Penelope's αἰνοπαθή (σ 201)

Very old or very young?

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Abstract

The Homeric hapax αἰνοπαθής ‘terribly suffering’ has been adduced as evidence for ancient processes of Indo-European word-formation. In particular, the vocalism of the root, α of -παθ-, would derive from **n*, an ablaut grade conditioned by the accent on the ending -ής (a “hysterokinetic” *s*-stem adjective). I reexamine the passage where the word is found and argue the vocalism of -παθής reflects not an archaism but an innovation in Homeric Greek. Using this reanalysis as a point of departure, I review recent literature on *s*-stem adjectives in Greek, Vedic, and Proto-Indo-European, disputing that the evidence suffices for a hysterokinetic reconstruction. I propose that the PIE accent was borne on the first member of these exocentric compounds as we find it in earliest Old Indic, in the prehistory of Greek, and in certain Greek archaisms.

Keywords

Homer – compounds – internal derivation – accent – ablaut

1 Is αἰνοπαθής very old?

How old is Homeric αἰνοπαθής? Some scholars have analysed the compound as coming from the bedrock of prehistoric Greek. Such an analysis departs primarily from the vocalism of the second member: the α of the root -παθ- would derive from a zero-grade **n*, an ablaut grade conditioned by the accent on the ending -ής. In this case, the zero-grade ablaut and the oxytone accent must be of considerable antiquity. Conversely, the Homeric compounds in -πενθής, with full-grade of the root, would be innovations. Weiss (2011: 258–259) states this

position clearly, as he discusses more broadly the (pre-)Proto-Indo-European process known as “internal derivation”: “The zero-grade of the root is preserved in Gk. αἰνοπαθής ‘terribly suffering’ < **-pntʰ-ēs* vs. the proterokinetic simplex with full-grade root πένθος ‘suffering’.” The contours of his claim, the nature of internal derivation in early Proto-Indo-European (PIE), exceed the bounds of the present discussion, except to say that the process would be active in the remote prehistory of the proto-language, in which case αἰνοπαθής would preserve a remarkable relic.¹ The Greek language does preserve hoary archaisms of accent and of ablaut—bards in the Homeric tradition do sing words that must have been passed down virtually unchanged across the millennia—but αἰνοπαθής is not one. Basically a hapax of the *Odyssey* (18.201; on other attestations, cf. *infra*), this compound, I show, was formed in a more recent era, one in which *s*-stem adjectives could be built to deverbal bases, in this case the aorist παθεῖν, no longer being confined to their denominal origins. Furthermore this compound in particular, far from being ancient, is of so recent a vintage that we can witness its formation. We may locate within Homeric poetry the formulaic material underlying Penelope’s αἰνοπαθής, especially in the phraseology of lament as heard in Hekabe’s Iliadic αἰνὰ παθοῦσα (*Il.* 22.431); I examine below the passages where these words occur. The re-examination of this one word then occasions new remarks on the history of accent and ablaut in the *s*-stem adjectives.

1.1 αἰνοπαθής in context

αἰνοπαθής first occurs in one passage of Homer’s *Odyssey* (18.201), then rarely elsewhere, mostly as imitation in later epic; accordingly, we focus on αἰνοπαθής in Homer.² In understanding this word to be very old, Weiss has precedent (and

- 1 But **-pntʰ-ēs* is not a PIE form. Perhaps one could posit a pre-PIE ***-bʰndʰ-ēs*, ***-bʰndʰ-s-ēs*, or, *mutatis mutandis*, with the root **kʷendʰ*. The root etymology is immaterial to my discussion because I do not derive the compound from (pre-)PIE but rather via inner-Greek processes. On internal derivation in general, cf. Lundquist & Yates (2018: 2121–2137, esp. 2134–2137 with further lit.). N.B.: as this article was going to press, I received my copy of the new edition of Michael Weiss’s excellent grammar. I had discussed this form with him in 2017 and I see he has excised it from the new edition; Weiss (2020: 277–278) treats the same process of internal derivation but without ablaut archaisms in Greek. The example he does discuss is εὐμενής = Ved. *sumánāh*, whose paradigmatic source he reconstructs as **(h₃su-)-mn-ēs-s*, *-mṇ-s-é/ós*; I evaluate this reconstruction below.
- 2 One other possibly early attestation comes from the old scholia to the *Odyssey*: αἰνοπαθῆ ... παρὰ Ἀνακρέοντι αἰνοπαθῆ, in the works of Anacreon (codd., Dindorf 1855: 12.313 H, vol. ii.550), of which Dindorf laconically remarks, “Teum, ubi natus erat Anacreon” (‘Teos, where Anacreon was born’). Most recent editors reassign the fragment to an Aeolic poet, emending to παρὰ Ἀλκαίῳ ‘in the works of Alcaeus’, or an Aeolic fragment of Sappho or Alcaeus (Voigt 1971:

followers). Schmidt (1889: 147), for example, deems it old, though he understands the basis as an agent noun *παθής; in an important, recent contribution to PIE word-formation, Majer (2017: 140) expresses, with due caution, the idea that the theoretically expected ablaut of an “original hysterokinetic paradigm” might be found in this compound (he reconstructs “*-k^wḡt^h-ēs”). If the word has been misdiagnosed diachronically, as I argue, synchronically oriented lexica have fared little better. The authoritative *Lexikon des frühgriechischen Epos* analyzes this compound in the style of the Sanskrit grammarians as a *bahuvrīhi*, ‘whose Y is X’, glossed as “wessen πένθος αἰνόν ist” (*LfgrE* Snell et al., s.v., entry by Friedrich Scholz). But other voices have been heard. Older commentators contended—rightly, I claim—that the compound is best read not as a traditional Noun-Noun *bahuvrīhi* but in meaning as something closer to the verbal governing type. Ameis et al. (1910) gloss in Greek as μάλ’ αἰνῶς πάσχουσιν ‘suffering very terribly’, which shows that they would treat the second member of the compound as verbal (πάσχουσιν), the first member as adverbial (αἰνῶς). Likewise Risch (1974: 81–82) translates αἰνοπαθής as “Schlimmes erdulnd”, i.e., not a *bahuvrīhi*, and explicitly draws the second member from the aorist ἔπαθον. Risch rejects deriving -παθής from the simplex πάθος on chronological grounds, namely that the simplex crops up too late to feed derivation (πάθος appears first in Aeschylus). Risch lays down a chronology of forms that still seems to me viable. He analyzes -παθής and other zero-grade forms as innovations. He argues that the older forms show *e*-grade, πολυ-, νεο-, ταλα-πενθής, etc. I agree with his schema and discuss further how he understood deverbal derivation in this category, following the recent work on *s*-stem adjectives in Greek carried out by Meissner (2006) and Blanc (2018). As few authors have discussed αἰνοπαθής in its actual occurrence, the Homeric hapax αἰνοπαθή (acc.sg.f., *Od.*18.201), I do so here. I demonstrate that when we understand the word in context, not diagnosing its morphology in the abstract but in the particular, we see that this hapax displays numerous hallmarks of innovation (Section 1.2). Nor is the word αἰνοπαθή isolated in this respect: it is rather one harbinger of a changing class (Section 2). Finally, once I have argued the zero-grade ablaut is not so old as previously thought, we turn to the thornier questions of accentuation in the *s*-stem adjectives (Section 2.1). We then conclude by examining the Indo-Iranian comparative material (Section 2.2).

fr. 1). Maybe a further attestation is to be resurrected from the tattered papyri of Pindar: αἰνοπα (Thren fr. 128ec.3 Snell & Maehler), but maybe not. It occurs rarely later as epic imitation: see Montanari (2015: s.v. αἰνοπαθή).

1.2 *αἰνοπαθής is very young*

Let us enter that passage in the *Odyssey* where the word occurs. Penelope awakes from sweet sleep shed upon her by the goddess Athena. In some disarray, she describes herself, doomed for an uncertain term, as αἰνοπαθῆ. To cease wasting away her life, mourning in heart, Penelope begs Artemis for death (*Od.*18.201–205, West):

ἦ με μάλ' αἰνοπαθῆ μαλακὸν περὶ κῶμ' ἐκάλυψεν.
αἴθε μοι ὥς μαλακὸν θάνατον πόροι Ἄρτεμις ἀγνή
αὐτίκα νῦν, ἴνα μηκέτ' ὀδυρομένη κατὰ θυμόν
αἰῶνα φθινύθω, πόσιος ποθέουσα φίλοιο
παντοίην ἄρετήν, ἐπεὶ ἔξοχος ἦεν Ἀχαιῶν.

(Then sweet sleep released Penelope, and she rubbed her cheeks with her hands, and said:) 'Soft sleep had enfolded me **suffering terribly**. If only chaste Artemis would give so soft a death even now so that I might no longer waste away my life sorrowing at heart, longing for my dear husband's manifold excellence, for he was pre-eminent among the Achaeans.'

Several problems conspire against treating αἰνοπαθῆ as an archaism. First, in terms of morphology, the zero-grade -παθής may be understood as deverbal from παθεῖν, as Risch and others have proposed, a claim I examine in more detail below (Section 2). If correctly reconstructed, then, because this change is by definition an innovation, the vocalism of the second member in αἰνοπαθής bespeaks a relative lateness, not an archaism.

Secondly, we have a metrical problem: the inflectional ending -ῆ contracts irresolvably as -ῆ < -έα, a feature discordant with the diagnosis of the word as archaic. This contraction occurs clearly only here in Homer (Chantraine 1958: 56). However, several verse-end *s*-stems remain uncontracted but to be read with synizesis, such as ἄλγεα (*Il.*24.7), τεύχεα (*Il.*7.207, 22.322), Διομήδεα (*Il.*4.365, 5.881), Ἀλέξανδρον θεοειδέα (*Il.*3.27), etc. Very likely, these synizesis forms originate as verse-end modifications of forms such as, e.g., Ἀλέξανδρος θεοειδής, as Witte (1972: 113–115) already posited.³ Indeed, Witte counts 14 cases where trisyllabic forms such as ἄλγεα, βέλεα, ἔρχεα etc. are exceptionally not trisyllabic (i.e., are to be read with contraction or synizesis), which he treats as inflected formulas. For him, the bards formed the verse-end πάθεν ἄλγεα (*Il.*24.7) after the

3 Cf. Wesselmann (2020: ad 207) and Brügger (2017: ad 7) for further discussion and literature.

line-final singular ἄλγος. In the case of αἶνοπαθῆ, the bardic tradition appears to have extended a line-final license to the caesura, i.e. hemistich-final, a possibility a reviewer nicely raises. West records no variants in his *apparatus*, e.g. -έα to be read with synizesis: in αἶνοπαθῆ we may have the birth of a new metrical license, synizesis of s-stem -έα, read -ῆ, at the caesura. Chantraine (1958: 59 fn. 21, III) fittingly discusses αἶνοπαθῆς under “l’adaptation des mots au mètre,” but the tradition does not adapt words to the meter willy-nilly. αἶνοπαθῆ does fit this metrical slot, *and* the poet permitted it precisely because deverbal derivation has become productive at this stage of Greek. I would reconstruct the following sequence to deliver our forms. The poet had in mind *αἶνοπαθέα, which makes a metrical quadribrach; what was he to do? He recalls the metrical license of synizesis for s-stem nouns and adjectives line-finally (ἄλγεα, θεοειδέα). The Muse brings to his mind a momentary inspiration: transfer this verse-final license to the hemistich! And so he produces αἶνοπαθῆ in this youngest layer of Homeric composition.

Let me add briefly two further points of criticism against the idea that αἶνοπαθῆ is archaic. It has been slotted in a metrical *sedes* not renowned for housing archaisms, not the line-final adonic, where old forms often dwell.⁴ Finally, αἶνοπαθῆς is a hapax of the *Odyssey*, absent from the *Iliad*, and found only in character speech—all strikes against any assessment of the word as ancient.

Not only is the second member in -παθῆς an innovation, but, I suggest, it is one so recent we may behold its genesis. Consider the following passage, the importance of which for analysing the compound has not been fully appreciated. Here we have Hekabe’s ritual mourning at the death of Hector (*Il.* 22.429–432 West):

“ὦς ἔφατο κλαίων · ἐπὶ δὲ στενάχοντο πολῖται.
Τρωϊήσιν δ’ Ἑκάβη ἀδινού ἐξήρχε γόοιο·
“τέκνον, ἐγὼ δειλὴ· τί νυ βείομαι αἰνὰ παθοῦσα
σεῖ’ ἀποτεθνηῶτος; ...”

‘So he (Priam) spoke in tears and in response to him his people groaned. Among the Trojan women Hecabe began the vehement lamentation: “My child, I am wretched! How am I to live, suffering terribly, now that you are dead?”’

4 As Witte (1972: 88) states, “Der fünfte und sechste Fuß ist der Hauptherd aller homerischen Formeln.” Of course, some deep archaisms occur in other positions, and innovations may arise in the adonic, the “Hauptherd” of Homeric formula; yet the point stands, I hope, that the pre-caesura pause is not a metrical *sedes* where archaisms are frequently seated.

Hekabe's is the second γόος, centring the triad of γόοι darkly concluding *Iliad* 22. Bards draw her αἰνὰ παθοῦσα from the ancient stock of formulas for suffering pain.⁵ Odyssean αἰνοπαθήs is generated from the formulaic family (adonic) "suffer woes" (Mawet 1979: 253–259). In part, this family consists of vowel-initial ἄλγεα alternating with consonant-initial πῆματα πασχ- etc., probably both poetic plurals (cf. Witte 1972: 6–9). The opening of the *Odyssey* establishes this formulaic exchange: πάθεν ἄλγεα (*Od.*1.4, before the bucolic diaeresis) and πῆματα πάσχει (*Od.*1.49, at line-end).⁶ The formulaic material for this family is rich; I illustrate with only a few formulas to paint the broader sweep, and focus on formal matches for the phraseology:

(1) Some formulas of adonic "Suffer Pains"

- ἄλγεα πάσχω (*Il.*2.667 = 2.721, etc. with the present stem -ει, -ειν)
- πολλὰ πέπασθε (*Il.*3.99, etc. with the perfect stem)
- (πρὶν ...) κακὸν ἄλλο πάθεισθα (*Il.*24.551, etc. with the aorist subjunctive)
- ἄλλο πάθοιμι (*Il.*19.321, etc. with the aorist optative)
- αἰνὰ παθοῦσα (*Il.*22.431)
- → αἰνοπαθή (*Od.*18.201)

The syntagm αἰνὰ παθοῦσα is more deeply embedded than these parallels alone suggest. Following hard on the heels of Hekabe, Andromache in her γόος laments how she has become αἰνόμορον 'terribly doomed' (*Il.*22.481), and wishes her father had never begotten her (τεκέσθαι). The death of Hector thus provokes similarly phrased sentiments from those women nearest him: his mother αἰνὰ παθοῦσα, his wife αἰνόμορος.⁷ Furthermore, Hekabe's αἰνὰ παθοῦσα links not only with formulas for suffering woes but rhymes enigmatically, evocatively with Thetis's hapax αἰνὰ τεκοῦσα (*Il.*1.414), of Achilles, which is in fact

5 Mawet (1979: 182) explores how ἄλγεα πάσχω stems from "un vieux fonds de vocabulaire épique."

6 πῆματα πασχ- is an Odyssean formula, occurring 6 times with Odysseus as subject, predicated only once (1.190) not of Odysseus. In that last-mentioned passage, Athena-Mentes uses it of Laertes; as Pulleyn (2019: ad loc.) remarks, the formula "echoes an earlier reference to his [Odysseus's] sufferings (49n.). Father and son are thus subtly linked." If there existed an earlier distinction between πῆμα as pain sensed within a subject, ἄλγος a pain imposed on somebody (Meissner 2006: 117–118), the distinction seems often blurred, and the interchange mostly conditioned by metrics, i.e., the word beginning with a vowel or consonant.

7 This rare word (in *epos* 1x *Il.*, 2x *Od.*, and *HH Merc.*257) is used to describe Odysseus and his men in their fight with the Cicones (*Od.*9.53), when 'we suffered many pains' (ἄλγεα πολλὰ πάθοιμεν). This latter passage further underscores the connection between αἰνὰ παθοῦσα (/πολλὰ πάθοιμεν) and αἰνόμορος.

the Aristarchean reading here (*Sch.II.22.431c* T, Did, Erbse). Tsagalis (2004: 155), in his study of epic grief, observes how “... the use of similar diction suggests that the paragon pair of mother and son (Thetis-Achilles) exercises its influence on the Trojan dyad of mother and son (Hecuba-Hector), with the former shaping the latter.” These keen remarks would repay further study. The two passages thematically ring the narrative of our *Iliad*, from the moment Thetis remembers her child, τέκνον ἐμόν (1.414) and her child-bearing (αἰνὰ τεκοῦσα), to the moment Hekabe grieves for her child—again, vocative τέκνον—for whom she is terribly suffering (αἰνὰ παθοῦσα). Taken with Thetis’s prophetic γόος at *II.18.52–64*, the passage from *Iliad* 22 mirrors across the battle lines the figures of mothers in mourning. In his commentary to the passage, Rutherford (2019: ad 18.59–60) observes that the Iliadic lines 18.59–60 (=18.440–441) are “reworked at *Od.19.257–258*, where Penelope pathetically declares that she will never welcome her husband home again [ex. omitted]. Here Thetis’ pessimism is justified, but in the *Odyssey* the hero will return (indeed, he is already present in disguise).” In the tradition of the *Odyssey*, poets structure Penelope’s grief by drawing on the Iliadic γόοι. I suggest that these maternal lamentations make up some of the cloth from which the poets of the *Odyssey*-tradition cut Penelope’s αἰνοπαθῆ̃. Penelope is not, of course, mother to Odysseus, so in this sense her bereavement differs from that of Thetis, or Hekabe; but by recasting αἰνὰ παθοῦσα and αἰνόμορος into αἰνοπαθῆ̃, the poet produces for his audience a word suggestive of the depths of Penelope’s grief.⁸

Nor do the cited direct parallels exhaust this rich theme. Casting our glance slightly further afield, including full-grades in *s*-stem adjectives, we may mention Homeric compounds in -πενθή̃ς. Although the simplex πένθος seems to be specialised completely to ‘mourning’,⁹ some adjectives in -πενθή̃ς have merged in meaning with those in -παθή̃ς, at least by the time of the *Odyssey*. Consider, for example, the adjective πολυπενθή̃ς, ‘having much pain’. First, in *Odyssey* 14, the loyal swineherd Eumaeus addresses himself to his master, the still disguised Odysseus, and says this stranger has roused his heart for all he has suffered (ὄσα δὴ πάθεις, *Od.14.362*), and seems one ‘much-suffering’, πολυπενθέ̃ς (*Od.14.386*).

8 Tsagalis (2008: 329–371) treats this lament in considerable detail. Tsagalis (2004: 124) connects Andromache’s δῦσμορος αἰνόμορον with the suffering of Hekabe and Thetis; Jong 2012: 185–187 provides a recent commentary on this passage.

9 With Blanc (2018: 242 fn. 16), “Il faut dire sans ambiguïté: [sc. πένθος] s’est totalement spécialisé pour désigner le deuil”, contra Chantraine *DELG* and others. Pulleyn (2019: ad *Od.1.342*), however, notes that πένθος “is often grief at a death (*II.17.37*), but not invariably so (*II.9.3*)”. This last-cited example could refer to the Achaeans grieving for those they have lost, but does seem to refer most easily to the mental wounds they presently suffer from contemplating the events to come.

The adjectives, πολυπενθής of Odysseus and αἰνοπαθής of Penelope, make up one thread through which the poet unites husband and wife across the narrative. Odysseus himself is πολυπενθής, a theme the opening lines of the poem establish (πολλὰ ... πάθεν ἄλγεα *Od.*1.4), in mirror-image bringing suffering on others, producing αἰνοπαθής in Penelope. After the slaughter of the suitors, Eurykleia rushes in to her mistress's chamber to tell her Odysseus has returned. Penelope pointedly asks the following of Eurykleia (*Od.*23.15): 'why ridicule me whose heart is πολυπενθέα, charged with pain?' Morphologically, a compound in -πενθής with *e*-grade shows older ablaut than that of αἰνοπαθής (substantiated below, Section 2), and has uncontracted inflection (-έα for -ῆ in the accusative). The equivalence in phraseology thus sets up a tension of grief, mourning, and suffering—Odysseus πολυπενθής, Penelope both αἰνοπαθής and πολυπενθής—which will not be resolved until near the poem's close, when παθεῖν yields at last to rejoicing (ἐταρπήτην, τερπέσθην, *Od.*23.300–301; ἡ δ' ἄρ' ἐτέρπετο, *Od.*23.308).

This is all to say, morphology needs poetics and we pluck "archaisms" from their contexts at our peril. αἰνοπαθής is sourced from the ancient font of 'pain, suffering', prime themes of the poems (the *Iliad*'s incipit μυρί' ... ἄλγε' ἔθηκεν, *Il.*1.2). The meanings of the new -παθής compounds interact with the compounds in -πενθής and simplex πένθος, the primary theme of 'grief'. The reciprocal influence is not surprising. In light of the derivational change to be discussed next (Section 2), we expect that the older denominal system with full-grade adjectives (e.g., -πενθής) yields to and, in some measure, merges with the younger layer of deverbal derivation (-παθής), before the former adjectives dwindle. One clear consequence is that αἰνοπαθής cannot be used as evidence for archaic processes of (pre)PIE word-formation. Moreover, the compound αἰνοπαθή, far from being an inherited archaism, more likely represents its opposite: an upstart, innovative, belonging to the most recent layer of composition—not ancient, though drawing on older material.

2 Historia, and αἰνοπαθής is deverbal

This last point leads us to discuss more broadly deverbal derivation in the *s*-stem adjectives. I may be spared a full *historia quaestionis* thanks to two recent, large-scale works treating *s*-stem nouns and adjective in Ancient Greek: Meissner (2006) and now Blanc (2018). A third monograph treats *s*-stems in Ancient Greek, though the focus is more broadly on Indo-European, namely Stüber (2002). I provide a brief overview.

Around the turn of the 20th century, many scholars would entertain that the two vocalisms of early Greek *s*-stem adjectives, e.g. -πενθής beside -παθής,

reflected a quondam ablaut alternation. In this scenario, the two ablaut grades would be viewed on an equal diachronic plane, hence pointing to an alternation in the proto-language. Many scholars, moreover, would have allowed the same alternation to be reflected in the simplex, e.g. πένθος beside πάθος. But following the groundbreaking work of Parmentier (1889), this position looked increasingly untenable. Parmentier ranged the compound αἰνοπαθής, which he translates “très malheureux”, with the vocalism of the aorist ἔπαθον. He demonstrates that in many cases the zero-grade form of noun and adjective postdate the *e*-grade form (so πάθος postdates πένθος), which suggests the denominal bahuvrīhis with *e*-grades are being ousted by zero-grade vocalisms from verbal bases. He established the results of his study in large measure on textual chronologies. Parmentier also indicated cases where *s*-stem adjectives must be taken from verbal roots because no corresponding nominal stem exists: Homeric examples like δισθανής ‘twice-dying’ (from θαν-, aor. ἔθανον) and γυναιμανής ‘manic for women’ (from μαν-, aor. ἐμάνη) seal the point. In the second edition of his *Grundriss*, Brugmann (1906: 516 fn. 1), who had followed in his first edition the ablaut account of αἰνοπαθής, offered a somewhat bristly recantation: “muss die Schwundstufigkeit nicht jedesmal so erklärt werden ...” In this second edition he finds that -παθής compounds may derive from the verbal root instead, here the aorist παθεῖν. This position Schwyzler (1939: 513) enshrined: “Für alte Schwachstufe der Komposita [...] beweisen nichts πένθος : αἰνοπαθής”, noting that often these *s*-stem adjectives have verbal reference (“verbalen Bezug”), forming active or passive verbal adjectives.¹⁰ In the early twentieth century, then, scholars reached a significant consensus on this category. In oldest Greek, *e*-grade in the second member of *s*-stem adjectives is canonical. In cases of ablaut alternations such as -βενθής : -βαθής, -θερσής : -θαρσής, -κρετής : -κρατής, the *e*-grade forms are found in, often confined to, the oldest layer of Greek; and this ablaut grade agrees with what we find in Indo-Iranian. The zero-grade ablaut is younger in terms of textual chronology (we are, of course, at the mercy of attestations).

We have noted that in the field of Homeric word-formation, Risch (1974: esp. 82) further elaborated this position. What appears on the surface as an ablaut alternation, -πενθής : -παθής, turns out to be a diachronic mirage. The same false equivalence holds for the simplex: the story is one of replacement, not old ablaut alternation.¹¹ Discussing these simplexes (πένθος, κρέτος, etc.)

10 Chantraine (1933: 436) slightly earlier had recognized, but not explored fully, this deverbal development. Meissner (2006: ch. 1, and 170–196) offers an informed and particularly readable account of this *historia*.

11 Cf. the conclusions in Blanc (2018: ch. 7 ‘La question des alternances’, conclusion on p. 247).

and how they come to be replaced by zero-grades (πάθος, κράτος, etc.), Meissner (2006: 71) reaches a conclusion that is worth reiterating: “The first consequence of this secondary emergence of the zero grade forms is that these cannot be considered reflexes of an old paradigmatic ablaut alternation of the root”. This evidence has been analysed in considerable detail in recent works by Blanc (2016, 2018). The outline of the story Blanc (2016: 136) captures well: “divers indices montrent que le vocalisme zéro s’est étendu petit à petit aux dépens du vocalisme *e*”. In the cases of ablaut pairs, compounds in -βενθής : -βαθής, -θερσής : -θαρσής, -κρετής : -κρατής, we do not find evidence for ancient zero-grades. In all cases the *e*-grade is attested early and lost, constituting the second member of a *bahuvrīhi*, and the zero-grade is suspected of being deverbal in origin. This evidence agrees perfectly with the Vedic evidence, to be presented afterwards (Section 2.2), and should be the basis for a reconstruction of PIE forms.¹²

Deverbal derivation marks the major innovation in the prehistory of *s*-stem compounds in Greek. The older *e*-grade forms match the Indo-Iranian material, and are being progressively dislodged from the compound adjectives in favor of vocalisms taken over from the verbal bases. Since Risch (cf. 1974: 81), scholars have located the source of change in second members like -γενής, which existed beside both nouns (γένος) and verbs (γενέσθαι). Acquirers of Proto-Greek might then have “misparsed” (historically) compounds in -γενής etc. as deriving directly from the verb γενέσθαι, thereby engendering a new derivational relationship. To exemplify this new relationship, we may take the root at hand: verbal (aorist) παθεῖν → compound adjective -παθής → noun πάθος, first in post-Homeric Greek. Most Hellenists who have worked on the *s*-stems seem to be happy with this conclusion; in the wake of Risch, see Tucker (1990: 57–65), Meissner (2006: 186–197), and Tribulato (2015: 88–89, 315–332). In broad outline, this story may well be correct but pinning the development to a prehistoric chronology has proven trickier. Certainly the deverbal innovation predates Homer, and probably predates Mycenaean.¹³ One outstanding question is whether the vocalism of the second member of an adjective is owed to the verbal stem (-παθής from παθεῖν) or can come via an intermediate, *even if unattested* or attested later than the compound, noun, here an earlier Ionic πάθος.

12 For the philological details see esp. Meissner (2006: 64–94), Beek (2013: chh. 4–5), and Blanc (2018: s.vv. in ch. 5).

13 Blanc (2018: 309 ff.) dedicates the majority of the second half of his monograph to answering this question. He argues convincingly for a *terminus ante quem* of the Mycenaean age (esp. his pp. 310–313). Blanc acknowledges that the Mycenaean evidence, as so often, boils down to a few philologically fraught forms, esp. *ka-ka-re-a* (KN R 1815), which could correspond to Homeric χαλκήρης (χαλκήρει δουρί, *Il.* 5.145); *ke-re-si-jo we-ke* (PY Ta 641), which could represent *krēsio wergēs*, of ‘Cretan wrought’ workmanship.

Blanc (2018: 237 ff.) poses this question. He accepts the fundamentals of the Tucker/Meissner derivation—that compound αἰνοπαθής etc. derive from the verbal stem—but he insists on an intermediary noun, even if unattested. Thus, Tucker and Meissner reconstruct the chain -παθής → πάθος, whereas Blanc, instead, posits instead a dual route, one for adjectives in -παθής from the noun πάθος, and another for preverb and verbal παθ- (his “συνεχής type”):

(2) Blanc's derivations of s-stem adjectives

1. παθεῖν → *πάθος → αἰνοπαθής
2. παθ- → ἀντιπαθής, συμπαθής etc.

He rejects the notion that a compound like -παθής could backform a new noun πάθος on the grounds that a verbal root or a noun always underlies the adjective (παθ-, πάθος → -παθής). Blanc disputes the evidential worth of textual chronology in this case, on the grounds that we possess too skimpy a record of the Greek lexicon for date of attestation to dictate linguistic chronology.¹⁴ But given the trend philologists like Meissner and Tucker have so convincingly described, not simply one case of the noun postdating the attestation of the adjective but an abundance of such cases—a trend Blanc's own monograph contributes to shoring up—I see no compelling reason to construct an s-stem simplex where none is attested. In this case, I see no need for an intermediary πάθος beyond theory-internal presuppositions. Once language learners acquired παθεῖν beside the compounds in -παθής, a new simplex may arise, which will be πάθος. Especially given the specialization of πένθος to ‘mourning’, this verbal root may well have produced an early πάθος, one preceding our textual records, just as Blanc posits. But given the richness of the pattern ‘noun beside compound’, the conclusions of Meissner (2006: 72) on αἰνοπαθής still seem to me viable: “On the abundantly attested model γένος : -γενής, πένθος : -πενθής, etc. a noun πάθος could easily be created as a back-formation”.

A new attestation of an early Ionic πάθος would help clinch the point for Blanc but it would not be decisive for all cases. We run the risk of creating false positives, potential forms that likely never existed, if we reconstruct, e.g., *θάνος, etc. wherever we find a related adjective (Hom. δισθανής ‘twice-dying’, to θανεῖν). At any rate, for my present purposes, the divergence between these positions is small. Whether αἰνοπαθής derives straight from the verbal stem (with Risch, Tucker, Meissner), or as proceeding only via an unattested, but potential, Homeric/early Ionic πάθος (itself dependent on the verbal root),

14 Cf. esp. his harsh wording at Blanc (2018: 242, 606 fn. 6).

there is little chance, on morphological grounds, that αἰνοπαθής is anything old; and coupled with the internal evidence from the Homeric tradition itself, the chances that αἰνοπαθής is a hysterokinetic *s*-stem derived via internal derivation, are nil.

2.1 *Deverbal derivation: genesis of the oxytone accent?*

Even lacking the ablaut evidence of αἰνοπαθής, etc., many Indo-Europeanists would maintain that the oxytones of Greek preserve the oldest accentual (and, thus, indirectly ablaut) evidence for reconstructing the PIE patterns (again, cf. Weiss 2020: 277–278). In Vedic, as seen below, the accent is regularly on the first member in all stem-classes of *bahuvrīhis* (e.g., Ved. *bāhú-ojas* ‘whose arms are strong’). In Vedic *bahu-* *vrīhis*, the *s*-stem adjectives do not behave differently from the other athematic stem-classes. Probably, the *communis opinio* amongst Indo-Europeanists remains that the oxytone accent as seen in Greek is oldest,¹⁵ although Hellenists have been less convinced. Taking as representative the three monographs dedicated to *s*-stem nouns and adjectives published since the year 2000, we see that the one most oriented towards PIE is pro-hysterokinesis, whereas the Greek-oriented monographs are contra. Stüber (2002: 189–190, with 27, 42) argues that the recessive accentual classes of Greek must be secondary, and the Vedic accents are innovated. She finds corroboration in a single Vedic compound which would retain the primitive oxytonesis, Vedic *āhanás-*, a word not easily defined in context. Stüber (2002: 190) sees in this word an archaism (“Archaismus”), and accordingly plumps for the hysterokinetic reconstruction. But in different passages Jamison and Brereton (2014) translate “luxuriant” (IX.75.5c) and “swollen” (X.125.2a) of Soma; “lubricious” (twice of Yamī, X.10.6d, 8c); and “bulging(?)” (V.42.13.c) of Tvaṣṭar in the belly of his daughter. That neither prefix, nor root or stem, can be segmented out, moreover that no simplex occurs, invite caution.¹⁶ Stüber (2002: 189–190)

15 Schindler (1975) initiated the specifically hysterokinetic reconstruction (and cf. Rix 1992: 144–145). He is widely followed: Jasanoff (2017: 4, 22) is representative. If this reconstruction were correct, the Vedic accents on the first member, and the second member (outside the negative compounds) would be innovations (discussed just below, Section 2.2), as would be the recessive classes in Ancient Greek.

16 Mayrhofer (1986–2001: s.v. *āhanás-*) carefully discusses possible prehistories, observing that the word might be of labiovelar origin if connected to *ghaná-* ‘Klumpen, Masse’ (Brāhmaṇa+). However, any deeper etymological connections he deems “fraglich”, warning “doch geht dies alles über Möglichkeiten nicht hinaus.” Kulikov (2018) proposes the Vedic etymology remounts to the root *han-* < **g^{wh}en-* ‘beat, strike’, but his simplex, “the agentive masculine -as- derivative” is unattested **hanás-* (which should depend then on an unattested neuter **hānas-*, the basis of the internal derivative), to a root that likely

is tempted to connect it with the Greek gloss εὐθενής (εὐπαθοῦσα, ισχυρά, Hsych. 6864 Latte). Other Hellenists have not followed suit. On the etymology, Meissner (2006:200) offers *non liquet*; on hysterokinesis, Meissner (2006: 162–163, 199–201, 221) stands staunchly opposed. He sees in the relic recessive classes in Greek an agreement with Vedic, and in Greek's oxytonesis an innovation. He writes (Meissner 2006: 63) that “there is no basis—and this time not even any systemic reasons—for regarding them as originally belonging to the hysterokinetic inflectional type”. In the latest on Greek εὐθενέω etc., Blanc (2018: 297 fn. 12, 543) rejects the connection to Vedic *āhanás-*, proposing a totally different etymology, aligning rather with PIE **d^heh₁-* ‘put, place’.

On the evidence of these relic accentual classes in Greek, combined with the evidence of Indo-Iranian (*infra*), I would reconstruct for PIE the *s*-stem possessive or *bahuvrīhi* compounds, like all other athematic possessive compounds, with a first member accent.¹⁷ The *s*-stems hold a place apart only in Greek: we may hypothesize that the change to deverbal derivation in Greek induced the innovated oxytone accent.

Several scholars have suggested developments along these lines. From other deverbal, determinative compounds our oxytones would originate. Meissner (2006: 200–201) states in no uncertain terms that for him, rather than regarding Greek oxytonesis as the “sole relic demonstrating the putative hysterokinetic character of the class, it seems that it is an innovation”. He locates the oxytonesis in the active verbal compounds in -ός (e.g., ὑ-φορβός ‘swineherd’), before this class secondarily shifted the accent towards the beginning of the word, owing to Wheeler’s Law (oxytone dactyls become paroxytone), e.g. φωσφόρος ‘light-bearing’.¹⁸ In the same vein, Blanc (2018: 304–305) concludes that root-noun compounds like βουπλήξ ‘cow-goading’, and thematic compounds (before Wheeler’s Law) like ψυχοπομπός ‘soul-conducting’, provided the basis

never made an *s*-stem noun. More generally, the kind of lexicalization Stüber envisages for *āhanás-* depends directly on frequency: an item may be exceptionally stored (as opposed to productively processed) provided that acquirers have sufficient access to encode the irregularity. We may fairly wonder how often the proto-Vedins spoke of “moist,” “bulging,” and “lubricious” things.

17 I discuss the accents of PIE compounds further in Lundquist (forthcoming).

18 On this law of accent shift, see Probert (2006: 87–96), concisely Gunkel (2014). Earlier scholars of Greek compounds have proposed explanations along the lines Meissner suggests, e.g. Kuryłowicz (1958: 145–146) and more recently Meier-Brügger (1992: 39 ad 5). Meissner also mentions that the verbal formations from **-eh₁* might have influenced the class. These formations constitute a large part of the new *s*-stem adjectives, and whose verbal forms in non-finite inflections are not recessive (e.g., μανέντ- in the participle); cf. Lundquist (2016). Perhaps the accented stem, e.g., μαν-ή-, played a role in the oxytone accent of compounds (-μανής).

for oxytone accent of the newly deverbal *s*-stems. On the whole, I agree with this account, for the following reasons.

The oxytone class is highly productive in Greek: if a new adjective is created in this class, it will be oxytone. The oxytone accent is not, however, the sole accent of *s*-stem adjectives in Greek. The class bifurcates: (1) a handful are truly recessive, e.g., adjectives in *-ετης* ‘year’,¹⁹ agreeing closely with Vedic’s first member accent; (2) a smaller handful of suffixes, deriving historically from *s*-stem adjectives, are accented persistently paroxytone (*-ήρης*, *-ώδης*, *-ώλης*). The neuter nom.-acc. singular is, e.g., *-ῶδες*, displaying clearly the persistent accent. These suffixes are likely frozen relics from an earlier stage of Greek,²⁰ though Philomen Probert cautions me that this class of suffixes could have been “demorphologized” and subject to a subsequent default accentuation. That is, in the course of coming to be synchronically analysed as suffixes rather than second members of compounds, these new suffixes broke ranks with the other *s*-stems, and accent was recalculated.²¹ If so, only the truly recessive class would agree with Vedic. To my mind, since we have the recessive class developed from the first member accent, deriving the paroxytones likewise remains not overly problematic, though I cannot claim any certainty here. Regardless, the oxytone accent, on this reconstruction, must be an innovation. As a methodological given, we should look not to Greek’s productive class but to its relics. In this case, we should look to its classes of recessives because they are relics internal to Greek, and because they agree with the Vedic first member accent.²² From the witnesses of Greek and Indo-Iranian (effectively Vedic),

19 On this word in Greek and PIE, cf. Vine (2009), and Lundquist (2017: ch. 3.2.1.2), now Blanc (2018: 207–220, and on accent 300–302). Note esp. Blanc in his conclusion on this second member (220), “-(f)έτης conserve le vieil accent des composés possessifs (de toutes classes)”; the last two accounts are contra Stüber (2002: 51).

20 Chantraine (1933: 429–432) outlines the “grande fortune” of the new adjectival suffix *-ώδης* and cf. Debrunner (1917: §195, see too §155). Another case of a second member becoming suffixal in Greek is *-φρων*; in English, ‘-wise, -like’ share this trajectory. A Sanskrit example is *-mātrā* ‘measure’, forming *bahuvrīhis* ‘having the measure, size of’, but already for Pāṇini (Pā.5.2.37) *-mātrā* is treated as *taddhita*.

21 Probert (2006: 412) defines the process of “demorphologization” as one “whereby a word stem that was originally analysable into component parts (for example, a stem containing one or more derivational suffixes) ceases to be analysed synchronically as consisting of component parts; from a synchronic point of view it comes to be treated simply as an unanalysed stem, in other words a root.” When this process takes place, she argues, a word may be re-accented according to that language’s default accentuation; her monograph provides ample case studies.

22 Wheeler, whose account remains the most detailed in this domain, devotes a chapter to this problem of not-exact correspondence, a chapter he informatively entitles: “Wenn der

we may reconstruct the PIE accentuation of this class as surfacing on the first member of the compound.²³

I treat the oxytone class as an innovation. For the moment, I would like to elaborate a significant union of accent and ablaut, one that is missed if we do not attend to the class's transformation from denominal to deverbal derivation. Specifically, I adduce sources to demonstrate that deverbal derivation played a direct role in accentuation of the *s*-stem compounds in the historical and, in all likelihood, the prehistoric periods. For the moment, the point is that oxytone accent is not ancient, but sprang from deverbal derivation.

First, the ancient grammarian Herodian (2nd cent. A.D.) seems to have drawn a very similar (and overlooked) distinction. His doctrine is reflected in at least three sources: an epitome of Herodian by so-called Pseudo-Arcadius (Roussou 2018); the scholia to the *Iliad*; and the scholia to the *Odyssey*. I list and translate the passages in turn.

- (3) Τὰ εἰς ΗΣ ἐπίθετα παρὰ ῥήμα σύνθετα εἰς ΟΥΣ ποιοῦντα τὴν γενικὴν ὀξύνεται· εὐσεβῆς ἀσεβῆς εὐλαβῆς θεοφιλῆς αὐτοσφαγῆς πολυδευκῆς· Πολυδεύκης δὲ τὸ κύριον βαρύνεται. τὸ μέντοι φιλαλήθης καὶ μισαλήθης καὶ εὐήθης καὶ κακοήθης παρ' ὀνόμα' εἰσι οὐ παρὰ ῥήμα. (ps.-Arc.29.1–13 Roussou 2018).

'Adjectives in ΗΣ compounded from verbs and forming their genitive in ΟΥΣ are oxytones: εὐσεβῆς ἀσεβῆς εὐλαβῆς θεοφιλῆς αὐτοσφαγῆς πολυδευκῆς; but the proper name Πολυδεύκης is recessive. However, φιλαλήθης, μισαλήθης, εὐήθης, κακοήθης are from a noun, not from a verb [sc. hence are barytone, i.e., recessive]' (tr. JL)²⁴

historische Accent weiter zurück als die Stelle des Secundäraccentes lag, dann erhielt das Wort den Secundäraccent." He does mention the *bahuvrihis* (pp. 42–45), but is forced to leave unresolved the problem of the *s*-stem adjectives in particular (see his lengthy fn. ad pp. 45–46 fn. 1).

23 Again, I treat the PIE material at greater length in Lundquist (forthcoming).

24 In *Od.*19.521, πολυδευκῆς is transmitted as a v.l. πολυδευκέα ("quidam ap. Ael. Hsch." app. West) for πολυηχέα φωνήν 'a voice widely resounding'. Additionally, Nicander alludes to the Homeric readings in *Th.*209, 625 Gow and Scholfield. At great length Nagy (1996: ch. 1) pleads that Homerists admit both variants as "original": "both are legitimate, both ultimately generated from the multiform performance tradition of Homer." Whatever one makes of that construct, πολυδευκέα is an intriguing reading. The relevant section of Aelian (*de natura animalium*, 5.38), with the translation by Nagy (1996: 32), runs: τὴν ποικίλως μεμιμημένην, ὡς τὴν ἀδευκέα τὴν μηδ' ὅλως ἐς μίμησιν παρατραπεῖσαν 'making imitation [mímēsis] in a varied [poikílōs] way, just as ἀδευκέα [adeukés] means 'not at all adapted for imitation [mímēsis]'.

- (4) περιμήκεος · ... τὰ γὰρ εἰς ΗΣ σύνθετα, παρ' οὐδέτερα γενόμενα τὰ εἰς ΟΣ, τῷ Η παραληγόμενα βαρύνεσθαι θέλει, ὥσπερ ἔχει παρὰ τὸ κῆτος τὸ “μεγακῆτης” (cf. Θ 222 al.), ἦθος κακοῆθης · διὸ τὰ “λαθικηδῆς” (cf. Χ 83), “οἰνοπληθῆς” (ο 406) ὀξυνόμενα παρὰ ῥήματά φαμεν συντεθεῖσθαι, τὸ κήδω καὶ τὸ πλήθω. (*Sch.II.A ad N.63b, Erbse*)

‘For the compounds in ΗΣ, derived from neuter nouns in ΟΣ, in which Η is in the penultimate syllable, are usually recessively accented, as from τὸ κῆτος is derived *μεγακῆτης*, from ἦθος, *κακοῆθης*. On account of which we say that the oxytones *λαθικηδῆς* and *οἰνοπληθῆς* are compounded from verbs, namely *κήδω* and *πλήθω*.’ (tr. JL)

Herodian, as transmitted from these secondary sources, divides denominal and deverbal derivation. This is perceptive: likely this derivational basis divides the accentual classes in Greek. Herodian’s rider, “in which Η is in the penultimate syllable”, has the look of reasoning secondarily abstracted from the evidence: because many forms have eta in the penultimate syllable, that vowel somehow governs the accent. In an influential reading of the Herodianic rule, Wackernagel (1914: 45–46) invokes this phonological explanation to argue that the archaism (“das Alte”) in s-stem accent is preserved not in oxytones but in recessive personal names and in certain adjectives with long vowels. However, he too founders on an explanation. He cannot devise a reason why the syllabic weight of the second compound member should determine the accent: “Warum größere Lautfülle des Hintergliedes auf Oxytonese hinwirkte, ist vorläufig unklar”. I think he cannot because it does not: what matters for accent is rather whether the second member derives, or is felt to derive from a verb or a noun. More significantly, a score of counterexamples in both directions undermines the eta-ful rule: first, there are plenty of oxytone long-vowel roots (-γηθῆς, -θηλῆς, to name only two); second, conversely, recessives with a short-vowel root are found, such as -άντης, -άρκης, -(f)έτης. Another set of forms also undercuts the long-vowel rule, e.g., recessive compounds in -μεγάθης, -στελέχης. Admittedly, already in antiquity, the disyllabic stems (-μεγαθ-, -στελεχ-, etc.) were sometimes enfolded in the same rule as the long-vowel stems (cf. *Sch.II.A ad 16.57c Erbse*). Herodian’s canon should be understood as splitting deverbal (oxytone) vs. denominal derivation (barytone), as he articulates clearly with the wordings παρ’ ὄνομα and παρὰ ῥήμα (/ῥήματα).

The second source is a scholion to the *Odyssey*, which identifies the compound *πυκιμηδης*, standardly treated as recessive (e.g., Chandler 1881: 199 fn. 6), as paroxytone in the genitive *πυκιμηδέος*, hence oxytone in the nominative singular *πυκιμηδῆς*. The oxytone accent the scholiast gives is owed to the

grammarians's distinction: the deverbal *s*-stem compounds are oxytone. We owe this deft discovery to Pontani (2008), who explicates the grammatical doctrine underlying this brief but significant scholion attributed to Herodian in the scholia to the *Odyssey*:

- (5) πυκιμηδέος · παροξυτόνως τὸ “πυκιμηδέος” BHx (schol. α 438d Hrd, πυκιμηδέος, p. 207,26 Pontani).

‘The word πυκιμηδέος (should be accented as) paroxytone.’

Pontani argues cogently for the oxytone accent when the adjective is used as an adjective (i.e., not a personal name) because Herodian derived the adjective from the verb μήδομαι. This doctrine has left only scant traces in the grammatical tradition.²⁵ Pontani then extends his argument to encompass other compounds in -μηδης: θρασυμηδης in Pindar and Bacchylides should also be oxytone. In one well-known papyrus, the scribe dashed an acute over the epsilon θρασυμηδέα φῶθ' (Bacc. 16.15, *PLitLond* 46; the adjective qualifies Heracles), as elsewhere in the papyri we find accented oxytone *s*-stems (examples and discussion in Schironi 2018: 109). To show that the grammarians assigned oxytone accent because the compound was considered deverbal, Pontani (2008) mentions two grammatical sources: first, a brief entry in Hesychius (s.v. πυκιμήδεος [sic], 4324 Hansen), whose gloss runs, συνετής. ἢ ἐπιμελοῦς κατὰ τὸ ποιῆσαι, ‘Intelligent. Or attentive, from the doing (of the verb).’ Secondly, Pontani gives a clearer passage from the Lexicon of Zonaras:

- (6) Πυκιμήδη. ἢ συνετόβουλος, ἢ βαθυγνώμων. ἀπὸ τοῦ πύκα καὶ πυκνῶς (συνετῶς καὶ ἐπιμελῶς) καὶ τὸ μήδω τὸ βουλευόμαι.

Πυκιμήδη: ‘of intelligent plans’, ‘of profound wisdom’. From πύκα and πυκνῶς (meaning ‘intelligently’ and ‘attentively’) plus μήδω ‘deliberate’. (Zonaras *Lex.*, 1596, 11, Tittmann).²⁶

25 In his note in the apparatus, Pontani (2007: 207) explains his argument more concisely: “-μήδης nomina huius generis (cf. schol. A N 63b, Π57c) sed prob. a verbo μήδομαι (ut Zon. 1596, 11) adj. ducebat Hrd [Herodian].”

26 I am indebted to Philomen Probert for help translating this entry. As she mentions to me, the lemma seems to gloss the name Πυκιμήδη, elsewhere said to be the name of Hesiod's mother. What to make of that, neither she, nor I, knows. Tittmann, the editor of the text, says only in his apparatus we should read πυκιμηδής, referring to our passage of the *Od.* 1.438, γράϊης πυκιμηδέος.

This doctrine is likely more widespread than my culling suggests, though I am not aware of any extensive discussions. I can produce at least one other relevant passage. In a chapter treating the paroxytone accent of disyllabic nouns in -ΟΣ that are proparoxytone in the compounds (ἐν τῇ συνθέσει), Pseudo-Arcadius exemplifies his canon with ποικίλος παμποίκιλος, αἰδός παναἰδός, then excepts compounds derived from verbs:

- (7) τὸ δὲ κορυθαιόλος Ἐκτωρ οὐκ ἀπὸ ὀνόματος, ἀλλὰ ἀπὸ ῥήματος. τὸ μέντοι ἵππο-βουκόλος διὰ τὴν ἐνέργειαν παροξύνεται, καὶ ὅτι ἀπὸ τοῦ ῥήματος καὶ αὐτό. (ps.-Arc.221.9–12 Roussou 2018).²⁷

‘But κορυθαιόλος Ἐκτωρ (derives) not from the noun, but the verb. ἵππο-βουκόλος, however, is treated as paroxytone on account of its active voice, because it also (derives) from the verb.’

Quite differently, West (1998–2000: XXI) says the compound has coalesced from the syntagm κόρυθ’ αἰδός; as editor of the Homeric text, he remains undecided whether the word should be written with or without a division, as he prints for πόδας ὠκός.²⁸ West notes that the grammarians teach paroxytonesis (“Paroxytonesis et docent grammatici”) as basically all manuscripts exhibit, but editors disagree. Regardless of the origins of the compound, and the editorial principle by which an editor may write the words united or divided, we see that Herodian, as transmitted under Pseudo-Arcadius, again gives evidence that deverbal derivation determined the accent. In the case of κορυθαιόλος, with West, we may not know what to print; but the passage evinces the identical doctrine we have posited for the s-stem adjectives. We should take the reading of the grammarians seriously here, as at least a window onto the synchronic pressures of derivation. In my opinion, what they have picked up on synchronically holds as well for a not-too-remote period of prehistory: in Proto-Greek, deverbal derivation produced the oxytone accent.²⁹

27 In her commentary, Roussou (2018: 482) parallels the doctrine that κορυθαιόλος derives from a verb, not a corresponding nominal, referring to several ancient and medieval grammarians; so too Lentz (1867: 228, 12–13). This word is discussed in the broader context of compounding by Tribulato (2015: 29 with fn. 36).

28 Itself not an undisputed point! For the latest, see Blanc (2018: 173–175), who rightly (to my mind) disagrees with West’s reasoning on ποδώκης, but has no solution for why the compound alternates with ποδάρκης. The last word on this topic has not been said.

29 Again, my survey of the grammarians on deverbal derivation is far from comprehensive. At least one further reflection of this canon comes from a discussion of nouns in -η: τὸ δὲ ἀρπαγή ὀξύνεται, διότι ἀπὸ τοῦ ἀρπάζω. τὸ δὲ ἀρπάγη (σιδήριόν τι) βαρυνόμενον, ἀπὸ τοῦ

I hope my main point has become clear. Deverbative derivation exerts its force down to the age of these later grammarians. When an *s*-stem adjective can be understood as deverbal, the accent assigned is oxytone; when the adjective remains purely denominal, was not connected to a verb, as in the case of -έτης ‘year’, the adjective could not make the leap to oxytonesis. When the adjective could not make the leap to oxytonesis, recessive accent was retained. The oxytone accent is owed to deverbal derivation, taking its form from other deverbal, determinative compounds. Again, Blanc (2018: 304–305) cites root-noun compounds (*tatpuruṣas*) like βουπλήξ ‘ox-goad’, equally accented on the deverbal second member in Vedic, and thematic compounds (before Wheeler’s Law) like ψυχοπομπός.³⁰ The *s*-stems would follow suit. On the whole, I agree with this account, for the reasons I lay out in the next section.

2.2 Indo-Iranian *s*-stem adjectives are *bahuvrīhis* (mostly)

A full-scale treatment of Indo-Iranian *s*-stem adjectives would exceed the bounds of a paper whose goal is explaining the Greek compound αἰνοπαθής, but because the evidence is pertinent to understanding the prehistory of Greek compounds, I sketch the Indo-Iranian material here. I focus on how our understanding of Greek compounds may be informed by the specifically Old Indic material, since Old Iranian languages (Avestan, Old Persian) lack the relevant accentual data. Despite its strong show in the Rig-Veda, following this earliest layer of Old Indic, the category of *s*-stem adjectives goes into a general decline, as Wackernagel and Debrunner (1954: 224–225) tally. Accordingly, we focus here on Vedic texts. I use the term “accent”, which I indicate with an acute mark over the vowel, for what is the high tone (*udātta*), not directly marked in the written tradition of the Rig-Veda.³¹

ἄρπαγος, ‘ἄρπαγή is oxytone because it derives from ἄρπάζω. ἄρπάγη, however, a kind of iron, is barytone, coming from the genitive of ἄρπαξ’ (ps.-Arc.243–244 Roussou 2018, tr. JL). Ps.-Arcadius focuses on feminines in -η that are from genitives and, according to him, are therefore recessive. ἄρπαγή does not come under this principle because he derives it from ἄρπάζω, while ἄρπάγη does because he derives it from the genitive of ἄρπαξ. In this passage Ps.-Arcadius does not generalize about deverbal derivation—but likely enough he had such a generalization in mind.

30 Cf. Macdonell (1910: pp. 94–95, B1 Dependent determinatives), e.g., *gotra-bhīd-* ‘cowpen-splitter’ (root *bhid-*), which are known in the Sanskrit tradition as *tatpuruṣa upapada* (sc. *samāsa*; cf. Pāṇini 3.1.92; sources in Wackernagel 1905: 174, § 75). On the comparison, Wheeler (1885: 69) remains valuable beside the more recent accounts that frame Wheeler’s Law in new lights: esp. Probert (2006: 87–96), and Willi (2018: 269–270), connecting agentivity and oxytone accentuation. On the PIE background of this type, cf. Lundquist & Yates (2018: 2218–2220 with lit.).

31 I have treated the Indo-Iranian material in greater detail in Lundquist (2017); Stüber (2002) treats the evidence extensively within the hysterokinetic reconstruction.

Ablaut is easy: of zero-grades in the second member of Old Indic *s*-stem adjectives, we find no traces. This is the judgment of Wackernagel and Debrunner (1954: 233): “das Ai. (Old Indic) zeigt davon keine Spur”. In terms of raw ablaut indices, then, Old Indic provides nothing to match $-\alpha\theta\eta\varsigma$, but a good deal to match $-\pi\epsilon\nu\theta\eta\varsigma$. Accent, however, is hard. Because Indic and Greek disagree, each language attesting three accentual classes, specialists reasonably dispute how to reconstruct *s*-stem adjectives in PIE. Before turning to reconstruction, I flesh out briefly the rules of Vedic accentuation, a necessary step since I will rely on the accents to diagnose morphological constituency in these compounds.

The rules of *bahuvrīhi* accent in Vedic are relatively simple to state. Pāṇini lays down the basic accent rule of *bahuvrīhi*s right in the beginning of 6.2 (P.6.2.1): *bahuvrīhau prakṛtyā pūrvapadam* ‘in a *bahuvrīhi* the first member preserves its own original accent’ (tr. Vasu 1897).³² Linguists often discuss compounds as accented on the first or second member, not referring to the underlying accent of either member’s stem. This imprecise version omits the important distinction conveyed by the Pāṇinian rule: it is not just the first member, but that member’s accent *prakṛtyā* ‘by nature’. E.g., if we have a first member *bāhú-* ‘arm’ and a second member *s*-stem *ójas-*, the resulting compound will be accented *bāhú-ojas-* ‘strong-armed’. If we recast this statement in terms of underlying phonological representations, using slash-brackets, then underlying /*bāhú* + *ójas*/ surfaces as *bāhú-ojas-*. This rule of *bahuvrīhi* accentuation basically holds across the language with two classes of exceptions: (1) in cases where the first member has no accent ‘by nature’, as with the bound morphemes *su-* ‘well-’ = Gk. $\epsilon\upsilon-$, and *dus-* ‘ill-’ = Gk. $\delta\upsilon\sigma-$.³³ And (2), the first member negative *a(n)-* induces an accent on the end of the stem. Notice that this last-mentioned class tells us much about the accentual properties of the first member *a(n)-*, but nothing about the second member *s*-stem. Stüber (2002: 42), therefore, rightly excludes the privative compounds in *a(n)-*, despite their surfacing with end accent which would otherwise support her hypothesis of hysterokinetic inheritance (e.g., *anāgás-* ‘guiltless’). Negative *a(n)-*, when com-

32 To this sūtra, cf. the *Vṛtti*: *bahuvrīhau samāse pūrvapadasya yaḥ svarāḥ sa prakṛtyā bhavati* ‘The accent of an initial constituent in a *bahuvrīhi* compound remains as it originally was’ (tr. Sharma 2001). This sūtra refers further to 6.1.223, and 6.1.220. The word *prakṛti-* ‘natural, the form before further modifications’ seems quite close to ‘underlying representation’ in modern generative phonology. Cf. Renou (1957: s.v. *prakṛti*, pp. 212–213) on its uses in the grammatical tradition (he translates here “la place primitive du ton.”)

33 Melazzo (2010: ch. 3–4) helpfully lists the *bahuvrīhi* compounds of the Rig-Veda, arranged by word-class of each member and by accent. These exceptions are discussed at greater length in Lundquist (2017: 94–109) and Lundquist (forthcoming).

pounded with a noun, derives stem-end accent regardless of stem-class. For instance, thematic *vṛka-* in /a + vṛka-/ → *a-vṛká-* ‘not having wolves,’ or athematic /a + bhrátar-/ → *abhrātár-* ‘brotherless.’ In Greek, by contrast, alpha privative creates recessive stems—except, of course, in the *s*-stems. Examples are thematic *ἄ* + σοφός → ἄσοφος ‘unwise’ or *ἄ* + πατήρ → ἄπάτωρ ‘fatherless’. Negative **h-* is a separate problem.³⁴ For this reason the negative compounds in Vedic make a poor comparandum for the *s*-stem adjectives in Greek, *pace* Jasanoff (2017: 4, 22). With Stüber, they are better excluded as comparanda.

- I. Accented 1M in original place, Noun-Noun:
 - /bāhú + ójas/ → *bāhú-ojas-* ‘having strength in one’s arms’
 - /kaví + krátu/ → *kaví-kratu-* ‘having the will of a poet’
 - /sóma + kāma/ → *sóma-kāma-* ‘having desire of soma’
- II. Accented 2M in its original place (first member is a bound morpheme):
 - /su + śrávas/ → *su-śrávas-* ‘having good renown, fame’
 - /tuvi + ójas/ → *tuvi-ójas-* ‘powerfully strong’
 - /puru + bhójas/ → *puru-bhójas-* ‘having many benefits’
- III. Accented 2M at stem’s right-edge, negative compounds:
 - /a + rákṣas/ → *arakṣás-* ‘undemonic; unharming’
 - /a + vṛka-/ → *a-vṛká-* ‘not having wolves’
 - /a + bhrátar-/ → *abhrātár-* ‘brotherless’

Formally, then, Vedic preserves the older state of affairs. In terms of derivational bases for the adjectives, we find neuter *s*-stem nouns as the second member of *bahuvrīhi* compounds. A well-known match of Indo-Iranian date, Ved. *su-mánas-* ‘of good mind, well-disposed’ = YAv. *hu-manah-* = Greek εὐμενής, pushes the equation back to Greco-Indic, or ‘late’ core PIE. This basis, too, agrees closely with early Greek (πένθος : -πενθής). Some second members in

34 Kiparsky (2010: 173) would indirectly unite the reflexes of PIE privative **h-* under the property of a deaccenting morpheme. In this case, the deaccented stem becomes subject to phonologically imposed accentuation. He envisages a two-tiered derivational process, involving as an intermediate representation an unaccented stem: Ved. /a-vṛka-/, Gk. /a-sopho-/. In Greek, this leads to the recessive accent (ἄσοφος) but in Vedic the “oxytone rule” of accent at the right-edge of the stem (*a-vṛká-*). In this reconstruction, the rule of deaccentuation would be a common inheritance, the language-specific accent on a deaccented stem a point of divergence. For present purposes we do not need to adjudicate between these competing scenarios (I give it a go in Lundquist forthcoming); for the Indic data, with a PIE reconstruction, Knauer (1885) remains particularly valuable.

Vedic are attested without a corresponding *s*-stem noun. In some cases, and these are closest to the Greek, the second member has a more verbal reading. Since the *s*-stem noun derives from the verbal root, the verbal reading of a few compounds is not surprising. As we have seen, this near nexus leads in Greek to regular deverbal derivation of *s*-stem adjectives. Although the same fate would never overtake the Indic compounds, we can see in the Vedic material a latent potential, seeds that flower in Greece.

As far as the meaning of the compounds goes, in the Rīg-Veda the *s*-stem adjectives are overwhelmingly *bahuvrīhis* showing X–Y composition where the meaning is ‘whose Y is X’. Because two nominals being compounded display no overt syntax, various refinements of meaning are available such as ‘whose Y provides X’ (see esp. Schindler 1986, 1987, 1997 on these readings). Some *bahuvrīhi s*-stems may be read more verbally. In this connection, Blanc (2018: 309) cites *viśvá-bharas-* ‘all-carrying’, to *bhárati* ‘he carries’ as the prime example of a second member in *-as-* which can be related to verbal bases. This compound occurs when the fire-god Agni kicks off Maṇḍala IV as the Hotar, best sacrificer, *viśvábharasam* ‘carrying all burdens’ (RV IV.1.19b).³⁵ This compound intrigues: we do not have a simplex **bháras-* in the Rīg-Veda, as the adjective appears to imply, and despite the clear *bahuvrīhi* accent on the first member, the compound can be read as closer to a verbal governing compound, ‘carrying all, who carries all (burdens)’, though a *bahuvrīhi* ‘whose burden is all’ certainly remains possible. In general, this verbal reading is alien to the *s*-stem adjectives, but common with other deverbal nouns as second members, such as the suffixes *-a-*, *-ana-*, *-i-*, *-in-*, *-man-*, *-van-* (cf. Wackernagel 1905: § 75a). In fact, this compound may be based not on an *s*-stem simplex, but extended from the verbal compounds in *-bhara-*, as Wackernagel and Debrunner (1930: 286) suggest. This example is typical: the *s*-stem adjectives in Vedic form regularly denominal *bahuvrīhis* and where that is not the case, we have good reason to suspect their origins may lie elsewhere. The examples of verbal governing *s*-stem adjectives are few, peculiar in various respects, ultimately proving the rule that the *s*-stem adjectives in Indic, early Greek, and at least core PIE, were used as denominal *bahuvrīhis*.

35 Jamison and Brereton (2014) translate the compound with a relative clause, “who carries all burdens”; likewise Geldner (1951) “der die ganze Last trägt”. The simplex *bháras-* occurs first in AVŚ 2.16.5 where the simplex appears contrived for the sake of word-play, unfolding the compound (not an *s*-stem, not a *bahuvrīhi*) in a noun phrase: *viśvambhara viśvena mā bhárasā pāhi svāhā*, ‘you who bears all, protect me with all bearing’.

2.2.1 Deverbal *s*-stems elsewhere?

These compound *s*-stem adjectives are basically confined to Greco-Indic (so too Blanc 2018: 5–6). Accordingly, hypotheses on their accent and ablaut patterns will rest foremost on the Greek and Indic evidence. Further evidence from a third branch (a *tertium comparationis*) for first member accent would corroborate my hypothesis; evidence for an oxytone accent would corroborate the hysterokinetic reconstruction; it is a pity Iranian gives no good testimony. Other languages lack the relevant morphology (i.e., do not form *s*-stem adjectives), and no language preserves as perspicuous an accentual heritage as does Greek and especially Old Indic. One branch that may meet these criteria is Anatolian, if we follow the reconstruction of Yates (2017, 2019b), who demonstrates that Hittite (and Anatolian more broadly) has inherited an accent very like that preserved in Greek and Indic.

One significant, if uncertain, example of an *s*-stem adjective comes in the form of Hittite *šawitišt-*, *šaudišt-* ‘weanling, (calf) born this year’ (Old Hittite/Old Script). This word may be compounded with the second member *s*-stem *-wet-es-* ‘year’ (cf. Gk. -(f)ῆτης), viz. PIE **sóm-wetes-t-*. In Old Hittite we have the word spelled with plene writing *ša-a-*, a strong indication for the seat of the accent (with Rieken 1999: 147–148, esp. fn. 693). Also, the medial **-t-* of the preform undergoes Proto-Anatolian lenition, a further index of the first member accent.³⁶ If so, the compound looks like an old *s*-stem, and would be tellingly denominal (cf. Vine 2009: 213–216, Lundquist 2017: 3.2.1.2). Notice that this intriguing example is not deverbal in any clear way. If this word allows one to reconstruct some *bahuvrihi* *s*-stems already for the node of PIE that includes Anatolian, then Hittite corresponds in accent with Vedic and the relics of Greek, and offers nothing hysterokinetic. I know of no good evidence for deverbal derivation, or oxytone accentuation, of *s*-stem adjectives elsewhere in ancient Indo-European languages.

3 Conclusion, and outlooks

We have covered much ground in this paper so I summarize my results.

αἰνοπαθή̃ς, our starting point, is not prehistorically ancient but rather is innovative, reflecting the latest layer of Homeric composition. At this shallowly pre-Homeric stage, compounds were formed from verbal bases, like *-παθή̃ς* from

36 The changes would be: **sóm-wetes-t-* > **sóm-wedest-* > **sāwedest-* > *šaudišt-*; see Yates (2019a: 246–247 with fn. 10). I am grateful to Anthony Yates for his help in articulating these diachronic steps.

παθεῖν (vs. older -πενθήης). Uniquely to this compound, the tradition even permits contracted inflection without synizesis (-ῆ in the accusative singular for -έα). I have suggested that this license stemmed from line-final synizesis of *s*-stems such as ἄλγεα, itself a formulaic modification from ἄλγος. I have contextualized the phraseology from which the compound derives, focusing on the Iliadic words of lament, αἰνὰ παθοῦσα etc. We lose the thread of this word's web when we pluck it from context. To call αἰνοπαθῆ an archaism—to claim a hysterokinetic zero-grade is preserved in the root of -παθήης—makes up another chapter in the efforts to shoehorn forms to a framework into which they do not fit.

A more general principle to be gleaned from this investigation is one well known but worth reiterating: philology needs to precede reconstruction. Much effort in Indo-European studies over the last five decades or so has been expended on reconstructing pre-PIE paradigms, an exciting endeavor for letting a linguist potentially identify archaisms, but one that has left many questions of shallower reconstruction unexplored. I have suggested ways to pose new questions. In this light, other cases of *s*-stem adjectives could stand to be revised.

To close with one famous example, Indo-Europeanists often invoke ψευδής 'lying' as evidence for internal derivation, deriving ψευδής from the neuter noun ψεῦδος 'lie' (e.g., Widmer 2004: 31). But strong arguments may be raised to counter this derivation. In its Homeric context (*Il.* 4.235), the putative simplex ψευδής would occur in the prepositional phrase ἐπὶ ψευδέσσι, where it is probably better read as a noun ψεῦδος, viz. ἐπὶ ψεύδεσσι 'in the case of falsehoods' (as printed by West 1998–2000). Wackernagel (1889: 37) understands ψευδής as formed after the adjectives ἄψευδής (in Homer, only the name of a Nereid at *Il.* 18.46), φιλοψευδής 'lie-loving', and he may be correct; later scholars agree (Brugmann, Meillet, Leumann et al., cited and discussed apud Blanc 2018: 595; and cf. Meissner 2006: 208–209). Post-Homeric ψευδής is all but certainly not derived from the noun, but either from compounds or from the verb ψεύδω, so fails as an example of internal derivation, proterokinetic to hysterokinetic inflection. Clackson (2007: 85–86) states that a closer examination of textual occurrences of ψευδής reveals it to be a back-formation "and the apparent derivation of this adjective through accent shift alone is a mirage". Blanc (2018: 593–596) scrutinizes the forms in granular detail, and may correctly derive the adjective ψευδής not from the adjectives but instead from the verb ψεύδομαι / ψεύδω. At any rate, the adjective ψευδής does not withstand scrutiny as evidence for internal derivation of hysterokinesis any better than did αἰνοπαθής.

The Indo-Iranian evidence supports these Greek-based conclusions. This branch best preserves the PIE *s*-stem adjectives. The *s*-stem second member is denominal, in the full-grade, and the finished compound used as a *bahuvrīhi*. I

have eschewed the use of Vedic negative prefixes with Greek oxytones, rejecting the seeming correspondence because the Vedic *a(n)*- negatives bespeak only the accentual properties of the first member (*a(n)*- in Indic), not the second. Schematized with examples from Vedic of various types of *bahuvr̥his*, *s*-stem and otherwise, since Vedic best preserves the PIE situation, and with reconstructible PIE examples, we arrive at the following reconstructions:

(8) Vedic and PIE: Bahuvr̥hi Accents

a. Vedic:

/bāhú + ójas/	→ <i>bāhú-ojas</i> - ‘having strength in one’s arms’
/ugrá + bāhú/	→ <i>ugrá-bāhu</i> - ‘mighty-armed’
/prá + śrávas/	→ <i>prá-śravas</i> - ‘of advancing fame’
/dabhrá + cétas/	→ <i>dabhrá-cetas</i> - ‘small-witted’

b. PIE

/*pró + kléwes- /	→ * <i>pró-klewes</i> - ‘of advancing fame’
/*h ₁ su- + ménes-/	→ * <i>h₁su-ménes</i> - ‘having a good mind’
/*h ₁ su- + ġénh ₁ -es-/	→ * <i>h₁su—ġénh₁es</i> - ‘having a good lineage’

In this compound class the leftmost member wins, resulting in its first-member accent surfacing in its “natural” place. With other scholars (e.g., Kiparsky 2010: 172–173), I reconstruct this accent for the PIE *bahuvr̥his*, though my means may be slightly different, since I have invoked the Sanskrit concept of *prakṛtyā* accent, the accent of the base form ‘by nature’. The *prakṛtyā* accent shows an important insight that Indo-Europeanists might follow: the Sanskrit grammatical tradition worked with two levels of phonological representation, one before derivation, one after, which I translate into underlying and surface forms. This concept partially maps onto the κατὰ φύσιν τόνος, ‘natural accent’, of the Greek grammarians (Probert 2019: 49–53), though the latter only applied to inflection, not derivation, so far as I am aware. My amendment may seem a minor one, and so it is: we reconstruct accents in the underlying representation of the protolanguage itself.³⁷ In this sense, suprasegmental phonology should be treated like the laws and rules of segmental phonology, reconstructing where possible an underlying and a surface form. This generative representation was first brought systematically into the field of PIE segmental phonology by Mayrhofer (1986), I believe, and is broadly followed in present-day PIE studies. More gen-

37 Saussure (1879: 236–237) already hinted at such an accent, as I, following Watkins, discuss (Lundquist 2019: 8–10 with fn. 11). Nihil novi sub sole!

erally, I suggest we should reconstruct the PIE accent with greater attention to its underlying properties because accent is arguably assigned at an abstract level, morpho-phonologically, not subject to audible change in the same way as phonetic segments.³⁸

Where shall a reconstruction of *s*-stem adjectives in PIE be found? Combining in a new unity (and hopefully no unholy alliance) Herodian and Pāṇini, we find, with Pāṇini, first member accent in its natural place holds for Vedic and PIE. On the way to Greek, with Herodian, recessive relics are derived from the noun, not the verb, *παρ' ὄνομά εἰσι οὐ παρὰ ῥήμα*, while the oxytone *s*-stems come from verbs, *παρὰ ῥήματα*. A new reconstruction formed on old ideas: Pāṇini and Herodian have beaten us to the punch.

Acknowledgements

It is my pleasure to thank the British Academy for generously supporting this research through a Newton International Fellowship. My thanks as well to the audience at the Oxford-Cambridge Philology Day 2019, who heard an oral version of this paper, in particular Torsten Meissner. My thanks as well to colleagues both in Oxford, Philomen Probert and Elizabeth Tucker, and in California, Stephanie Jamison, Brent Vine, and especially Anthony Yates, whose careful scrutiny has saved me from many blunders. All errors remain my own.

References

- Ameis, Karl Friedrich, C. Hentze, and P. Cauer. 1910. *Homers Odyssee. Für den Schulgebrauch erklärt. Gesang XIII–XVIII*. Leipzig: Teubner.
- Beek, Lucien van. 2013. *The Development of the Proto-Indo-European Syllabic Liquids in Greek*. Ph.D. diss., Leiden University, The Netherlands.
- Blanc, Alain. 2016. Le vocalisme des seconds membres sigmatiques déverbatifs. In Alain

38 “The locus of morphophonological variation and change are not the word accents themselves but the system which assigns them, comprising the lexically specified accentual properties of morphemes and the rules by which the accent is computed from them in the lexical phonology” (Kiparsky 2015: 82–83). Calvert Watkins in 1963 (= Watkins 1994: 4) raised a similar point when he argued that historical linguists need to pay close attention not to the transmission of the “physical body of the sentence” but to the underlying systems that generate surface forms (his discussion is mainly concerned with syntax, but he mentions phonology and morphology as well).

- Blanc and Daniel Petit (eds.), *Nouveaux acquis sur la formation des noms en grec ancien. Actes du colloque international, Université de Rouen, ERIAC, 17–18 novembre 2013*, 135–170. Leuven: Peeters.
- Blanc, Alain. 2018. *Les adjectifs sigmatiques du grec ancien. Un cas de métamorphisme dérivationnel*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Brügger, Claude. 2017. *Homer's Iliad: The Basel Commentary. Book XXIV*. (tr. by Benjamin W. Millis and Sara Strack; ed. by S. Douglas Olson). Berlin: De Gruyter.
- Brugmann, Karl. 1906. *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen*. vol. 2.1. (2nd edn.) Strassburg: Trübner. Chandler, Henry W. 1881. *A Practical Introduction to Greek Accentuation* (2nd edn.). Oxford: Clarendon Press.
- Chantraine, Pierre. 1933. *La formation des noms en grec ancien*. Paris: Klincksieck.
- Chantraine, Pierre. 1958. *Grammaire homérique, vol. 1: Phonologie et morphologie*. (2013, nouvelle édition revue et corrigée par Michel Casevitz). Paris: Klincksieck.
- Chantraine, Pierre. 1999. *Dictionnaire étymologique de la langue grecque. Histoire des mots* (2ème edn., avec un supplément, CEG). Paris: Klincksieck.
- Clackson, James. 2007. *Indo-European Linguistics: An Introduction*. Cambridge: Cambridge University Press.
- Debrunner, Albert. 1917. *Griechische Wortbildungslehre*. Heidelberg: Winter.
- Dindorf, Wilhelm. 1855. *Scholia Græca in Homeri Odysseam*. Oxford: Oxford University Press.
- Erbse, Hartmut. 1969–1988. *Scholia graeca in Homeri Iliadem (scholia vetera)*. Berlin: De Gruyter.
- Geldner, Karl F. 1951. *Der Rig-Veda: aus dem Sanskrit ins Deutsche übersetzt und mit einem laufenden Kommentar versehen*. Cambridge, MA: Harvard University Press.
- Gow, Andrew, and Alwyn Scholfield. 1953. *Nicander of Colophon: The Poems and Poetical Fragments*. Cambridge: Cambridge University Press.
- Gunkel, Dieter. 2014. Wheeler's Law. In *Encyclopedia of Ancient Greek Language and Linguistics*, vol. 3, P–Z, 515–516. Leiden: Brill.
- Hansen, Peter Allan. 2005. *Hesychii Alexandrini Lexicon: Volumen III Π–Σ*. Berlin: De Gruyter.
- Jamison, Stephanie W., and Joel P. Brereton. 2014. *The Rigveda: The Earliest Religious Poetry of India*. Oxford: Oxford University Press.
- Jasanoff, Jay H. 2017. *The Prehistory of the Balto-Slavic Accent*. Leiden: Brill.
- Jong, Irene de. 2012. *Homer: Iliad Book 22*. Cambridge: Cambridge University Press.
- Kiparsky, Paul. 2010. Compositional vs. Paradigmatic Approaches to Accent and Ablaut. In Stephanie W. Jamison, H. Craig Melchert & Brent Vine (eds.), *Proceedings of the 21st Annual UCLA Indo-European Conference*, 137–181. Bremen: Hempen.
- Kiparsky, Paul. 2015. New Perspectives in Historical Linguistics. In Claire Bowern & Bethwyn Evans (eds.), *The Routledge Handbook of Historical Linguistics*, 64–102. London: Routledge.

- Knauer, Friedrich. 1885. Ueber die betonung der composita mit a privativum im sanskrit. *KZ* 27.1–68.
- Kulikov, Leonid. 2018. Vedic āhanás- and Its Relatives/Cognates within and outside Indo-Iranian. In Beek, Lucien van, Alwin Kloekhorst, Guus Kroonen, Michaël Peyrot, & Tijmen Pronk (eds.), *Farnah. Indo-Iranian and Indo-European Studies in Honor of Sasha Lubotsky*, 153–161. Ann Arbor: Beech Stave Press.
- Kuryłowicz, Jerzy. 1958. *L'accentuation des langues indo-européennes* (2nd edn.). Warsaw and Cracow: Polish Academy, Zakład Narodowy imienia Ossolińskich.
- Latte, Kurt. 1966. *Hesychii Alexandrini lexicon: Vol. II E–O*. Copenhagen: Munksgaard.
- Lentz, August. 1867. *Herodiani technici Reliquiae. Collegit, disposuit, emendavit, explicavit, praefatus est Augustus Lentz. Tomus I: praefationem et Herodiani prosodiam catholicam continens*. Leipzig: Teubner.
- Lundquist, Jesse. 2016. On the Accentuation of Compound s-Stem Adjectives in Greek and Vedic. In David Goldstein, Stephanie Jamison & Brent Vine (eds.), *Proceedings of the 27th Annual UCLA Indo-European Conference*, 97–114. Bremen: Hempen.
- Lundquist, Jesse. 2017. *Archaisms and Innovations in the Songs of Homer*. Ph.D. diss., UCLA Program in Indo-European Studies, Los Angeles, CA.
- Lundquist, Jesse. 2019. *Indo-European Grammar, Vol. III, Morphology: A History of Indo-European Verb Inflexion by Calvert Watkins. Introduced by Jesse Lundquist*. Los Angeles, CA: UCLA at <https://pies.ucla.edu/cwatkins.html>.
- Lundquist, Jesse. Forthcoming. Does tvátpitārah = εὐπάτωρ? Accents, Amphikinetics, and Compounds in Sanskrit, Greek, and Indo-European. To appear in *Indo-European Linguistics*.
- Lundquist, Jesse, & Anthony D. Yates. 2018. Proto-Indo-European Morphology. In Jared Klein, Brian Joseph, & Matthias Fritz (eds.), *Comparative Indo-European Linguistics: An International Handbook*, vol. 3, 2079–2193. Berlin: De Gruyter.
- Macdonell, Arthur Anthony. 1910. *Vedic Grammar*. Strassburg: Trübner.
- Majer, Marek. 2017. *The Caland System in the North: Archaism and Innovation in Property-Concept/State Morphology in Balto-Slavic*. Ph.D. diss., Harvard University.
- Mawet, Francine. 1979. *Recherches sur les oppositions fonctionnelles dans le vocabulaire homérique de la douleur (autour de πῆμα-ἄλγος)*. Bruxelles: Palais des Académies.
- Mayrhofer, Manfred. 1986. *Indogermanische Grammatik, Band I/2: Lautlehre*. Heidelberg: Carl Winter.
- Mayrhofer, Manfred. 1986–2001. *Etymologisches Wörterbuch des Altindoarischen*. vol. 1–3. Heidelberg: Winter.
- Meier-Brügger, Michael. 1992. *Griechische Sprachwissenschaft. Band II: Wortschatz, Formenlehre, Lautlehre, Indizes*. Berlin: De Gruyter.
- Meissner, Torsten. 2006. *S-stem Nouns and Adjectives in Greek and Proto-Indo-European*. Oxford: Oxford University Press.
- Melazzo, Roberta. 2010. *I Bahuvrihi del R̥g Veda*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.

- Montanari, Franco et al. 2015. *The Brill Dictionary of Ancient Greek*. (Under the Auspices of the Center for Hellenic Studies, Harvard University) Leiden: Brill.
- Nagy, Gregory. 1996. *Poetry as Performance: Homer and Beyond*. (Online text with updates: <http://chs.harvard.edu/CHS/article/display/5581>, accessed Jan. 2021) Cambridge: Cambridge University Press.
- Parmentier, Léon. 1889. *Les substantifs et les adjectifs en -εσ- dans la langue d'Homère et d'Hésiode*. Ghent: Vanderhaeghen.
- Pontani, Filippomaria. 2007. *Scholia graeca in Odysseam: scholia ad libros α-β*. Rome: Edizioni di storia e letteratura.
- Pontani, Filippomaria. 2008. Zur Akzentuierung der griechischen Komposita auf -medes. *Glotta* 84.114–125.
- Probert, Philomen. 2006. *Ancient Greek Accentuation: Synchronic Patterns, Frequency Effects, and Prehistory*. Oxford: Oxford University Press.
- Probert, Philomen. 2019. *Latin grammarians on Latin accents: the transformation of Greek grammatical thought*. Oxford: Oxford University Press.
- Pulley, Simon. 2019. *Homer Odyssey 1. Edited with an Introduction, Translation, Commentary, and Glossary*. Oxford: Oxford University Press.
- Renou, Louis. 1957. *Terminologie grammaticale du sanskrit*. Paris: Champion.
- Rieken, Elizabeth. 1999. *Untersuchungen zur nominalen Stammbildung des Hethitischen*. Wiesbaden: Harrassowitz.
- Risch, Ernst. 1974. *Wortbildung der homerischen Sprache* (2nd edn.). Berlin: De Gruyter.
- Rix, Helmut. 1992. *Historische Grammatik des Griechischen: Laut- und Formenlehre* (2nd edn.). Darmstadt: Wissenschaftliche Buchgesellschaft.
- Roussou, Stephanie. 2018. *Pseudo-Arcadius' Epitome of Herodian's Περὶ καθολικῆς προσηγορίας*. Oxford: Oxford University Press.
- Rutherford, R.B. 2019. *Homer: Iliad 18*. Cambridge: Cambridge University Press.
- Saussure, Ferdinand de. 1879. *Mémoire sur le système primitif des voyelles dans les langues indo-européennes*. Leipsick: Teubner.
- Schindler, Jochem. 1975. Zum Ablaut der neutralen s-Stämme des Indogermanischen. In Helmut Rix (ed.), *Flexion und Wortbildung: Akten der V. Fachtagung der Indogermanischen Gesellschaft, Regensburg, 9. bis 14. September 1975*, 259–267. Wiesbaden: Reichert.
- Schindler, Jochem. 1986. Zu den homerischen ῥοδοδάκτυλος-Komposita. In Annemarie Etter (ed.), *o-o-pe-ro-si: Festschrift für Ernst Risch zum 75. Geburtstag*, 394–401. Berlin: De Gruyter.
- Schindler, Jochem. 1987. Zur avestischen Kompositionslehre: aš- 'groß'. In George Cardona & Norman H. Zide (eds.), *Festschrift for Henry Hoenigswald on the occasion of his seventieth birthday*, 337–348. Tübingen: Narr.
- Schindler, Jochem. 1997. Zur internen Syntax der indogermanischen Nominalkom-

- posita. In Emilio Crespo & José Luis García Ramón (eds.), *Berthold Delbrück y la sintaxis indoeuropea hoy*, 537–540. Wiesbaden: Reichert.
- Schironi, Francesca. 2018. *The Best of the Grammarians: Aristarchus of Samothrace on the Iliad*. Ann Arbor: University of Michigan Press.
- Schmidt, Johannes. 1889. *Die pluralbildungen der indogermanischen neutra*. Weimar: Böhlau.
- Schwyzer, Eduard. 1939. *Griechische Grammatik (auf der Grundlage von Karl Brugmanns griechischer Grammatik). Erster Band: Allgemeiner Teil. Lautlehre. Wortbildung. Flexion*. München: Beck.
- Sharma, Rama Nath. 2001. *The Aṣṭādhyāyī of Pāṇini. Volume V*. New Delhi: Munshiram Manoharlal.
- Snell, Bruno, & Herwig Maehler. 1980. *Pindari Carmina cum fragmentis* (6th edn.). Leipzig: Teubner.
- Snell, Bruno et al. (ed.). 1955–2010. *Lexikon des frühgriechischen Epos*. Thesaurus Linguae Graecae. Göttingen: Vandenhoeck & Ruprecht.
- Stüber, Karin. 2002. *Die primären s-Stämme des Indogermanischen*. Wiesbaden: Reichert.
- Tittmann, Johann August. 1808. *Iohannis Zonarae Lexicon*. Leipsig: Crusii.
- Tribulato, Olga. 2015. *Ancient Greek Verb-Initial Compounds: Their Diachronic Development within the Greek Compound System*. Cambridge: Cambridge University Press.
- Tsagalis, Christos. 2004. *Epic Grief*. Berlin: de Gruyter.
- Tsagalis, Christos. 2008. *The Oral Palimpsest: Exploring Intertextuality in the Homeric Epics*. Cambridge, MA: Harvard University Press.
- Tucker, Elizabeth. 1990. *The Creation of Morphological Regularity: Early Greek Verbs in -éo, -áo, -óō, -úō and -lō*. Göttingen: Vandenhoeck & Ruprecht.
- Vasu, Srisa. 1897. *The Ashtādhyāyī Of Pāṇini Book VI*. Benares: Sindhu Charan Bose at the Panini Office.
- Vine, Brent. 2009. A Yearly Problem. In Kazuhiko Yoshida and Brent Vine (eds.), *East and West: Papers in Indo-European Studies*, 205–224. Bremen: Hempen.
- Voigt, Eva-Maria. 1971. *Sappho et Alcaeus: fragmenta*. Amsterdam: Athenaeum.
- Wackernagel, Jacob. 1889. *Das Dehnungsgesetz der griechischen Composita*. (Repr. in Wackernagel 1955–1979: *Kleine Schriften* ii. 897–960). Basel: Reinhardt.
- Wackernagel, Jacob. 1914. Akzentstudien II. *Nachrichten von der Königlichen Gesellschaft der Wissenschaften zu Göttingen: Philologisch-historische Klasse* 20–51 (Repr. in Wackernagel 1955–1979: *Kleine Schriften* ii. 1122–1153).
- Wackernagel, Jakob. 1905. *Altindische Grammatik, Band II.1: Einleitung zur Wortlehre, Nominalkomposition*. Göttingen: Vandenhoeck & Ruprecht.
- Wackernagel, Jakob, and Albert Debrunner. 1930. *Altindische Grammatik, Band III: Nominalflexion, Zahlwort, Pronomen*. Göttingen: Vandenhoeck & Ruprecht.

- Wackernagel, Jacob. 1954. *Altindische Grammatik, Band II.2 Die Nominalsuffixe*. Göttingen: Vandenhoeck & Ruprecht.
- Watkins, Calvert. 1994. *Selected Writings. Volume I: Language and Linguistics*. Lisi Oliver (ed.). Innsbruck: Institut für Sprachwissenschaft der Universität Innsbruck.
- Weiss, Michael. 2011. *Outline of the Historical and Comparative Grammar of Latin* (corrected reprinted edn.) Ann Arbor: Beech Stave Press.
- Weiss, Michael. 2020. *Outline of the Historical and Comparative Grammar of Latin* (2nd edn.). Ann Arbor: Beech Stave Press.
- Wesselmann, Katharina. 2020. *Homers Ilias. Gesamtkommentar (Basler Kommentar), Band XII, Siebter Gesang (H). Faszikel 2: Kommentar*. Berlin: De Gruyter.
- West, Martin L. 1998–2000. *Homeri Ilias*. Bibliotheca Teubneriana. Vol. 1 Berlin; Vol. 2 Leipzig: Teubner.
- West, Martin L. 2017. *Homerus Odyssea*. Bibliotheca Teubneriana. Berlin: De Gruyter.
- Wheeler, Benjamin Ide. 1885. *Der griechische Nominalaccent*. Strassburg: Trübner.
- Widmer, Paul. 2004. *Das Korn des weiten Feldes: Interne Derivation, Derivationskette und Flexionsklassenhierarchie. Aspekte der nominalen Wortbildung im Urindogermanischen*. Innsbruck: Innsbrucker Beiträge zur Sprachwissenschaft.
- Willi, Andreas. 2018. *Origins of the Greek Verb*. Cambridge: Cambridge University Press.
- Witte, Kurt. 1972. *Zur homerischen Sprache*. Darmstadt: Wissenschaftliche Buchgesellschaft.
- Yates, Anthony D. 2017. *The Diachrony of Lexical Accent: Studies in Hittite, Indo-European, and Cupeño Prosody*. Ph.D. diss., UCLA Indo-European Studies.
- Yates, Anthony D. 2019a. The phonology, phonetics, and diachrony of Sturtevant's Law. *Indo-European Linguistics* 7.241–307.
- Yates, Anthony D. 2019b. Suffixal *o-vocalism without “amphikinesis:” On Proto-Indo-European *-oi-stems and ablaut as a diagnostic for word stress. In David Goldstein, Stephanie W. Jamison, & Brent Vine (eds.), *Proceedings of the 30th Annual UCLA Indo-European Conference*, 199–221. Bremen: Hempen.