg. **Antlans* < **Antlants*.

⁴¹ According to Schwyzler, other forms in which the *nt*-stem could be secondary to an older *n*-stem or vowel stem are Βῖᾱς, Αῖᾱς, Θῶᾱς, and names in -δαμᾱς.

(testes and papyri) and Ἀτληγενέων (sch. A *ad Il.* 18.486), severely undermines the value of the form Ἀτλᾱγενέων.

2.2 ἀστεμφής

The adjective ἀστεμφής ‘firm, rigid’ properly belongs to the epic tradition. It is used to refer to various forms of fixity, mainly physical, but also inflexibility of character. Morphologically, the word poses two problems: the origin of the prefix ἀ- and the root etymology of στεμφ-.

DELG and *GEW* (s.v. ἀστεμφής) both followed Boisacq in assuming copulative ἀ- and a second member somehow related to the verb στέμβω ‘to maltreat, injure (verbally)’, as well as several other lexemes containing one of the roots στομφ-, στεμβ-, or στοβ-. However, the semantic and morphological details of such an analysis have always been unclear. It is obviously problematic that στέμβω has a different root-final stop as compared to ἀστεμφής. Furthermore, if the root meaning were indeed ‘press’, as these scholars assumed, this would have yielded a possible starting point for ἀστεμφής: ‘pressed together’ might develop into ‘hard, firm’. It is problematic, however, that στέμβω is attested only very late (in lexicographers), and that its precise meaning is hard to determine with certainty. It is therefore remarkable that Frisk later (*GEW* II 788, s.v. στέμβω) withdrew his earlier analysis, suddenly translating ἀστεμφής as a privative compound ‘unerschütterlich’ (rather than ‘fest, starr’).⁴² This is based on the assumption that the original root meaning of στεμφ- was something like ‘shake violently, erschüttern’, and this in turn is again based on the supposed connection with στέμβω and the Germanic group of **stampa-* ‘mortar’ and derivatives.⁴³

Blanc (1994) rightly concludes that there is not the slightest synchronic point of contact between ἀστεμφής and the words starting with στομφ-, στεμβ-, and στοβ-. In his view, the two groups are also etymologically unrelated.⁴⁴ He convincingly argues that the root of

⁴² He is followed in this by the *LIV*², s.v. **stemb^hH-* (the final laryngeal is based on the nasal present attested in Indo-Iranian and Tocharian): “Aus semantischen Gründen kaum hierher gr. (nur Lex.) στέμβω ‘schüttle heftig’ und Wörter wie ἀστεμφής ‘unerschütterlich’”. The same semantic interpretation is found in the gloss ἀστεμφής· ἀθαμβής, ἀτάραχος (Hsch.).

⁴³ Beekes (*EDG* s.v. ἀστεμφής) objects to all this that a verb *στέμω is unattested in Greek, but unfortunately did not know the article by Blanc (1994).

⁴⁴ The core meaning of στόμφος and its derivations is, according to Blanc (1994: 23), “jactance prétentieuse ou moqueuse”; moreover, “Il n’y a aucun fait solide qui plaide pour une parenté entre ἀστεμφής, qui fait allusion à une position fixe dans

-στεμφής is related to that of Skt. *stambhⁱ*- ‘to prop, hold firmly’ (cf. also Av. *staβra*- ‘firm’). Semantically, this makes good sense: the adverbs ἀστεμφές and ἀστεμφέως modify the verb ἔχειν on various occasions, and this combination means ‘to hold tight or firmly’. Next, Blanc notes that both ἀστεμφής and Vedic *stambhⁱ*- (pres. *stámbhate*, aor. *ástambhīt*, pf. *tastámbha*) appear in the context of a divine being upholding the firmament. In Vedic cosmology, the action of separating heaven and earth and firmly upholding the heavens is normally ascribed to Indra. In early Greek mythology, the expression ἀστεμφέως ἔχειν occurs once in a comparable cosmological context, where Atlas performs a similar feat:

τῶν πρόσθ’ Ἰαπετοῖο πάϊς ἔχει οὐρανὸν εὐρὺν
ἔστηώς κεφαλῇ τε καὶ ἀκαμάτησι χέρεσσιν
ἀστεμφέως, ... (Hes. *Th.* 746–8)
‘In front of that [resting place of Night], the Son of Iapetos stands,
upholding the broad heavens with his head and his untiring arms, firmly
(...)’

Blanc concludes (1994: 29) that ἀστεμφής was derived from a thematic present *στέμφω or *στέμφομαι ‘to fix, support’ with copulative or intensive alpha.⁴⁵

While I agree with Blanc that ἀστεμφής is probably a deverbal compound, I propose to reconsider the origin of its ἀ-. At first sight, something might be said for a copulative analysis of ἀστεμφής. Given that *sm- ‘together’ occurred as a preverb in Proto-Greek (cf. section 1.2), a verb *ἀ-στέμφω would have the meaning ‘to fix/keep together’, which would be a possible starting point for ‘firm, rigid’. Unfortunately, in Sanskrit, verbal forms of *stambhⁱ*- occur with a preverb *sám* only after the Vedic period, so there is no real comparative support for this idea. Let us therefore try a different avenue.

If the meaning of PIE **stemb^hH-* was indeed ‘to fix, support, prop’, as in Sanskrit *stambhⁱ*-, the original meaning of ἀστεμφής ‘firm’ may have been *‘upholding, supporting firmly’. In this case, it would be attractive to reconstruct ἀστεμφής as *ἀν-στεμφής. As we saw, the

l’espace, et les formes en στομφ-, στεμβ- et στοβ-, qui se réfèrent à des comportements violents ou à des manifestations verbales hostiles”. (1994: 24). Recently, Steer (2010: 177) again proposed to derive στόμφος from the root **stemb^hH-*, assuming a semantic development ‘fixation’ > ‘rigidity’ > ‘arrogance’. This is possible, but in my view by no means compelling.

⁴⁵ The first member of ἀστεμφής is also discussed briefly by Steer (2010: 173 n. 9), who notes the problems with assuming a root meaning ‘to stamp, press’ (and the concomitant privative analysis of ἀ-) for PIE **stemb^hH-*. For a clear summary of these problems, see already *GEW* (s.v. στέμφω).

verb qualified by ἄστεμφές is usually ἔχω ‘hold’. Starting from a phrase ἄστεμφές ἔχειν ‘to support firmly’, the adverb may have been transferred to other kinds of activities that require endurance, such as Odysseus keeping in check the Old Man of the Sea by physical force (ἄστεμφέως ἐχέμεν *Od.* 4.419); and it may have been used metaphorically, as when Agamemnon is exhorted to lead the Achaeans while keeping up his resolve (ἔχων ἄστεμφέα βουλήν, *Il.* 2.344; note the English idiom). A compounded verb *ἄν(α)-στέμφω ‘to prop up’ would also make sense from a comparative perspective. The Vedic verb *stambh*⁴⁶ is frequently accompanied by the preverb *úd*, with the meaning ‘to uphold, prop, support’, and ἀνα- replaced the continuation of PIE **ud-* in Greek. In my view, therefore, *ἄν-στέμφής is an improvement over a reconstruction with copulative or intensive alpha.

2.3 ἀσπερχές

The adverb ἀσπερχές ‘vehemently, furiously’, whence perhaps ‘incessantly’,⁴⁶ occurs six times in Homer. It qualifies anger verbs (μενεαίνω + dat. ‘to be angry (with)’, κεχολῶσθαι), and also verbs denoting impetuous motion (μενεαίνω + inf. ‘to strive eagerly, rage’; ἐφέπω; κλονέω).⁴⁷ The second member of ἀσπερχές clearly belongs with σπέρχω, -ομαι ‘to haste, hurry; be furious’. As for the initial alpha, the etymological dictionaries and lexica agree on the label ‘intensive’.⁴⁸ Some scholars explicitly envisage an origin as copulative alpha, which may either have undergone Grassmann’s Law or lost

⁴⁶ The *Lfgre* s.v. ἀσπερχ(ής) gives “obstinément, avec ardeur, sans répit”; Autenrieth has “eifrig” as well as “heftig, unablässig”. There is no reason, in my view, to admit translations like “without intermission or pause” (Cunliffe): the adjective retains the full force of the verb σπέρχω in most cases. In one passage, however, the meaning of ἀσπερχές is difficult to establish: παῖδες δραγμαεύοντες ἐν ἀγκαλίδεσσι φέροντες / ἀσπερχές πάρεχον (*Il.* 18.555–556). This is the only passage where ‘vehemently, furiously’ does not work, and where ‘incessantly’ would offer an improvement. However, “busily” (Murray) or “eifrig” (Autenrieth) are also acceptable options (cf. *Lfgre*: “difficile à préciser: avec zèle ou sans relâche”). However this passage is to be interpreted, ‘furiously’ is clearly the most common and the more original meaning of ἀσπερχές. To express a temporal adverb ‘all the time’ or ‘incessantly’, the poets had recourse to other phrases, such as ἀσκελές αἰέν.

⁴⁷ Cf. also σφεδανὸν ἔφεπ’ ἔγχει ‘impetuously wielded his spear’ (*Il.* 21.542). In epic diction, ἀσπερχές μενέαινεν (+ dat.) seems to be functionally synonymous with ἐπιζαφελῶς μενέαινεν ‘he was furiously angry’: a comparison between *Od.* 6.330–331 and *Od.* 1.20–21 suggests that the choice between ἐπιζαφελῶς and ἀσπερχές was dictated by the different main caesuras in these lines.

⁴⁸ “Mit *a* copulativum (intensivum) direkt von σπέρχω ‘drängen, einherstürmen’ gebildet” (Frisk s.v.); “tiré de σπέρχω (...) avec un *α*- ‘intensif’ sans aspiration” (*DELG* s.v.); this is also accepted by Beekes (*EDG* s.v.), and cf. also *Lfgre* s.v. ἀσπερχ(ής).

its aspiration by psilosis.⁴⁹ Although this is phonologically possible, semantically such a reconstruction has no particular appeal. There is no indication that ‘furiously, incessantly’ developed from a verbal compound *ἄ-σπέρχω with ἄ- in the sense ‘together’. As for the interpretation as a possessive compound ‘with *σπέρχος’ (Solmsen 1909: 22), the problems discussed in section 1 (the absence of *σπέρχος and the general rarity of this type of compound) make it worthwhile to consider alternatives.

In my view, it would be attractive to derive ἄσπερχές regularly from *ἄν-σπερχές, with ἄν- in the distributive sense ‘across’.⁵⁰ This is supported by the fact that κατα- ‘downwards; along, across’, the opposite of ἀνα-, also occurs in the compound κατα-σπέρχω. It does not come as a surprise that the verb ἀνα-σπέρχω is not attested in Greek, because σπέρχω and its compounds were, to judge from the pattern of attestations, being eliminated from the language in any case. The basic meaning of *ἄν-σπερχές can be posited as distributive, ‘raging all over the place, hurrying all the time’.

There is, however, a second possibility. The only other attested verbal compound is ἐπισπέρχω ‘to rush, rage furiously; urge on’. It is attested already in Homer (*Il.* 23.430; *Od.* 5.304, 22.451), both transitively and intransitively; the compound adjective ἐπισπερχής ‘hurried’ is attested in Classical Greek.⁵¹ Taking into account that ἐπί is one of the local particles that took over the functions of PIE *h₂ed- in Greek, it would be possible to derive ἄσπερχές from an intransitive present *ad-sperk^he/o-. The preverb *h₂ed- expressed a directedness of the verbal action at a goal, and we may assume (as happened with ἐπισπερχής) that ἄσπερχές originally qualified such verbal actions, as in the verse Ἑκτορα δ’ ἄσπερχές κλονέων ἔφεπ’ ὠκύς Ἀχιλλεύς ‘swift Achilles pursued Hektor, violently harassing him’ (*Il.* 22.188).

Without further evidence, the second reconstruction seems rather far-fetched, or at best a remote possibility. As I will now argue, however, there are several other remnants of the local particle *h₂ed- in Greek.

⁴⁹ Thus Solmsen (1909: 22–24), Frisk (*GEW* s.v. ἄσπερχές), Risch (1974: 216 n. 29).

⁵⁰ This reconstruction was suggested already by Cunliffe (1924 s.v. ἄσπερχές), though without further argumentation.

⁵¹ The other attested compound with a preverb is περισπερχής.

3. Compounds with \acute{a} - from *ad- (PIE *h₂ed-)

3.1 ἄχρι

The adverb and preposition ἄχρι ‘until the end, utterly; up to; as long as’ is attested from Homer onwards in Attic and Ionic prose.⁵² It is usually reconstructed as Proto-Greek * $\acute{m}g^h(s)ri$, and supposed to be an ablauting form of μέχρι < * $me\acute{g}^h(s)ri$ ‘up to, as far as, until’, which equally occurs from Homer onwards in Attic and Ionic prose, with a large functional overlap with ἄχρι.⁵³ In view of the Armenian adverb *merj* ‘near, close’, a Graeco-Armenian isogloss can be reconstructed; the word can be further segmented as * $me-\acute{g}^h sr-i$, a petrified phrase meaning ‘up to the hand, at hand’ and consisting of the preposition * $me(t)$ ‘with’,⁵⁴ and a reduced form * $\acute{g}^h sr-i$ of the locative (cf. Gr. χεῖρ < * $\acute{g}^h es-r$).

It is, however, not unproblematic to analyze ἄχρι as an ablauting variant of μέχρι. As Dunkel (*LIPP* II: 12 n. 25) remarks, there is no independent evidence suggesting that the local particle * $me(t)$ could undergo ablaut. Moreover, there would be no morphological motivation for having two coexisting petrified adverbials * $me\acute{g}^h(s)ri$ and * $\acute{m}g^h(s)ri$. It would be theoretically possible to assume that * $\acute{m}g^h(s)ri$ was the oldest form, and that the full form of the preposition was (re)introduced in * $me(t)-\acute{g}^h(s)ri$. Such an introduction, however, would have to be quite old and would lack a clear motivation. Finally, an inherited syntagm * $\acute{m}g^h(s)ri$ with only zero grades would be odd. In view of these problems, it is much more attractive to assume that ἄχρι continues a petrified prepositional phrase * $h_2ed-\acute{g}^h(s)r-i$, formed exactly like * $me-\acute{g}^h(s)r-i$, but with a different local particle.⁵⁵ Indeed, * h_2ed could probably govern both the accusative and locative case in PIE: most of Germanic has generalized the dative (with remnants of the accusative in e.g. Gothic *at*), while Latin generalized accusative rection for *ad*, even with locatival semantics.⁵⁶

⁵² It also occurs in the Heracleian Tables and in other, mainly West Greek, dialect inscriptions. For the distribution of ἄχρι and μέχρι across the dialects, see Günther (1906: 18–19).

⁵³ For the reconstruction ἄχρι < * $\acute{m}g^h(s)ri$, see *DELG* and *EDG* s.v. ἄχρι. Frisk’s suggestion (*GEW* s.v. ἄχρι) that ἄχρι may have arisen by “contamination” of μέχρι and another, unknown synonymous adverb is clearly gratuitous.

⁵⁴ Cf. Gr. μετά (+ gen. or dat.) ‘among, between’, Thess. μες ‘until’, Phryg. μεβερει ‘carries away, deprives of’, and Goth. *miþ*, Germ. *mit* ‘with’.

⁵⁵ This was already suggested, though without any argumentation, by Klingenschmitt (1982: 150) and recently taken up by Dunkel (*LIPP* II: 12). In Dunkel’s view, ἄχρι contains the only trace in Greek of PIE * h_2ed .

⁵⁶ Cf. Brugmann (1911: 794).

In what follows, I propose to recognize **ad-* in a number of other Greek compounds. Before stating these proposals, it will be useful to review the semantics and functions of PIE **h₂ed*, and by which local particle(s) these functions were taken over in Greek.

3.2 PIE **h₂ed* and its continuation in Greek

The Indo-European local particle **h₂ed* is continued in Italic (Latin *ad* ‘to, up to, into’), Celtic (Old Irish *ad-* ‘to’, Old Welsh *ad* ‘to’), Germanic (Gothic *at* ‘at, near’, etc.), and Phrygian (e.g. *αδδακετ* ‘affects, does’).⁵⁷ Recently, Garnier (2014) has plausibly suggested that the Sanskrit preverb *ā-* ‘towards, against, up to’ and its Iranian congeners should equally be derived from **h₂ed*. The preverb can therefore be safely reconstructed for at least Nuclear Indo-European.⁵⁸ Its function was to designate a goal and, in connection with verbal roots, to reinforce the idea of directedness.⁵⁹

Clearly, all Greek dialects lost **ad* as a local particle and replaced it with other forms. In Ionic-Attic Greek, the functions of PIE **h₂ed* are exercised by two other local particles: *πρός* + acc. ‘to, towards, against’ and *ἐπί* + acc. in the meaning ‘upon, onto, towards’. Indeed, the original meaning of **h₁épi* is reconstructed as ‘on top of, upon’, and hence also ‘onto, at’ with verbs of movement.⁶⁰ Phrygian, however, retains *αδ-* as a productive preverb and preposition, e.g. New Phrygian *αδδακετ* ‘afflicts’ (quasi from **h₂ed-d^heh₁k-e-t*)⁶¹ and *ατ Τη* ‘by Zeus’.⁶² This is remarkable, because Phrygian and Greek are generally considered to be part of the same subgroup of Indo-

⁵⁷ See *LIPP* II, 8–13 for these and other forms (though with a reconstruction PIE **ád*).

⁵⁸ That is, Proto-Indo-European after the splitting off of the Anatolian and Tocharian subgroups.

⁵⁹ It is therefore rendered by Dunkel (*LIPP* II, 8) as ‘in Richtung, zu – hin; bei’. See also *LIPP* II, 16: “In Verbindung mit Verbalstämmen verstärkt **ád* den Ausdruck der Richtung, etwa **ád b^her-* ‘hinbringen’, **ád steh₂-* ‘sich hinstellen’ > ‘dazutreten’”.

⁶⁰ See *LIPP* II, 251.

⁶¹ It is unclear whether the attested variation between *αδακετ* and *αδδακετ* reflects a difference in pronunciation or is merely orthographic. Cf. also NPhr. *αββερετ(ορ)* < **ad-b^her-e-t(-)*.

⁶² If Lubotsky (2004) is correct in arguing for a Phrygian *Lautverschiebung* (which I think he is), the Phrygian outcome of **h₂ed* would have to be *ατ*. However, the NPhr. compound *αδειτου* (beside *ειτου*) seems to show that the reflex was *αδ-*. Lubotsky (2004: 232–233) suggests to explain this *αδ-* as a case of word-final voicing, or as a generalization of the (more frequent) assimilated form before voiced stops (as in the attested verbal forms *αββερετ*, *αδδακετ*).

European.⁶³ This is an additional reason to look for more traces of **h₂ed* in Greek, apart from ἄχρη.

Let us pause for a moment. Is it legitimate to recognize traces of an adverb that no longer exists? Traces of other local particles have also been sought in Greek, notably of PIE **ud-* (Ved. *úd* ‘up, out’, Goth. *ut* ‘out’, OCS. *vy* ‘out’), which has certainly been preserved in the forms of comparison ὕστερος ‘coming behind; next, later’, ὕστατος ‘last, latest’. Some scholars have also recognized it in a few other nominal forms, but with limited success.⁶⁴ One of the more promising cases is ὕστριξ, -ίχος ‘porcupine, hedgehog’ which can be interpreted as ‘having its hairs up’, with θρίξ ‘hair’ as a second member. The dictionaries have, however, been hesitant to accept this etymology: for instance, *DELG* s.v. remarks that **ud-* does not otherwise appear with the meaning ‘upwards’ in Greek.

Thus, we have to be careful in assuming reflexes of **ad-*. We may compare Seiler’s methodological remark (1958: 3) that the reconstruction *ā-* < **h₂-* ‘in’ can be accepted only “wenn die Funktion ‘in’ hinsichtlich des Gesamtsinns der postulierten Zusammensetzung semantisch besser passt als irgendeine andere Funktion von *ā-*”. The same should hold for assuming **ad-*. On the other hand, the existence of *ad* in Phrygian considerably reduces the chronological gap between attested Greek and a pre-stage that still had the reconstructed **ad-*. In other words, the existence of **ad-* in Proto-Graeco-Phrygian gives us a good reason to look for traces also in Greek. In order to back up the etymologies that follow, I will pay close attention not only to semantics, but also to phraseology.

3.3 ἀσπάζομαι

The verb ἀσπάζομαι ‘to greet, welcome’ is nowadays generally said to be of obscure etymology.⁶⁵ Seiler (1958: 21) followed a proposal by

⁶³ Phrygian and Greek share important phonological innovations like the vocalization of word-initial laryngeals before consonants and a threefold reflex of the laryngeals (cf. the middle ptcl. Phryg. and Gr. -μενος < **mh₁no-*, Phryg. *αναρ* ‘man’ < **h₂nēr*, and Phryg. *ονομαν* ‘name’); they also share exclusive morphological innovations like the oblique stem *κναικ-* ‘wife’ beside Gr. *γυναικ-*, both from **g^wneh₂ik-* (cf. Lubotsky 2004: 234) and the reflexive pronoun /auto-/. Hence, it is very likely that Greek and Phrygian formed a separate sub-branch of the Indo-European family. For an extensive discussion of these and other points, with further literature, see Lamberterie (2013: 22–41).

⁶⁴ Cf. Egetmeyer (2010: 450–452) for criticism of some of these proposals and a history of the question. Egetmeyer accepts *u-ke-ro-ne* /u-k^hērōn/ ‘Handgeld’ as the only relic of **ud-* > **u-* in Cyprian.

⁶⁵ See *GEW*, *DELG*, *EDG*, all s.v. ἀσπάζομαι.

Lagercrantz to analyze ἀσπάζομαι as based on **h₂-sk^w-ā* and to connect this with ἐννέπω ‘to tell’. This idea cannot be upheld because, in spite of its meaning ‘to greet’, ἀσπάζομαι originally had nothing to do with speaking, as we shall see below. A derivation from σπάω ‘to draw’ with an apocopated preverb ἀν- has also been proposed (Kretschmer 1895; 1923), but this idea has not won conviction either.⁶⁶

Let us first consider the basic meaning of ἀσπάζομαι. In the Classical language, it normally has the general meaning ‘to greet, salute, welcome’, but there are also other uses. *LSJ* (s.v. ἀσπάζομαι, 2.) gives the meanings ‘to kiss, embrace’ and ‘to cling fondly to’, suggesting that these developed “from the modes of salutation in use”. However, the development may rather have been the other way around. Consider the following attestation from Xenophon’s *Cyropaedia*. As soon as Cyrus finds out that Astyages was his maternal grandfather, εὐθὺς οἷα δὴ παῖς φύσει φιλόστοργος ὦν ἡσπάζετο ... αὐτόν ‘he immediately embraced him, being by nature an affectionate boy’ (X. *Cyr.* 1.3.2). The same lexical meaning is presupposed by the derived *nomen rei actae* ἀσπασματα ‘embraces’, which is used in a sexual sense in τῶν ἐν εὐνῇ φιλότατων ἀσπασμάτων (E. *Hec.* 829).

There may also be traces of this older meaning ‘to embrace’ in Homer, where ἀσπάζομαι occurs only four times. When Odysseus has emerged victorious from his battle with the suitors, his servant girls come running at him:

αἱ μὲν ἄρ’ ἀμφοτέρωθεν καὶ ἡσπάζοντ’ Ὀδυσῆα
καὶ κύνεον ἀγαπαζόμεναι κεφαλὴν τε καὶ ὤμους
‘They poured all over Odysseus and ἡσπάζοντ’ him, and gave him
cherishing kisses on his head and shoulders’. (*Od.* 22.498–499).

Translating ἡσπάζοντ’ as ‘they welcomed him’ is not quite fitting: the situation described here is not a normal welcome, but characterized by great anxiety and distress: Odysseus has just killed off all the suitors and the unfaithful servant girls. The remaining servants, afraid that one of them might be the next victim, are therefore more than eager to show their affection to Odysseus. Since the two other verbs in this passage (ἀμφοτέρωθεν, κύνεον) are also physically oriented, it is preferable to render ἡσπάζοντ’ with ‘they embraced’.⁶⁷

⁶⁶ Beekes (*EDG* s.v. ἀσπάζομαι) rightly rejects these attempts, but offers no alternative solution.

⁶⁷ In the remaining three Homeric attestations, ἀσπάζομαι is accompanied by an instrumental dative of the word for right hand (δεξιῇ) or arms (χερσίν, 2x). Whether the latter refers to a handshake or to an embrace as a form of greeting is hard to tell; for what it is worth, the sources quoted by Kretschmer (1923: 190), the scholia to *Od.*

For these reasons, I agree with Kretschmer's remark (1923: 190): "Die Bedeutung 'an sich ziehen' passt ausgezeichnet: die Späteren sagten dafür ἐπισπᾶσθαι". Indeed, the basic meaning of ἐπισπᾶσθαι is 'draw towards oneself', whence in specific contexts 'attract, gain' (*LSJ*, I.4), 'allure, induce, entice' (*LSJ*, I.5), and even 'welcome'. Although the last-mentioned meaning is attested only in as late an author as Philo Judaeus, the semantic development from 'draw to oneself, attract' to 'embrace' (attested for ἀσπάζομαι) and finally to 'greet, welcome' is natural.

As we have seen, Kretschmer derived ἀσπάζομαι from *ἀν-σπᾶσθαι, an apocopated form of ἀνα-σπᾶω. However, the attested meanings of this verbal compound ('to draw back, draw up or out, suck up') do not seem very suitable as a starting point for a semantic development to 'embrace'. Kretschmer cites the phrase ἀσπασάμενος τὴν μάχαιραν 'drawing his dagger', but here the participle describes the action of drawing a weapon out of its sheath. Moreover, ἀνα-σπᾶσθαι exists, and it normally retains a full-fledged preverb. It seems unlikely that the preverb ἀν- or ἀνα- would not have been restored after the loss of the nasal before *s* plus occlusive.

Let us therefore stick to Kretschmer's observation that the meaning of ἀσπάζομαι is close to that of ἐπισπᾶσθαι. Since, as noted earlier, ἐπι- has taken over part of the functions of PIE *h₂ed- in Greek, it would be suitable to derive the initial ἀ- of ἀσπάζομαι from *h₂ed-. Unlike Kretschmer's *ἀν-, this would also explain why the ἀ- was incorporated into the verbal stem after the reflex of *h₂ed- had disappeared as a local particle. The further stem formation of ἀσπάζομαι can be explained by starting from the aorist *ad-spa-s-.⁶⁸ On the model of other verbs in -άζομαι with a polysyllabic stem, the present stem was then supplied. This may have happened at an early date if the derivative ἀσπάσιος 'welcoming; welcomed' is indeed attested

3.35 and Eusthatius *ad Il.* 10.542, already interpreted χερσὶν τ' ἡσπάζοντο as 'they embraced each other, drew the other closer to themselves as a way of greeting' (χερσὶν ἡσπάζοντο, ἀντὶ τοῦ ἐπεσπῶντο καὶ εἶλκον διὰ δεξιῶσεως εἰς ἑαυτούς). In any case, the verb ἀσπάζομαι has clearly developed the lexical meaning 'to greet, salute, welcome' already in Homer, because in two cases it is also accompanied by the instrumental dative ἐπέεσσι.

⁶⁸ For the reconstruction of the root and its further cognates, see García Ramón (2009). García Ramón notes that the sigmatic aorist is the only stem of σπᾶω attested early on; for this reason, he judges it likely that the present stem was formed secondarily. This would indeed fit the lexical semantics of σπᾶω, which denotes a momentaneous drawing movement and is thus eminently compatible with punctual aspect.

already in the Mycenaean personal name *a-pa-si-jo-jo* (gen.sg., PY Sa 767).⁶⁹

3.4 ἀσελγής

In Attic prose, ἀσελγής is a common word meaning ‘wanton, brutal, outrageous’. It is one of the few *s*-stem compounds with no established etymology (see *GEW*, *DELG*). Because of its morphology, it is difficult to assume a borrowing, unless the base form was a simple neuter in -ος that was itself borrowed (cf. Meissner 2006: 50 for such cases). Such a neuter, however, is unattested beside ἀσελγής. There are two by-forms with ἀσαλγ- in Hesychius, but both are of unclear value.⁷⁰ The only somewhat longer discussion of the word has been provided by Havers (1911: 194–202), in whose view the original meaning is ‘out of one’s mind, mentally deranged’; he bases this conclusion on an unlikely etymological proposal.⁷¹ Even so, Havers’ discussion of several passages clearly confirms the idea also expressed by Chantraine, namely that ἀσελγής “exprime la violence grossière et sans frein” (*DELG* s.v.).

With this in mind, I propose to derive ἀσελγής from **ad-* plus the Indo-European verbal root **selǵ-* that is also continued in Skt. *√sarj* ‘to let loose, release, set free’, Avestan *√harəz* ‘id.’, and in the nominal derivative Proto-Celtic **selgā-* ‘hunt’ (e.g. OIr. *selg* f.), probably from “release of hunting dogs”. It would be semantically attractive to also derive the Greek compound, with its basic meaning ‘unrestrained’, from this root. For this to work, the following assumptions have to be made. First, we need an intransitive base verb (e.g. an anticausative thematic middle **selǵ-e/o-* meaning ‘be loose, act in an unrestrained way’) to be preserved into early Proto-Greek. Second, we have to assume that such a verb occurred in combination with a pre-

⁶⁹ At any rate, since ἀπάσιος and ἀσπαστός are both well-entrenched in epic Greek, and since they are deverbal formations (for a model, cf. θαυμάσιος and θαυμαστός beside θαυμάζω; Risch 1974: 114), it is likely that ἀσπάζομαι developed its lexical meaning ‘to welcome’ at an early date.

⁷⁰ Cf. Beekes (*EDG* s.v.).

⁷¹ “Ich werde (...) durch die Etymologie des Wortes ἀσελγής nachzuweisen versuchen, dass wir die Bedeutung “wahnsinnig, verrückt” als die ursprüngliche ansehen können. Aus ihr lassen sich alle übrigen Bedeutungen des Wortes unschwer herleiten” (Havers 1911: 196). His etymological proposal, however, does not inspire much confidence: assuming that the word was borrowed from Boeotian or another Greek dialect where θ was pronounced as a spirant, Havers assumes that the second member is related to θέλω ‘to enchant, beguile’. Since Havers posits an original meaning ‘to strike’ for θέλω, he arrives at “geschlagen”, whence “verrückt” for ἀσελγής.

verb **ad-* with approximately the same meaning. That this is possible is confirmed by the absolute use of ἐπι- in verbs like Hom. ἐπαιγίζω, ἐπαίσσω, ἐπισπέρχω, which all mean ‘to rush on’. A derived compound PGr. **ad-selg-es-* ‘moving/acting in an unrestrained way’ would then directly yield Attic ἀσελγής. A further Greek cognate of Vedic √*sarj* is the adjective λάγνος ‘lascivious, lecherous’ (Arist.), which requires a pre-form **słg-no-*.⁷²

There are some potential problems involved in the assumptions just made, but none of them is decisive.⁷³ Therefore, this new proposal mainly depends on whether one is prepared to accept the existence, in Proto-Greek, of an intransitive verb **ad-selge/o-* ‘to release oneself (upon)’ corresponding to Skt. √*sarj* ‘to release’.⁷⁴ In the absence of further evidence, this remains hypothetical. However, given the fact that almost all *s*-stem adjectives in Greek arose by applying productive processes of word-formation to inherited material, it would be attractive to have an etymology for ἀσελγής, and this one would be fitting, both semantically and phonologically.

3.5 ἀθρέω

The verb ἀθρέω, aor. ἀθρήσαι ‘to look at, observe; consider’ (Hom.+) is mainly poetic. The etymology is considered uncertain or unknown by the main etymological dictionaries.⁷⁵ They do mention a proposal

⁷² This implies that λάγνος is unrelated to Germanic **slaka-* ‘slack’ (to which it is compared in *GEW* s.v. λαγαίω), because the Germanic word has a different vowel slot in comparison with Skt. √*sarj*. In my view, the forms mentioned in *GEW* s.v. λαγαίω should be sifted: leaving aside λάγνος and λαγαίω, I would separate the other forms meaning ‘slack’ from the Indo-Aryan √*sarj*.

⁷³ For instance, assuming **ad-selges-* > ἀσελγής presupposes that the connection to the simple verb **selge/o-* had been lost when the change **s-* > **h-* took place, for otherwise the form would presumably have been restored to **ad-helges-*. Now, a remnant of the verbal paradigm was probably preserved in Greek in Gortynian Cretan λαγαίω, aor. λαγάσαι ‘to release’. The Gortynian present was built on the aorist (also attested in Hsch. in the form λαγάσσαι), which may itself be analogical after χαλάσαι ‘id.’ (cf. *GEW* s.v. λαγαίω). If so, λαγάσαι could be a remodeling of a thematic aorist **λαγεῖν*, from an inherited root (> thematic) aorist **słg-e/o-*. This does not imply, however, that **ad-selges-* remained analyzable as derived from that verb. After the simple thematic present **selge/o-* had been lost, there would have been no model to reshape the outcome of **ad-selg-es-*.

⁷⁴ In Sanskrit, the combination *ā sarj-* exists, but there is no indication that it is related to **ad-selg-es-*.

⁷⁵ Chantraine (*DELG* s.v.) calls the etymology obscure and, for the initial alpha, hesitates between a prothetic vowel, a reflex of the preposition ‘in’, or copulative alpha. Frisk (*GEW* s.v.) has “nicht sicher gedeutet”, and the judgement of Beekes (*EDG* s.v.) is “no etymology”. However, Hoffmann’s proposal (see below) has been accepted in the *LfgreE*.

by Hoffmann (1921: 79, with references to older literature) according to which the root is $\theta\rho\eta-$, as in the gloss $\theta\rho\eta\sigma\kappa\omega$ · νόω ‘perceive, take notice’ and the verb $\theta\rho\eta\sigma\kappa\epsilon\acute{\upsilon}\omega$ ‘to observe religious customs’ (Hdt.+). Beekes (EDG s.v.) calls this idea “most improbable” in view of his doubts concerning the explanation of the initial $\acute{\alpha}-$ as reflecting $*sm-$ or $*\eta-$ ‘in’. However, if a root $\theta\rho\eta-$ did indeed exist, a Proto-Greek $*ad-t^hrē-$ ‘look at/towards’ would neatly explain both the initial $\acute{\alpha}-$ and the meaning.⁷⁶ The semantic development $*‘to hold at/towards’ > ‘look at’$ in $\acute{\alpha}\theta\rho\acute{\epsilon}\omega$ can be compared to that in English *to behold* and *to fix* (sb. with the eyes). For the further etymology of PGr. $*t^hrē-$ ‘look, perceive’, the gloss $\acute{\epsilon}\nu\theta\rho\epsilon\acute{\iota}\nu$ · φυλάσσειν (Hsch.)⁷⁷ is relevant: its meaning ‘to guard’ may well have developed from ‘to hold/keep within’, which suggests a connection with the Indo-Iranian root $*d^har-$ ‘to hold, maintain’.⁷⁸

This analysis presupposes, however, that $\acute{\alpha}\theta\rho\acute{\epsilon}\omega$ can be the reflex of $*ad-t^hrē-$. This seems to be at odds with the large body of evidence for a sound development $*TT$ (T = any dental stop) $> *TsT >$ Pan-Greek $/sT/$. Indeed, this change not only occurs in productive formations, but also in isolated forms like $\mu\epsilon\sigma\tau\acute{o}\varsigma$ ‘full’ $< *med-t\acute{o}-$ and $\acute{\upsilon}\sigma\tau\epsilon\rho\acute{o}\varsigma$ ‘later’ $< *úd-tero-$. The question is, however, whether this change was applied in the same way when $*TT$ was followed by another consonant. It was Schindler’s idea that forms like $\mu\acute{\epsilon}\tau\rho\nu$ ‘measure’ $< *méd-tro-$ and OHG. *sedal* ‘seat’ $< *setlo-$ $< *sed-tlo-$ arose by a reduction $*TT > *T$ before consonants.⁷⁹ To this, I would add that $\kappa\acute{\epsilon}\nu\tau\rho\nu$

⁷⁶ Hoffmann (l.c.) instead starts from a noun $*\acute{\alpha}\theta\rho-\omicron\varsigma$ ‘auf ein Ziel gerichtet, loshaltend’, which in his view consists of copulative α and a zero grade reflex of PIE $*d^her-$ ‘to hold’. The verb “bedeutete ursprünglich das scharfe Einstellen beider Augen auf einen Gegenstand, das Fixieren eines Gegenstandes”. However, to assume an intermediary noun does not seem necessary: the paradigm $\acute{\alpha}\theta\rho\acute{\epsilon}\omega$, $\acute{\alpha}\theta\rho\eta\sigma\alpha\iota$ may also reflect earlier pres. $*at^hrē-je/o-$ (or $*at^hr-eje/o-$), aor. $*at^hrē-s-$.

⁷⁷ This present infinitive is wrongly analyzed as an aorist in LIV² s.v. $*d^her-$.

⁷⁸ In order to explain the root shape PGr. $*t^hrē-$ as against PIE $*d^her-$, two possibilities are conceivable: (1) PGr. $*t^hrē-$ is a secondary root ultimately continuing a stative $*d^hr-eh_1-$ (cf. Lith. *derėti*, *derù* ‘to fit, be successful’, which probably derives from PIE $*d^her-$); (2) The present $\acute{\alpha}\theta\rho\acute{\epsilon}\omega$ (and $\acute{\epsilon}\nu\theta\rho\epsilon\acute{\iota}\nu$) is primary and derives from $*d^hr-eje-$, which is ultimately comparable to Ved. *dhārāyati* ‘holds’. The latter option, however, makes it difficult to explain the forms $\theta\rho\eta\sigma\kappa\omega$ and $\theta\rho\eta\sigma\kappa\epsilon\acute{\upsilon}\omega$.

⁷⁹ Thus also Mayrhofer (1986: 111), with reference to personal communication by Schindler: “In tautosyllabischer Stellung wurde TT zu T reduziert”. An alternative reconstruction $\mu\acute{\epsilon}\tau\rho\nu < *mh_1-tro-$, with a zero grade root, is assumed by Beekes (1988: 31). While this cannot be excluded from a morphological perspective, it does not fit well with the root accent of $\mu\acute{\epsilon}\tau\rho\nu$: cf. the zero-grade root in $\phi\iota\tau\rho\acute{o}\varsigma$ ‘trunk, wooden log’ which, given that the length of its $-i-$ cannot be determined, may derive either from $*b^hiH-tr\acute{o}-$ or from $*b^hid-tr\acute{o}-$ ‘what has been chopped’ (for the roots, see LIV² s.vv. $*b^heH-$ ‘schlagen’ and $*b^heid-$ ‘spalten’, respectively). The second option,

‘goad, spur’ is most naturally derived from an instrument noun **kén-tro-* by the same rule. Normally, κέντρον is thought to have been remade after the verb κεντέω, but this leaves unexplained the fact that other derivatives like κεστός < **kenstó-* < **kent-tó-* escaped this reshaping. The possibility to analyze κέντρον as κέντ-ρο- may have helped to preserve it from reshaping.

Even if one accepts the *metron*-rule for Greek, it may be doubted whether the assumed compound **ad-t^hrē-* was sufficiently old to participate in this rule. A second possibility to explain the lack of an intrusive -s- in a cluster **TT* will be given in the next section: as we will see, the prefix **ad-* may have been restored. For now, I conclude that deriving ἄθροέω from PGr. **ad-t^hrē-* is semantically attractive and phonologically possible.

3.6 ἀτενής and ἀχανής

One of the stock examples of intensive alpha is ἀτενής ‘direct, straight; attentive, serious’. An old meaning is ‘fixing the eyes at sth.’, which also appears in the derived verb ἀτενίζω ‘to gaze at, stare at’.⁸⁰ We are dealing with a compound based on the root of τείνω ‘to stretch’. Solmsen (1909: 22–23) analyzed the initial ἀ- as copulative, comparing the *s*-stem of the second member with Lat. *tenor*, *-ōris* ‘sustained movement, course’ and *tenuis* ‘a cord used in bird-catching’, and assuming a basic meaning ‘mit Spannung’.⁸¹ He further suggested to explain the lack of initial aspiration in ἀτενής by a borrowing from Ionic into literary language. Seiler (1958: 7), however, argued that the pattern of attestations of this word (attested in e.g. Aristophanes, Plato, and Aristotle) speaks against a borrowing. Both Solmsen and Seiler explain the derivation ἀ- < **h-* ‘in’ with reference to the verb ἐντείνω ‘to stretch tight’ (Hom.+) and derivatives

which is more attractive from a semantic point of view, would presuppose the same reduction of dentals under discussion here. Thus, even if the possibility that μέτρον derives from **mh₁-tro-* is granted, **setlo-* ‘seat’ remains a compelling example for the *metron*-rule.

⁸⁰ DELG (s.v. ἀτενής). The word was also used for mental dispositions and activities and occurs both as a positive and as a negative qualification. It may mean ‘inflexible, rigid, obstinate’ and indicate a negative character trait, as in μηδ’ ἀτενής ἄγαν ἀτεράμων τ’ ἀνὴρ (Ar. *Vesp.* 730), where ἀτεράμων ‘harsh’ may serve as a gloss for clarification (Seiler 1958: 7–8); in ὀργὰς ἀτενεῖς (A. *Ag.* 71) it qualifies an inflexible anger. In the earliest attestations (Hes., Pi.), on the other hand, we find the phrase ἀτενεῖ ... νόῳ (LSJ: ‘intent, earnest’, Mader *Lfgre* s.v. argues for “angespant”; but a translation like ‘attentive’ is also conceivable).

⁸¹ Accepted also by Schwyzler (1939: 433).

like ἔντονος ‘intense, eager, vehement’ (Hdt., Th.+), as well as Lat. *intentus* ‘strained, tense, keen at’.⁸²

A problem with this idea has already been pointed out above: **η-* would have been homonymous with the privative prefix. Apart from this, the semantic parallels are perhaps not entirely probative. Concerning *intentus*, it should not be forgotten that the Latin preverb *in-* may have the same function as ἐπι- in Greek, indicating directedness at a goal (allative function). The oldest attested meaning of ἐντείνω, however, is ‘to stretch inside (in between)’, without any sense of directedness.⁸³ Similarly, in the Homeric verb ἐντανύω ‘to stretch (a bow)’, ἐν- refers to the fact that a string is strung *in between* the two ends. Thus, assuming that ἀ- reflects a relic form of the preverb ἐν- is not at all self-evident from a Greek point of view.

From a semantic perspective, it would be at least as attractive to derive ἀτενής from a deverbal compound PGr. **ad-tenes-*. The original meaning of such a compound would be ‘stretching at/up to’, whence ‘directed at’. For this combination of preverb and root, we may compare Lat. *attendō* ‘to direct (at)’, especially (with or without *animum*) ‘direct one’s attention at’. Interestingly, just as Lat. *attendō* and *attentus* ‘attention’ refer to mental focus, ἀτενής qualifies a word for ‘mind’ in its two earliest attestations (ἀτενεῖ ... νόῳ Hes. *Th.* 661, Pi. *N.* 7.88). Besides, the existence of Skt. *ā tan-* ‘to extend across/towards; to stretch/direct at’ is noteworthy:⁸⁴ just like ἀτενής, this verb is used to denote ocular attention (e.g. RV 1.22.20c).

Although these parallels could well be due to independent developments, there can be no doubt that **ad-tenes-* would be a semantically fitting reconstruction. At first sight, however, there seem to be phonological objections. As already mentioned, in an intervocalic sequence of two dentals, the first developed into -σ-; hence, the phonologically expected outcome of **h₂ed-ten(H)-es-* is *ἀστενής. I will now argue, however, that this development may have been

⁸² This analysis is accepted by Stüber (2002: 160–161). Solmsen (1909: 22) also adduced Skt. *tānas-* ‘progeny’ in the comparison, but this form only occurs once as an instr. *tānasā*, which is probably a nonce formation (see Stüber with further references).

⁸³ In both Homeric examples of ἐντείνω, the perfect ἐντέταται, -to is accompanied by ἱμᾶσιν ‘with straps’, as at *Il.* 10.263, ‘the helmet was strongly lined inside with tight-stretched straps’.

⁸⁴ For the comparison between the Latin and Sanskrit verbal compounds, see Garnier (2014).

blocked (or rather, undone) in forms with a preverb ending in a dental stop.⁸⁵

There is another Greek preverb ending in a dental stop that does not take part in the sound change $*TT > sT$: $\kappa\alpha\tau-$, the apocopated form of $\kappa\alpha\acute{\tau}\alpha$. In theory, it is possible to assume that the apocopated form $\kappa\alpha\tau-$ arose only after the outcome of $*TT > *TsT$ had been phonologized (i.e. that $\kappa\alpha\acute{\tau}\alpha$ is the only old form), but in my view the issue should be approached within a broader phonological perspective. As is well-known, Greek dialects generally admitted clusters of two stops, but only if the second stop was a dental.⁸⁶ Allowed clusters are, therefore, $\tau\tau$, $\pi\tau$, $\kappa\tau$ (etc.), while disallowed ones are $*\tau\kappa$, $*\tau\pi$, $*\kappa\pi$, $*\pi\kappa$ (etc.). Given that the metathesis of inherited clusters like $*tp$, $*tk$ to $\pi\tau$, $\kappa\tau$ is Pan-Greek and already attested in Mycenaean (cf. forms like $a-qi-ti-to$, $e-qi-ti-wo-e$, $ki-ti-e-si$), it is plausible that this situation existed already in Proto-Greek. As a result, $\acute{\kappa}\alpha\tau$ ($\kappa\alpha\tau-$) was restored in the position before labial or velar stops (in order to retain a perspicuous morpheme boundary) after $*tp$, $*tk$ had undergone metathesis to $\pi\tau$, $\kappa\tau$. Thus, assimilated forms like Homeric $\acute{\kappa}\alpha\beta\beta\alpha\lambda\epsilon$, $\acute{\kappa}\alpha\pi\pi\epsilon\sigma\epsilon$, $\kappa\alpha\kappa\kappa\epsilon\acute{\iota}\omicron\nu\tau\epsilon\varsigma$ came into being. This type of forms may well be quite old, taking into account that the same process is attested in Phrygian: cf. $\alpha\beta\beta\epsilon\rho\epsilon\tau$ and the particle chain $\alpha\kappa \kappa\epsilon \omicron\iota$ ‘and to him’, quasi from PIE $*h_2ed\ k^we\ swoi$. Therefore, as long as $*ad-$ was around in the prehistory of Greek, the realization of forms like $*ad-p^her\acute{o}$ and $*ad-kalej\acute{o}$ would have been $*app^her\acute{o}$, $*akkalej\acute{o}$.

In Homer, $\acute{\kappa}\alpha\tau$ / $\kappa\alpha\tau-$ assimilates not only to following labial and velar stops, but also to other consonants, e.g. $\acute{\kappa}\alpha\rho \acute{\rho}\omicron\omicron\nu$, $\acute{\kappa}\alpha\mu \mu\acute{\epsilon}\sigma\sigma\omicron\nu$, notwithstanding the fact that the clusters $\tau\rho$, $\tau\mu$ were admissible. Especially relevant for present purposes are clause-initial $\kappa\alpha\delta$ $\delta\acute{\epsilon}$ in tmesis with a following verb, which is very frequent (55x in Homer), and forms like $\kappa\alpha\theta\acute{\epsilon}\mu\epsilon\nu\omicron\iota$, $\kappa\alpha\theta\acute{\alpha}\psi\alpha\iota$, $\acute{\kappa}\alpha\theta\alpha\nu\epsilon$. These forms show that

⁸⁵ As a first potential parallel, one might take into account that the reflex of PIE $*ud-$ ‘up’, which some scholars recognize in Cypr. $u-ke-ro-ne$ / $u-k^h\acute{e}r\acute{o}n$ / ‘Handgeld’, is also commonly assumed to have lost its final stop in *sandhi*. However, since the reliability of such traces of $*ud-$ in Greek is debated (see Egetmeyer 2010: 450–452), nothing should be based on this example. Moreover, it is not trivial to assume $*ud- > \acute{u}-$ with loss of the word-final occlusive, because local particles are generally followed by other particles or by noun phrases, and they hardly (if ever) appeared at the end of prosodic units. For the same reason, it is not trivial to assume that $*ad-$ ‘up to’ would develop a variant $*a-$ without further ado; hence the elaborations that follow.

⁸⁶ There are dialects with (presumably late) reductions of these occlusive clusters: $\pi\tau$, $\kappa\tau > \tau\tau$ and $\beta\delta$, $\gamma\delta > \delta\delta$ in Thessalian (see Blümel 1982: 132) and Central Cretan (Lejeune 1972: 69 with n. 1). For the treatment of occlusive clusters in Greek, see generally Lejeune (1972: 69–71).

the assimilated reflex of κάτ before labial and velar stops also spread to the position before dental stops and liquids. This generalization of the allomorph ‘κα- plus gemination of the following consonant’ is quite understandable. This means that, as long as the preverb **ad-* was around, forms like **astenes-* would have been reshaped into **attenes-* provided that they were morphologically analyzable. Again, we may compare the Phrygian situation: cf. αῖδακετ ‘inflicts on’, ατ Τη ‘to/with/by Zeus’.

This brings us to the second problem: how to account for the simplified geminate in ἀτενής? The only possible avenue seems to be that the reduction of such geminates was a regular development in Ionic-Attic. Indeed, in various other dialects the normal treatment of κάτ, κατ- in *sandhi* was assimilation followed by simplification of the geminate. Examples are Elean καζαλεμενοι < **kat-dālēmēno-*, Cypriot ἱγκαπάταόν· ἐγκατάβλεπον (Hsch.) < **en-kat-pata-s-*, and Arcadian κα τον θεθμον ‘according to the law’. The geminate is retained in Aeolic dialects, e.g. Thessalian καπ παντος < **kat pantos*, Boeotian ποκ κατοπτας. For Ionic-Attic, however, there is little direct evidence because in this dialect group, apocope has been entirely eliminated as a productive phenomenon (except for some possible traces of ἀν- and παρ-). In fact, since there were no other prefixes apart from the preverbs, and since word-final stops had been lost early on in Greek, we can hardly expect to find much evidence relating to this development. Nevertheless, there are some potential clues.

At first sight, the assumed geminate reduction is contradicted by the mere existence of geminate stops in Classical Greek. However, leaving aside obviously late geminates (like Attic ττ deriving from **ts* < **kʲ*, etc.), they appear either in loanwords (e.g. ἀτταγᾶς, ἀττέλαβος, ἄκκώ), nursery words (ἄττα, ἄππα), or in hypocoristic names containing ‘expressive’ geminates. In the case of loanwords, the time of borrowing usually cannot be determined. This means that the reduction of geminated stops assumed here may have antedated these borrowings. The same holds for the time of formation of hypocoristic names, provided that the geminate reduction took place before Mycenaean (because hypocoristic names are attested already in Mycenaean). The fact that Arcadian inscriptions and Cyprian glosses agree in showing the geminate reduction after local particles would be compatible with a relatively high antiquity of this reduction within South Greek, the common ancestor of Arcado-Cyprian, Mycenaean and Ionic-Attic.

If this is indeed what happened, the assumed geminate reduction may find a parallel in the simplification **ss* > σ, in which the outcomes of Proto-Greek **t^(h)i* and **Ts* also took part. This development

is shared by Ionic-Attic and Arcadian (and possibly also by Cyprian and Mycenaean),⁸⁷ but it is not attested for Aeolic or West Greek dialects. Since all Aeolic dialects and various West Greek dialects also keep geminate stops in preverb *sandhi* (see above), it is conceivable that both **TT > T* and **ss > s* were part of a complex of phonological restructuring that took place only in South Greek.

A case of potential interest is ὄττι beside ὄτι, which both continue PIE **(H)jod=k^wid* via an intermediate stage **jokk^wi*. In this example, the old *sandhi* form ὄττι is retained in the epic tradition and in Lesbian. Concerning the normal Ionic form ὄτι, it is uncertain whether this form arose by regular phonetic reduction of ὄττι (along the lines proposed here for ἀτενής) or whether it simply contains a restored sequence of pronouns, ὄ τι (thus Ruijgh 1977: 261).

The most important counterexample is ἵππος ‘horse’, which usually is thought to somehow reflect PIE **h₁ékwo-* via an intermediate **ekk^wo-*.⁸⁸ If ἵππος is the Ionic outcome of **h₁ékwo-*, this would be a serious problem for our hypothesis. However, it is also well-known that there are many problems with the reconstruction of ἵππος: apart from the geminate, these are its *i*-vocalism and the initial aspiration.⁸⁹ Since there are no other parallels for the retention of inherited geminate stops in Ionic-Attic, one might be inclined to follow Balles (2002: 13–15) in assuming that the regular reflex of PGr. **-kμ-* (via **-kk^w-* and/or **-k^w-*) is seen in *πραπίδες* ‘midriff, chest’.⁹⁰ To be sure, there are some problems with this etymology as well,⁹¹ but the main point is that ἵππος does not decisively speak against an early reduction of geminate stops in the Ionic-Attic vernacular.⁹² Rather, the *i*-vocalism

⁸⁷ If Cyprian and Mycenaean also took part in this development, this would be an early and major isogloss setting apart South Greek from North Greek. Unfortunately, however, the situation in Cyprian and Mycenaean cannot be ascertained in view of the syllabic writing systems of these two dialects.

⁸⁸ An exception is de Vaan 2009, who assumes that ἵππος directly continues a thematized form **h₁kμo-*, with zero-grade root, of the original *u*-stem for ‘horse’ attested in Hittite. This idea entails that various other branches of IE, where the word is attested with *e*-grade root, should have independently thematized it. In my view, this is unlikely.

⁸⁹ Bozzone (2013: 9–10), following de Vaan’s idea (2009) that an epenthetic *i* developed in a zero-grade **h₁kμo-*, assumes that **h₁i-* developed to *h-* via an intermediary palatalized stage **h₁ʲi-*. In my view, the evidence for this claim is insufficient: the aspiration of ἵημι, adduced by Bozzone, can easily be analogical after the aorist ἦκα.

⁹⁰ Balles derives *πραπίδες* from a PGr. **prkμ-id-*, based on a **prkμ-o-* ‘of the ribs; rib-cage’ that contains the stem of Ved. *pársu-* ‘rib’.

⁹¹ This concerns the outcome *πα < PGr. *f*, which in my view cannot be explained as the regular Ionic-Attic vernacular reflex (which was *ap*); we should therefore try to explain *πα* within the epic tradition, which is where *πραπίδες* is at home anyway. See Van Beek (2013: 280–281) for further discussion.

⁹² The geminates in question were obviously retained in the epic language, as has been illustrated above.

of ἵππος (if this word is indeed the regular outcome of PIE **h₁ékmo-*) could speak in favor of a Mycenaean origin.⁹³

Concerning the combinations of verbal roots with the athematic middle endings, we may note that there was no reason to introduce geminates in endings starting with a dental stop, because there were no endings starting with labials or (labio)velars. Therefore, forms like πέφρασται show the regular development of an inherited **-TT-* cluster. The same regular development is found with productive suffixes like **-tó-*. Indeed, the idea that a combination preverb + root would develop differently from a combination lexical element + suffix is confirmed by other examples. Thus, the noun παστάς -άδος ‘por-tico’ derives from PGr. **par-stad-*. The regular development of a cluster **-rst-* was -ρτ- or -ρθ-,⁹⁴ as in middle perfect forms like ἐφθαρθαι ‘to be wasted’ < **ἔ-φθαρ-σθαι* (middle pf. of φθείρω). Since **παρτάς* or **παρθάς* were not clearly analyzable, the root was apparently restored in Ionic-Attic, followed by a second reduction **-rst-* > -στ-, with a different outcome. In epic forms with apocope, the entire cluster was restored and maintained, e.g. in the aorist of παρίσταμαι (ptcpl. παρστάς, opt. παρσταίη).

In conclusion, it is possible that ἀτενής represents a regular reduction of **ἀττενής* early in Ionic-Attic, and that the retained geminates in ὅττι, ἵππος, and the preverb κάτ in *sandhi* are archaisms of the epic tradition.⁹⁵ This new reconstruction of ἀτενής is attractive both from a semantic and from a phraseological viewpoint, and it allows us to get around one of the key pieces of evidence for the alleged zero grade **h₂-* ‘in’.

If the possibility of this scenario for ἀτενής is granted, it can also be used to explain ἀχανής ‘gaping, wide open; immense; stupefied’ (Parm.+). This adjective is often applied to an abyss or to the cosmic void, and is clearly derived from the verb χάσκω ‘to gape, yawn, open the mouth; be stupefied’ (Anacr., Sol., Ion.-Att.) or, to be more precise, from the stem of the aorist χανεῖν (*Il.*+). The initial alpha is

⁹³ Leukart (1992) thinks that the expected outcome of **h₁ékmo-* in ‘normal’ Mycenaean would be /ik^wo-/ (without geminate) and assumes that the geminate originated in a substandard variant in the Submycenaean period. It is unlikely that we will ever be able to corroborate such speculations, but I agree with Leukart and Balles that the geminate outcome of **-ku-* is not necessarily what one expects within the phonological system of South Greek.

⁹⁴ This depends on whether one believes that the loss of **s* could trigger aspiration of a following consonant.

⁹⁵ It is not directly relevant for the present discussion whether such forms with geminate were retained in an Aeolian tradition, or whether they are archaisms of a continuous Ionian tradition.

usually considered to be intensive (e.g. Schwyzler 1939: 433, *GEW* s.v. χάσκω). Solmsen (1909: 21–22) remarks that the existence of ἐγγαίνω could suggest a relation between ἀ- and ἐν-. This suggestion is somewhat circular, however, because Solmsen wrongly translates ἐγγαίνω as “gähne an, stehe mit weit offenem Munde da” (with the meaning of the alleged derivative ἀχανής), while the actual meaning of the verb in Aristophanes is ‘to taunt, scoff at; laugh at’. The semantic connection between ἀχανής and ἐγγαίνω is therefore not a compelling argument.

On the other hand, if the above analysis of ἀτενής is correct, ἀχανής could also contain a phonological reflex of the preverb **ad-*: an **ad-kʰan-es-* ‘gaping at’ (Germ. *angaffend*) would be realized as **akkʰanes-* and then develop into ἀχανής. It is true that among the compounds with χάσκω or χαίνω, we only find προσχάσκω ‘to gape at’ (only early attestation: A. Ag. 920) and the late form ἐπιχαίνω (Luc.). This is, however, not necessarily an objection against the derivation from **ad-kʰan-es-*, because such a reconstruction is satisfactory from a semantic point of view. Thus, ἀχανής can no longer be used as a compelling argument for deriving intensive alpha from **η-* ‘in’.

4. Remaining evidence for intensive and copulative alpha

We have seen that some alleged cases of ‘intensive’ alpha may contain a reflex of **sm-* ‘together’, and that others can be derived from the local particles **an-* and **ad-*. If these new reconstructions are accepted, some questions remain. First, is it still necessary to reconstruct a PIE zero grade **η-* ‘in’? Secondly, under which conditions could the prefix **sm-* be used? I will now scrutinize the remaining evidence for intensive and copulative alpha with regard to these questions.

4.1 Ambiguous and irrelevant cases

I will start by discussing a number of other cases that have been analyzed in the literature as containing intensive or copulative alpha, but for which I would consider a different reconstruction. The examples are discussed in alphabetical order.⁹⁶

⁹⁶ Some remarks about my way of selecting the evidence below. To state the obvious first, in view of the laryngeal theory, the ‘prothetic vowel’ (still regularly assumed by Frisk and Chantraine as an explanation for the origin of ἀ-) no longer has

- ἄζα in the meaning ‘rust, deposit’ (*Od.* 22.184, dative) is a hapax in Greek. The etymological dictionaries explain it as a special variant of ἄζα ‘dry heat’ (Hell. poets), a derivative of ἄζω ‘to dry’. Fraenkel (1953: 22) explained it as **η-sd-ā*, a compound with the zero grade of ‘in’ followed by the root **sed-* ‘sit’ in the zero grade. This is mentioned by Seiler (1958: 2) and followed by Dunkel (*LIPP* II, 234). However, the semantic side of this derivation is very weak, because ‘rust’ is something that sits *on* an object, rather than within it. If one is inclined to retain the analysis as a compound with a zero grade **sd-*, the preforms **h₂en-sd-eh₂-* (cf. German *Ansatz* ‘id.’) or **h₂ed-sd-eh₂-* ‘what sits on/at (an object)’ would be better candidates, but in any case such etymological analyses remain hypothetical.
- Schulze (1888: 263–264) adduced ἄκαρος, which is explained as ἐγκέφαλος in the *Etymologicum Magnum* (45.13), as an instance of ἄ- ~ ἐν-. In fact, the attested accentuation is ἀκαρός. The example is widely cited in favor of Seiler’s ἄ- ~ ἐν- interchange, but Seiler himself notes that this example is “mit Skepsis zu beurteilen” due to its late attestation (1958: 2 n. 1). Beekes (1969: 25, cf. also 243) casts doubt on the antiquity of ἀκαρός, remarking that the gloss ἵγκρος· ἐγκέφαλος (Hsch.) looks like the older formation, because it presupposes an archaic laryngeal loss in the second member -κρος < **-krh₂-o-*. Cf. also Nussbaum (1986: 72–73), who discusses possible ways to still account for ἀκαρός as an old form, but also concludes skeptically that “this is all quite unsure”.
- Seiler (1958: 17–21) analyzes ἄμοτον as **η-μη₂-tom* ‘having μένος inside’, comparing the ptcpl. ἐμμεμαώς beside μεμαώς for the preverb. However, ἄμοτον means ‘heftig, kräftig’ in Homer and indicates a degree, like μάλα, μάλιστα (Forssman 1986: 330–331). Forssman, in turn, suggests to reconstruct a phrase **η-μη₂-tom me-μη₂-wós* “Unerstrebbares erstrebend” in order to explain the phrase ἄμοτον μεμαώς (and inflected forms), which he takes as the oldest formula. Beekes (*EDG* s.v.) rejects Forss-

any explanatory force. Secondly, there is quite a number of words for which variants with and without ἄ- are attested. A large subgroup of them belongs to specific semantic fields, such as local flora and fauna or material culture. In such cases, a borrowing is likely, and the presence or absence of ἄ- can be explained as a substrate phenomenon. See Beekes (2014) for an overview of such words per semantic field. Another group of these words with variation ἄ- ~ zero can be explained as artificial creations of the poetic language; some of them may have arisen by a reanalysis, e.g. within the epic *Kunstsprache*. All such words are left out of consideration below.

man's analysis, but for reasons that are hard to follow; earlier on, Beekes (1969: 26) remarked that the reconstruction **ḡ-mḡ-tom* would presuppose two different vocalizations of a syllabic nasal in the same word (**ḡ* > both *α* and *ο*), which is somewhat problematic. In conclusion, there is no ascertained etymology.

- The adverbs *ἄπριγδα* (only in A. *Pers.*)⁹⁷ and *ἄπριξ* (S., Pl.+) mean 'fast, tight' (*LSJ*). The more usual form *ἄπριξ* mostly modifies a verb meaning 'to hold, grasp, cling to (with the hands)', and *DELG* (s.v.) accordingly translates it as "en tenant solidement, à pleines mains". According to Frisk (*GEW* s.v.), it is composed of intensive alpha and the root of *πρίω* 'to saw; to grate, gnash, grind (with the teeth)', but Chantraine (*DELG* s.v.) hesitates because the extended verbal stem *πριγ-* is attested only late (in the form of *πρίζω*). For the same reason, Beekes (*EDG* s.v.) explicitly calls the etymology "rather dubious".⁹⁸ The semantic development would be quite conceivable if *πρίω* also had the meaning 'to grasp with the nails', but this is not the case. All in all, then, this etymology is certainly not straight-forward.
- *ἄπτερος* 'winged; quick' (*Od.*, trag.), *ἄπτερέως* 'promptly, quickly' *vel sim.* (Hes., Parm.+).⁹⁹ While the word is clearly derived from *πτερόν* 'wing', the etymological dictionaries are divided on its further analysis. *GEW* (s.v. *ἄπτερέως*, followed by *EDG*) analyzes *ἄ-* as copulative, but *DELG* (s.v. *πτερόν*), after an extensive summary of previous literature, follows the privative analysis advocated by Latacz (1968). The most acute synchronic analysis seems to me that of Mazon (1950), who translates *ἄπτερος* as 'quick, swift' already in Homer and understands the phrase *τῇ δ' ἄπτερος ἔπλετο μῦθος* (4x *Od.*) as 'and no sooner was it said than done'. If the meaning 'swift' is indeed old, it can be derived from **'winged'*; the word might then be an example of the compound type 'with X' that is generally derived from copulative alpha, but an alternative option would be a possessive compound **ad-ptero-* 'with feathers/wings at it' > 'winged', for which see section 4.2 below. In sum, however,

⁹⁷ Frisk's *ἄπριγδα* (*GEW* s.v.) is an error.

⁹⁸ It should be noted, however, that Frisk seems to segment the adverbial suffixes as *-ξ* and *-γδα*, as in forms like *γνύξ* 'on the knee(s)' and the semantically close *ὀδάξ* 'with the teeth'.

⁹⁹ *ἄπτερέως* is a metrically conditioned extension in *-έως* of the epic *Kunst-sprache*. The meanings are cited here according to *LSJ*, but they are in fact highly disputed: see the bibliography in *DELG* s.v. *πτερόν*.

since the synchronic meanings of ἄπτερος are highly disputed, it is best not to base any conclusions on it.¹⁰⁰

- **ἀσκελές** ‘obstinately, incessantly’: according to most handbooks, this may be derived from σκέλλομαι ‘to dry up’ with intensive alpha; the attested meaning allegedly developed from ‘in a harsh (< dried up) way’. In an article that has been unduly neglected, however, Harrison (1954) has argued that all Homeric occurrences of ἀσκελές can be derived from a privative compound with σκέλος ‘leg’. I intend to elaborate further philological arguments for this idea in a separate article.
- **ἄτερπνος** in the sense ἄγρυπνος ‘insomniac’ is attributed to Ibycus by the *Etymologicum Gudianum*. It has been interpreted by Nikolaev (2015: 69 with n. 21) as a compound derived from the PIE root **terk^w*- ‘turn’. Nikolaev assumes an underlying verbal noun **terk^w-men-* ‘turning’; from this, he derives a formation **η-terk^w-mn-o-* (intensive alpha) or **sm-terk^w-mn-o-* (copulative alpha). The original compound meaning would be “with much turning around, with much tossing to and fro”. Problematic for this assumption, however, is the fact that the verbal root **terk^w*- has not otherwise left any certain traces in Greek (as Nikolaev 2015: 68 n. 17 admits), and that an ostensibly old verbal noun in **-men-* to this root is not attested in other branches. Nikolaev rejects the derivation from τέρπομαι ‘to enjoy’, judging that Lobeck’s idea, “ἄτερπνοι are those who ὕπνω οὐ τέρπονται”, lacks conviction (2015: 67). However, neither Nikolaev nor anyone else seems to have noticed the Homeric phrase ὕπνου ταρπήμεναι ‘to get one’s fill of sleep’: the aorist of τέρπομαι, frequent already in Homer, has an appropriate meaning ‘to get satisfaction’. In my view, then, the compound is best analyzed as privative: ἄτερπνος may have qualified a sleep which does not provide satisfactory rest; hence, it could be glossed as ἄγρυπνος ‘restless, insomniac’ in the lexicographical tradition.

¹⁰⁰ A recent discussion of this word has been given by Reece (2009: 315–334, with discussion of preceding literature). Reece follows Hainsworth’s proposal that ἄπτερος was derived within the epic *Kunstsprache* from *ἔπε’ ἀπτερόεντα, a resegmentation of the formula ἔπεα πτερόεντα. This is in my view not credible, because it would have been very difficult to create a backformation ἄπτερος on the basis of *ἀπτερόεντα. The only comparable formation seems to be φαίδιμοντες (epithet of the Ἑπαιοί, *Il.* 13.686) beside φαίδιμος ‘brilliant’, but in this case the *hapax legomenon* φαίδιμόντες is a typical example of artificial word-formation; it could hardly have been used as a basis for further derivation.

- **ἀτραπός** and **ἀταρπός** ‘trail, footpath’. Both *GEW* and *DELG* (s.v. ἀτραπός) assume that these words consist of copulative ἀ- and the root of τραπεώ ‘to tread grapes’, τροπέοντο· ἐπάτουν ‘they were treading’ (Hsch.).¹⁰¹ The original meaning is supposed to be ‘well-trodden’ (‘la piste foulée’, *DELG*). Chantraine also remarks that the connection with τρέπω ‘to direct, turn towards’ (ἀτραπός· ὁδὸς τετριμμένη, μὴ ἔχουσα ἐκτροπάζ, ἀλλ’ εὐθεῖα, Hsch.) is folk-etymological. It is somewhat problematic for this etymology that the passive semantics (‘trodden’) would normally require a formation in *-τό-, given that τραπεώ is a transitive verb. Moreover, the assumed interpretation ‘well-trodden path’ is at odds with the fact that ἀτραπός characteristically denotes a trail (as I will show below). Finally, assuming copulative alpha does not explain the unaspirated anlaut of the word in Attic prose and comedy.

As an alternative, I have proposed (van Beek 2013: 276–277) that ἀτραπός was originally an adjective of the type ἄγραφος ‘unwritten’ with privative ἀ-. I reconstruct a pre-form **h₂-t₂p-o-* ‘untrodden’, where **t₂p-* is the zero grade of the verbal root continued in τραπεώ and τροπέοντο· ἐπάτουν. Starting from phrases like **ἄτραπος ὁδός* or **ἄτραπος κέλευθος* ‘untrodden path’, the oxytone accent of ἀτραπός can be ascribed to its substantivization. The meaning ‘untrodden’ fits the attestations of the word excellently. In Herodotus and Thucydides, ἀτραπός is exclusively used to refer to the shortcut at Thermopylae by means of which the Persians take the corridor. This ἀτραπός was probably more like a trail than a path. An original meaning ‘untrodden path’ is also favored by the Homeric phrases κατὰ παιπαλόεσσαν ἀταρπὸν ‘along a rugged path’ and τριχηῖαν ἀταρπὸν ‘rough path’.

As for the variants, the normal prose form was clearly ἀτραπός, while in poetry we find both ἀταρπός and ἀτραπός (in other words, ἀταρπός is limited to poetry). The variation also appears in the synonymous forms ἀταρπιτός and ἀτραπιτός (both Homeric), which are extensions based on the more common word ἀμαξιτός (adj.) ‘traversable by wagons’, (subst.) ‘carriage-road’ (*Il.*+). We may therefore hypothesize that ἀταρπός is the older

¹⁰¹ Beekes (*EDG* s.v. ἀτραπός) suggests that the variation ἀτραπός ~ ἀταρπός is a substrate phenomenon, comparing Russian *tropá* ‘path’, but this is nothing more than a wild guess.

form.¹⁰² If so, how did ἀτραπός come into being? As I have argued in my dissertation, the epic forms ἀταρπός and ἀταρπιτός may contain the regular Proto-Ionic development of a pre-form **η-τρρ-ο-*, whereas the prose form ἀτραπός may have been influenced by the root of the verb τραπέω. In τραπέω itself, the vocalization -ρα- may be due to the full grade attested in τροπέοντο· ἐπάτουν (Hsch.).

- **ἀφλοισμός** ‘foaming of the mouth’ (Hom.): a root φλιδ- is seen in Hesychian glosses like ἔφλιδεν· διέρρεεν, ἐρρήγνυεν ‘splashed’ (of an ulcer), διαπέφλοιδεν· διακέχυνται ‘has dissolved’, πεφλοιδέναι· φλυκταίνουσθαι ‘to have blisters’, and the verb φλιδάω ‘to be swollen’ (of ulcers, blisters), ‘be fat’ (of pigs). Apparently, the root denotes the process of a bubble blowing up and eventually splashing (telic semantics). An action noun denoting the production of such bubbles would fit this type of semantics very well, so the root etymology seems clear. Frisk analyzes ἀφλοισμός as a verbal noun in -σμός to this root, with the remark: “Anlautendes ἀ- ist als copulativ (intensiv) zu erklären, sofern man nicht vorzieht, Kontamination mit dem synonymen ἀφρός anzunehmen”. Under φλιδάω, Frisk seems to prefer the second option (contamination).¹⁰³ Indeed, it remains unclear what the semantic sense of an intensive or copulative prefix would be, so Frisk’s suggestion deserves consideration. A prefix **an-* would fit well semantically (‘bubbling up’), but to assume a phonetic reduction of the cluster -μφλ- would be unmotivated.

Having reviewed the entire evidence for ‘intensive’ alpha, we may draw some conclusions.

Firstly, it appears to be unnecessary to reconstruct a PIE zero grade **η-* ‘in’. If the reconstructions ἀτενής < **ad-tenes-* and ἀλέγω ‘to count among’ < **sm-lege/o-* are accepted, the only remaining piece of evidence would be ἄκαρος in the meaning ἐγκέφαλος. This attestation is, however, too late and uncertain to have any crucial bearing on the issue.

Secondly, concerning the functions of copulative **sm-*, we have seen that this prefix can be used in the following types (none of them is productive in Greek):

¹⁰² DELG remarks that in epic Greek, ἀταρπός was preferred for metrical reasons, but a dactylic form ἀτραπός (which could be used before vowels) would not be inconvenient by definition.

¹⁰³ DELG s.v. ἀφλοισμός keeps the options open; EDG follows Frisk.

- possessive compounds meaning ‘having the same X’ (ἄλοχος ‘bedmate’)
- determinative compounds (ἅπαντες ‘all together’)
- deverbal compounds (ἀολλέες ‘all together’).

So far, it has appeared that cases like ἄτερπνος, ἀτραπός are better analyzed as privative compounds, while instances like ἀσπερχές, ἀστεμφής may rather contain **an-* ‘up, along, across’. Given these alternative explanations, there is no longer any reason to suppose that compounds with **sm-* developed into ‘intensive’ compounds.

It remains to discuss in more detail another group of compounds with prefix ἀ-: the type ἄβιος ‘wealthy’.

4.2 Compounds with ἀ- meaning ‘with X’ (type ἄβιος)

This final group represents a different type of exocentric compounds, where ‘having (much) X’ is supposed to be the outcome of ‘being together with X’. The most important examples are the following:¹⁰⁴

- ἄξυλος, a *hapax* in Homer (*Il.* 11.155) occurring in the phrase ἄξυλος ὕλη, which has been interpreted as a ‘forest with much timber in it’.
- the verse-initial phrase ἄβρομοι ἀνίαχοι (*Il.* 13.41), again containing two Homeric *hapax legomena*, usually interpreted as ‘with much shouting’.
- ἄβιος, attested in the sense ‘wealthy’ in Antiphon Soph. fr. 43, for which our sources are Harpocration (gl. πολὺν βίον κεκτημένος) and Hesychius (gl. πλούσιος).
- ἄδειος· ἀκάθατος. Κύπριοι ‘unclean’ (Hsch.), generally derived from δεῖσα ‘mud’ with copulative α and dialectal loss of intervocalic sigma (*GEW, DELG, EDG*).
- ἄεδνον· πολύφερνον ‘with much dowry’ (Hsch.).
- ἀτρύγετος, a Homeric epithet of the sea that has been interpreted by Leukart (1986) as a possessive compound meaning ‘with much surf’. In Leukart’s analysis, it consists of copulative or

¹⁰⁴ A number of other glosses are more obscure. ἄχιλος is given both a privative and copulative interpretation in Hsch. s.v. ἄχειλον; ἀχύνετον ὕδωρ (*hapax*, Nic. *Al.* 174) is glossed as ‘far-spread, copious’ by *LSJ* and thought to be etymologically connected with χέω, χύνω ‘pour’; ἄστονον (v.l. at A. *Sept.* 857) is glossed as πολύστονον in the scholia and as ἄλυπον. μεγαλόστονον in Hsch. Finally, the gloss ἄσκιος ὕλη· ἡ δασεῖα ὕλη (Hsch.) may contain a case of privative alpha: in a thick forest, sunlight does not penetrate, and hence there are no shadows.

intensive α - and a lost noun *τρυγετός ‘surf’. He derives *τρυγετός from the sound verb τρύζω, with the suffix known from other deverbal nouns denoting natural phenomena, such as ὑετός ‘rain’, νιφετός ‘snow’, παγετός ‘frost’.

- ἄβυσσος ‘very deep, unfathomable’ (A., Hdt.+) has been analyzed by Peters (1999: 449 n. 12) as a copulative compound ‘having much depth’, derived from Ion. βυσσός ‘depth’. Peters argues that the usual interpretation as a privative compound ‘without bottom’ is implausible, because Att. βυθός / Ion. βυσσός did not merely denote the bottom of a body of water, but more generally ‘depth’.

These examples form a rather heterogeneous group: three Homeric *hapaxes*, three glosses, and two etymological explanations. As we have seen above, since Solmsen (1909: 22) the type is often supposed to be an intermediate stage that led to the creation of forms with ‘intensive’ alpha, such as ἀχανής ‘wide open’, ἀσπερχές ‘furiously’. According to Solmsen, the type is inherited because it also appears in Vedic compounds like *sáçetas-* ‘prudent’, *sapráthas-* ‘wide, spacious’, *sábādhās-* ‘hard pressed’, which can be interpreted as ‘with *cétas-*’, ‘with *práthas-*’, ‘with *bādhās-*’. In a similar vein, ἀχανής and ἀσπερχές would reflect earlier ‘with *χάνος’, ‘with *σπέρχος’.

However, we have also seen that the assumption of neuters like *χάνος and *σπέρχος is rather unlikely, and that the Greek compounds are better analyzed as deverbal. The Vedic examples, too, are rather exceptional within Indo-Iranian. One could therefore envisage to explain them as secondary creations; for instance, the meaning of *sapráthas-* may have developed from *‘consisting of one expanse’, while *sábādhās-* may reflect a more normal ‘copulative’ formation *‘pressed together, compressed’. Indeed, one wonders why noun phrases of the form ‘with X’ would have to be expressed by endocentric compounds with **sm-*, as long as two other inherited, productive ways of doing the same thing existed: adjectives of the *barbātus*-type and adjectives with a suffix *-*uent-*.

In view of these problems, it is pertinent to question the antiquity of the type ‘with X’ itself. I will now discuss the individual Greek examples of the type ἄβιος and try to judge whether they really should be analyzed as archaisms.

The phrase ἄξυλος ὕλη was interpreted already in antiquity (at least since Aristarchus) as ‘forest with much timber’ (πολύξυλος), with

copulative or intensive alpha.¹⁰⁵ However, another explanation mentioned in the scholia is ‘without timber’, with privative alpha; the meaning of ἄξυλος would be θρυώδης ‘consisting of rushes’. Finally, the preferred explanation of Aristarchus, who referred to a verse from Hesiod (fr. 314 M.-W.) containing the abstract ἄξυλή, was ‘from which one cannot obtain firewood’. The latter explanation seems rather far-fetched when taken as the literal, original meaning, and one has to agree that the analysis as ‘having much firewood’ would fit the context: Agamemnon’s assault, which brings down a large number of enemies, is compared to a raging fire which makes the bushes fall down in heaps. On the other hand, since the wood is said to consist of θάμνοι ‘shrubs’ (11.156), the possibility cannot be ruled out that the ὕλη in question consists only of dry shrubs, without taller trees: this might be the reason why it catches flame so easily. In support of this, the central meaning of ξύλον is ‘log of timber’, a thicker piece of wood suitable for further processing (cf. *Lfgre* s.v. ξύλον). Thus, it cannot be excluded that ἄξυλος ὕλη was a technical term for a certain type of thicket with only shrubs. In sum, nothing can be based on an analysis of ἄξυλος.

As for ἀτρυγετός, Leukart’s etymology is a sound possibility, but it should not be forgotten that the noun *τρυγετός is unattested. There are also alternative reconstructions, such as **η-trug-eto-* ‘that cannot dry up’, preferred by Vine (1998: 62–64). To this, I would add that a possessive compound **ad-trugeto-* ‘having surf at it’, along the lines sketched in section 3, is another possible reconstruction. The example therefore remains inconclusive.

The initial alpha’s in ἄβρομοι ἀνιάχοι are analyzed as copulative or intensive by most sources in antiquity.¹⁰⁶ Thus, we find glosses like ἅμα βρόμῳ καὶ ἅμα ἰαχῇ ‘accompanied by crying and shouting’, or ἄγαν βρομοῦντες καὶ ἄγαν ἰαχοῦντες ‘crying and shouting loudly’. This interpretation is followed in *GEW* and *DELG* (s.v. ἀνιάχος); as Frisk remarks, the privative interpretation advocated by Apion and Hesychius (χωρὶς βρόμου, ἢ ἄνευ θορύβου) is less plausible.

The treatment of ἀνιάχοι cannot be separated from that of directly preceding ἄβρομοι.¹⁰⁷ What about the possibility that ἄβρομοι means

¹⁰⁵ For a detailed discussion of the Alexandrian views and the scholia, see Nünlist (2010: 200–201) and *Comm. Il. ad* 11.155.

¹⁰⁶ The diphthong αὖ- of ἀνιάχοι must reflect ἄ- plus a geminated digamma; it is normally analyzed as an Aeolic feature. It is possible to explain the gemination with reference to an original anlaut **sw-* > **hw-* of the root, which seems to be presupposed as well by the metrical treatment of ἰάχω ‘to shout’ and ἰαχή ‘battle cry’.

¹⁰⁷ The idea of positing a pre-form **an-wíwak^hoi* (Tsopanakis *apud DELG* s.v. ἀνιάχος, *non vidi*) does not help, because it would leave ἄβρομοι unexplained.

‘with one voice, shouting all at one time’? This was in fact suggested by Hesychius (s.v. ἄβρομοι αὐίαχοι):¹⁰⁸ μετὰ κραυγῆς μιᾶς ... ἀντὶ τοῦ ὁμόβρομοι, ὅπερ δηλοῖ τοὺς ὁμοφώνως κεκραγότες. Assuming that the second member of ἄβρομοι is deverbal, it would be the same type of formation as *ἄβολος (underlying ἀβολέω ‘to meet’, cf. section 1.2). In other words, ἄβρομοι could be derived from a verb *ἄβρέμω (for the meaning of ἄ-, cf. ἄμα ‘at one time’), with epic psilosis. A similar derivation of αὐίαχοι from *ἄ- plus ἰάχω would be conceivable,¹⁰⁹ but I would not exclude that αὐίαχοι is an artificial formation created on the spot by some poet, on the basis of preceding ἄβρομοι (cf. Schwyzer’s remark, “Gelehrte Dichtung spielt mit den verschiedenen Möglichkeiten”, 1939: 433). In view of the strange anlaut αὐ-, the word was probably formed when the anlauting digamma was still present in ἰάχω and ἰαχή.

The example ἄεδνον· πολύφερνον (Hsch.) is probably a relatively late creation, because it presupposes a contraction (the normal Homeric form of the simplex is uncontracted ἔεδνα). This means that the gloss cannot be used to determine the origin of the type ‘with X’. On the other hand, precisely because it must be a relatively late creation, this gloss illustrates that ἄ- equivalent to πολυ- in possessive compounds had some productivity in poetic language. This is an interesting conclusion in itself.

Let us take stock. The glosses on ἄβιος, ἄδειος, and ἄεδνον seem reliable evidence for the existence of possessive compounds with ἄ- equivalent to πολυ-. If one wishes to insist on Peters’ claim (l.c.) that ἄβυσσος cannot be a privative compound meaning ‘without bottom’, that could be a fourth good example. However, for the Homeric forms ἄξυλος, ἄβρομοι αὐίαχοι, and ἀτρύγετος, alternative explanations are conceivable. I therefore wonder whether another origin of this type can be proposed.

If the interpretation of ἄξυλος and ἀτρύγετος as possessive compounds with ἄ- = πολυ- is correct, a pre-form with *ad- would explain both form and function of the prefix. The forms would be ἐνθεος-compounds meaning ‘which has X at it’, with the locative sense of PIE *h₂ed- ‘by, at’ also attested in Italic and Germanic.¹¹⁰ Now, if the possibility of geminate reduction as proposed in section 3.6 is accept-

¹⁰⁸ The text of this lemma is badly corrupted, and restored on the basis of similar wordings in Apollonius Sophistes; see Latte (1953) *ad loc.*

¹⁰⁹ For αὐίαχοι, Hsch. only glosses μετὰ ἰαχῆς μεγάλης.

¹¹⁰ The ἐνθεος-type is widespread in Greek (cf. ἔμπαις ‘who has a child within’ = ‘pregnant’, ἀμφιθάλασσος ‘which has the sea on both sides’ = ‘sea-girt’) and of PIE origin: cf. Schwyzer (1939: 435).

ed, a similar reconstruction would also explain ἄβιος, ἄβυσσος and ἄδειος (i.e. Proto-Greek **ad-g^wio-* ‘who has wealth / livestock at hand’ > **agg^wio-* > **abbio-* and subsequent reduction of the geminate in Proto-Ionic). Alternatively, one might assume that the short form **ad-* > **a-* was extracted from the position before two consonants (as in ἄξυλος, ἀτρύγετος).¹¹¹

An advantage of this new scenario would be that it straightforwardly explains why not a single instance of ‘intensive’ alpha is aspirated. Moreover, it allows us to understand the coexistence of two different prefixes ἄ- without having to admit a great time depth for their homonymy. The ‘geminating’ prefix **a(d)-* may still have enjoyed productivity in Proto-Greek, or perhaps even until the Mycenaean period. When it merged with the reflex of privative **h₂-* due to the general reduction of geminate stops outlined in section 3.6, a homonymy came into existence. Later on, after the operation of Grassmann’s Law and psilosis, these forms were joined by the reflexes of copulative **sm-*.

5. Conclusions

It has been argued that traces of the local particles **an-* and **ad-* (PIE **h₂en*, **h₂ed*) can be found among the supposed evidence for copulative and intensive alpha. The strongest cases are Ἀτλας < **an-tlant-*, ἀστεμφής < **an-stemp^hes-*, ἀσπερχές < **an-sperk^hes* or **ad-sperk^hes*, ἄχρι < **ad-k^h(s)ri*, ἀσπάζομαι < aor. **ad-spa-s-*, and ἀθρέω < **ad-t^hrē-*. I have also proposed the reconstructions ἀτενής < **ad-tenes-* and ἀχανής < **ad-k^hanes-*, arguing that the resulting geminated stops were reduced early on in Proto-Ionic.

For a number of alleged copulative or intensive compounds (e.g. ἄτερπνος, ἄξυλος, ἀτραπός) a privative analysis has been proposed. Furthermore, I have argued that Greek preserves traces of **sm-* ‘together’ as a verbal prefix: ἀλής, ἀολλέες ‘thronged together’ continues a PGr. **sm-wln-es-* which is derived from a verbal stem PGr. **sm-wlne/o-* ‘to throng together’. Another remnant of such a preverb can be recognized in ἀλέγω ‘to count among’ < PGr. **sm-lege/o-* (with psilosis). Thus, compounds with **sm-* can be possessive, determinative, or deverbal. The type ἄβιος ‘wealthy’, which is supposed to

¹¹¹ Given the homonymy with privative ἄ-, such a generalization does not seem very likely at first sight. However, it would be conceivable in the context of poetic diction, where forms that sound strange to a general audience may be used by poets as their hallmark.

have developed from copulative *‘who is together with wealth’, is only weakly attested in Greek and may also be derived from possessive compounds with **ad-*.

So far, various scholars have been of the opinion that ‘intensive’ alpha can be reduced to copulative alpha (**sm-*), whereas others thought that it originated from **η-* ‘in’. The above discussion suggests that we can do without **η-* ‘in’. This is attractive because it allows us to avoid the conclusion that two homonymous prefixes **η-* coexisted and were productively used from PIE onwards; the zero grade of ‘in’ can be reconstructed as **h₁n-*. For some cases of ‘intensive’ alpha (e.g. ἀλέγω), we may indeed resort to compounds with **sm-*. For a number of other cases, reconstructing a compound with **sm-* is less likely in terms of semantics, phonology, or word-formation. I have proposed that these compounds contained **an-* or **ad-* instead.

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