PIE *–oi-stems were not "amphikinetic": Decoupling stress mobility and *o-vocalism

Anthony D. Yates
University of California, Los Angeles
adyates@ucla.edu

§1   Introduction

[1] There is broad agreement that (Schindler 1969:154–5; cf. Rix 1992:146–7, Weiss 2011:242, *i.a.*):

   (i) PIE had a noun-forming suffix *–oi–.
   (ii) Nouns formed with this suffix exhibited "amphikinetic" (AK) inflectional paradigms.

[2] Reflexes of *–oi-stems are best attested in Hittite and in Greek, but it is generally held that their original inflectional patterns are best preserved in Indo-Iranian — in particular, in the morphologically isolated word for 'friend' in Vedic Sanskrit.

   • Representative attested forms of this word and their hypothesized AK PIE congenitors in (1):

(1)

	PIE		VEDIC SANSKRIT		
NOM.SG	*sék^{w}h$_2$-ōi	>	sákhā	'friend'	(e.g., RV IV.4.10c)
ACC.SG	*sék^{w}h$_2$-oy-m̥	>	sákhāyam	"	(e.g., RV V.31.12b)
DAT.SG	*s(e)k^{w}h$_2$-y-éi	>>	sákhye	'for a friend'	(e.g., RV V.29.7a)

[3] Under this view, the only major change between PIE and Vedic is in the weak cases, where Vedic has analogically introduced root stress from the strong stem.

[4] Yet the AK reconstruction is more difficult to reconcile with the evidence of Hittite and Greek, where reflexes of this PIE class consistently show suffixal stress (i.e., *–ói–) in their strong case forms.

(2)

	STRONG		WEAK			
a.	ḫurdāin	[χ$^{(w)}$orːt-áːi-n]	ḫurtiyaš	[χ$^{(w)}$orːt-y-áːs]	'curse'	(ANIM.ACC.SG/GEN.SG)
b.	zaḫḫāiš	[t͡saχː-áːi-s]	zaḫḫiyaš	[t͡saχː-y-áːs]	'battle'	(ANIM.NOM.SG/GEN.SG)
c.	linkāus	[liŋk-áː(y)-os]	linkiyaš	[liŋk-y-áːs]	'oath'	(ANIM.ACC.PL/GEN.SG)

(3)

	STRONG	WEAK		
a.	φειδώ	φειδοῖ	'sparing'	(F.NOM/DAT.SG)
b.	πειθώ	πειθοῦς	'P/persuasion'	(F.NOM/GEN.SG)
c.	χρε(ι)ώ	χρειοῖ	'need'	(F.NOM/DAT.SG)

[5] The AK reconstruction fails to explain the suffixal stress pattern attested in (2–3), since it is precisely the suffix that is "skipped" in the regular AK stress alternation between root and inflectional endings.

[6] Primary empirical claim of this paper — in directly reconstructible **PIE *–oi-stem nominal paradigms were not descriptively "amphikinetic;"** instead, they were characterized by:

   • Stressed *–ói– suffix in the strong cases (as in Hittite, Greek).
   • Zero-grade suffix (*–y–) (as in Hittite, Vedic) and stressed inflectional endings in the weak cases (as in Hittite).

[7] The remainder of this talk is structured as follows:

§2 – Survey the Indo-Iranian, Greek, and Hittite evidence and apply comparative reconstruction.

§3 – Propose a new analysis of PIE *–oi*-stems that accounts for their surface stress/ablaut patterns.

§4 – Show that this analysis *predicts* the fixed suffixal stress pattern that emerges in Greek (and in later Hittite) when suffixal ablaut is eliminated.

§5 – Discuss the implications of *–oi*-stems for the relationship between word stress and suffixal *o*-vocalism in PIE and for analyses of the PIE word-prosodic system.

§2   Comparative reconstruction: the PIE *–oi*-stems and their IE reflexes

§2.1   Vedic Sanskrit

[8] The only direct reflex of PIE *–oi*-stems in Indo-Iranian is the word for 'friend', which is continued in Ved. *sákhā(y)–* (cf. Av. *haxāii–*); its attested RVic paradigm is given in (4):

(4)

	SG	DU	PL
NOM	*sákhā*	*sákhāyā*	*sákhāyas*
ACC	*sákhāyam*	*sákhāyā*	*sákhīn*
INSTR	*sákh(i)yā*	—	*sákhibhis*
DAT	*sákhye*	—	*sákhibhyas*
ABL	*sákhyus*	—	*sákhibhyas*
GEN	*sákh(i)yus*	—	*sákhibhyas*
LOC	—	—	—
VOC	*sakhe*	*sakhāyā(u)*	*sakhāyas*

· Av. *kauuā(ii)–* 'ruler' (cf. Ved. *kaví–* 'sage-poet') is an *ei*-stem (per Schindler 1969:154) and thus not a reflex of PIE *–oi–*.

[9] Phonological observations on (4):

- Nominal paradigm shows fixed word-initial (= root) stress.
- Suffix reflects prehistoric *o* in strong cases (lengthened via BRUGMANN'S LAW; Brugmann 1876).
- Suffix reflects prehistoric zero-grade in the weak cases: *y* / ___ V; *i* / ___ C.
- Root *a*-vocalism is compatible with prehistoric *e, *o*, or morphological zero-grade (*[ə]).

[10] Morphological observations on (4):

- The root must be *sék^w–* 'accompany' in (5), but a primary deverbal formation leaves the voiceless aspirate (Ved. *kh*, Av. *x* < *k$^{(w)}$h$_2$*) unexplained.
- Schindler (1969:164[65]) thus proposes non-primary denominal derivation analogous to (6), i.e., (7a).
- Evidence for root *o*-grade comes from further Latin and Greek derivatives in (7b).

(5)   PIE *sek^w–* 'follow; accompany' > (e.g.) Ved. *sácate*, Gk. ἕπομαι, Lat. *sequitur*   (cf. *LIV*^{2}: 525–6)

(6)   PIE *rot-eh$_2$* 'set of runners'$^?$ (> Lat. *rota* 'wheel') ⇒ *rot-h$_2$-o–* > Ved. *rátha–*, YAv. *raθa* 'chariot'

(7)   a.   PIE   *sok^w-eh$_2$* 'accompaniment'   ⇒   *sok^w-h$_2$-oi–* 'member of accompaniment'
             Gk. ὀπᾱ* (ὀπάων 'comrade')   Ved. *sákhā(y)–* 'friend', YAv. *haxāii–*

       b.   PIE   *sok^w-h$_2$-oi–* ⇒ *sok^w-(h$_2$)-y-o–* 'id.'   ⇒   *sok^w-(h$_2$)-y-e-ye/o–* 'be a companion'
             Lat. *socius*, ON *seggr* 'comrade'   Gk. ἀοσσέω 'help'

· For (6) see Meier-Brügger 2010:248 with references. On (7) see Mayrhofer, *EWA* (II: 684–5) and detailed discussions in Ringe (2017:131–2) and Byrd (2015:210–11); for the Greek material see Beekes (2010:112–13, 1089) with references.

§2.2 Greek

[11] PIE *–oi*-stems are continued semi-productively in Greek from Homer onward in two functions:

(i) Feminine deverbal abstract nouns — e.g., (8).

(ii) Feminine denominal relational nouns referring to female persons/professions — e.g., (9).

- Especially in epic, both types are used as female theonyms.

(8)						
	a.	φείδομαι	'spare'	⇒	φειδώ	'sparing'	(Hom.+)
	b.	πείθω	'persuade'	⇒	πειθώ	'P/persuasion'	(Hes.+/Aesch.+)
	c.	λέχομαι	'lie down'	⇒	λεχώ	'woman after childbirth'	(Eur.+)
	d.	χρή	'need to'	⇒	χρε(ι)ώ	'need'	(Hom+)
	e.	καλύπτω	'cover'	⇒	Καλυψώ	'Calypso (PN)'	(Hom+)
	f.	μέλλω	'be about to'	⇒	μελλοῦς	'of hesitation'	(A. *Ag.* 1356)
	g.	δοκέω	'seem; think'	⇒	δοκώ	'notion'	(Eur. *El.* 747)
	h.	ἄπειμι	'be away/absent'	⇒	ἀπεστώ	'absence'	(Hdt., Plut.)
	i.	πύθομαι	'rot'	⇒?	Πυθώ	'Pytho (place)'	(Hom.+)

(9)						
	a.	κάμῑνος	'furnace'	⇒	καμῑνώ	'furnace-woman'	(Hom.+)
	b.	ἀργός	'swift'	⇒	Ἀργώ	'Argo (ship)'	(Hom.+)
	c.	ἐρατός	'lovely'	⇒	Ἐρατώ	'Erato (nymph)'	(Hes.+)
	d.	γοργός	'grim'	⇒	Γοργώ	'Gorgon (monster)'	(Hes.+)
	e.	κῦμα	'wave'	⇒	Κῡμώ	'Cymo (nymph)'	(Hes+)
	f.	κάλλιστος	'most beautiful'	⇒	Καλλιστώ	'Callisto (nymph)'	(Eur.+)
	g.	κόσμος	'order'	⇒	Κοσμώ	'Cosmo (priestess)'	(Lycurg.)

[12] Morphological observations on (8–9):

- All examples in (9) are manifestly non-primary denominal formations.
- (8a–c) are ambiguous — they may be primary (i.e., deradical with full-grade root; thus Schindler 1969:154) or else non-primary derivatives to the synchronically coexisting thematic verbal stems.
- (8d–h) are unambiguously non-primary derivatives to synchronically coexisting verbal stems.

[13] Phonologically, all Greek reflexes of PIE *–oi*-stems have a stressed suffix with non-ablauting *o*-vocalism.

- This pattern is partially obscured by intervocalic yod loss, but all attested forms continue pre-Greek NOM.SG *–ói* (> -ώ), GEN.SG *–óy-os* (> Att.-Ion. -οῦς), LOC(>DAT).SG *–óy-i* (> -οῖ) — e.g, (10):

(10)		STRONG	WEAK		
	a.	φειδώ	φειδοῖ	'sparing'	(F.NOM/DAT.SG)
	b.	πειθώ	πειθοῦς	'P/persuasion'	(F.NOM/GEN.SG)
	c.	χρε(ι)ώ	χρειοῖ	'need'	(F.NOM/DAT.SG)
	d.	λεχώ	λεχοῦς	'woman after childbirth'	(F.NOM/GEN.SG)
	e.	καμῑνώ	καμῑνοῖ	'furnace-woman'	(F.NOM/DAT.SG)
	f.	Ἀργώ	Ἀργοῦς	'Argo'	(F.NOM/GEN.SG)
	g.	Γοργώ	Γοργοῦς	'Gorgon'	(F.NOM/GEN.SG)
	h.	Σαπφώ	Σαπφοῦς	'Sappho (PN)'	(F.NOM/GEN.SG)

§2.3　Hittite

[14] PIE *–oi*-stems are continued semi-productively in Hittite (OH+) in two functions:

(i)　Animate deverbal abstract nouns — e.g., (11).

(ii)　Animate denominal action/result nouns — e.g., (12).

(11)　a.　*ḫuwart/ḫurt–*　'swear'　⇒　*ḫurdāin*　　　[χ$^{(w)}$ortː-áːi-n]　'curse'

　　　b.　*zaḫ(ḫ)–*　'strike'　⇒　*zaḫḫāiš*　　　[t͡saχː-áːi-s]　'fight'

　　　c.　*wašt(a)–*　'sin'　⇒　*waštāiš*　　　[wast-áːi-s]　'sin'

　　　d.　*wag–*　'bite'　⇒　*wagāiš*　　　[wak-áːi-s]　'grain pest'

　　　e.　*link–*　'swear'　⇒　*linkāus*　　　[liŋk-áː(y)-os]　'oaths'

　　　f.　*ištarni(n)k–*　'make ill'　⇒　*ištarningain*　　[istarniŋk-áːi-n]　'illness'

　　　g.　*maniyaḫḫ–*　'administer'　⇒　*[man]iyaḫḫāiš*　[maniy-aχː-áːi-s]　'administrative district'

(12)　a.　*ḫullant–*　'defeated'　⇒　*ḫullanzāiš*　　[χolːant͡s-áːi-s]　'defeat'

　　　b.　*ḫukma–**　'magical'[?]　⇒　*ḫukmain*　　　[χ$^{(w)}$okm-áːi-n]　'incantation'

- (12a–b) ultimately derive from the well-attested Hittite verbal stems *ḫulle/a–* 'fight' and *ḫuek/ḫuk–* 'conjure'.
- Some denominal-looking Hittite *ai*-stems are originally deadjectival non-primary *i*-stems that have been analogically remade within Hittite as *ai*-stems — e.g., *tuḫḫu-i–* 'smoke' >> *tuḫḫuwai–* 'id.' (see Rößle 2002:115–8).

[15] Morphological observations on (11–12):

- Examples in (12) are non-primary denominal formations.
- (11a–d) look primary, but (11e–g) are unambiguously non-primary stem formations.
- Given the general monothematic character of the Hittite verbal system (i.e., root = stem), synchronic stem-based derivation even for (11a–d) cannot be excluded on morphological grounds.

[16] The forms in (13) are representative of the formal patterns of the oldest attested Hittite *ai*-stems:

(13)

		STRONG		WEAK	
a.	*ḫurdāin*	[χ$^{(w)}$ortː-áːi-n]	*ḫurtiyaš*	[χ$^{(w)}$ortː-y-áːs]	'curse'
b.	*zaḫḫāiš*	[t͡saχː-áːi-s]	*zaḫḫiyaš*	[t͡saχː-y-áːs]	'battle'
c.	*linkāus*	[liŋk-áː(y)-os]	*linkiyaš*	[liŋk-y-áːs]	'oath'
d.	*[man]iyaḫḫāiš*	[maniy-aχː-áːi-s]	*maniyaḫḫiyaš*	[maniy-aχː-y-áːs]	'administrative district'
e.	*ḫukmāuš*	[χ$^{(w)}$okm-áː(y)-os]	*ḫukmiyaš*	[χ$^{(w)}$okm-y-áːs]	'incantation'

[17] Phonological observations on (13):

- All positive evidence supports a prehistoric consistently stressed suffix *–ói–* in the strong cases.
- Weak cases show zero-grade of the suffix and stressed endings ("voralthethitisch virtuell hysterodynamisches Paradigma" per Rößle 2002:324).
- In non-primary deverbal formations (13c–e) and deverbal (13b), the nominal stem is phonologically identical to the base.
- But (13a) shows the root vocalism of the weak verbal stem (cf. 3PL.IMP.ACT *ḫurtandu*), which points to a prehistoric paradigm like (14) with zero-grade root.

(14)

	PIE		HITTITE			
NOM.SG	**h₂wr̥t-ói*	>	*ḫurdāiš*	[χ$^{(w)}$ortː-áːi-s]	'curse'	(KBo 12.79 obv. 11´)
GEN.SG	**h₂wr̥t-y-é/ós*	>	*ḫurdiyaš*	[χ$^{(w)}$ortː-y-áːs]	'of the curse'	(KBo 10.45 iv 10)

§2.4 Comparative reconstruction: the morphology and phonology of PIE *–oi-stems

[18] The comparative morphological evidence argues that PIE *–oi-stems:

- Productively formed non-primary deverbal (Greek, Hittite) and denominal nouns (+ Vedic).
- May also have formed primary deverbal nouns (Hittite; Greek[?]).

[19] The comparative phonological evidence argues that PIE *–oi-stems:

- Had stressed suffixal *ó-vocalism in the strong cases (Hittite, Greek).
- Had zero-grade suffix in the weak cases (Vedic, Hittite).
- Had stressed inflectional endings in the weak cases (Hittite).
- In non-primary derivation, the nominal stem = stem of the base.
- In primary deverbal derivation, the verbal root was in zero-grade.

[20] Reconstructed PIE *–oi-stem schematic paradigms with these properties are given in (15):

(15)

	PRIMARY	NON-PRIMARY
NOM.SG	*R($\varnothing$)-ói	*STEM-ói
GEN.SG	*R($\varnothing$)-y-é/ós	*STEM-y-é/ós

[21] Under this reconstruction, the following innovations are observed in the daughter languages:

- Development of fixed word-initial stress in Vedic (*sákhā* / *sákhye*).
  - In Vedic fixed word-initial stress is the "default" prosodic pattern, which thus tends to emerge diachronically — e.g., as an inner-Vedic development in reflexes of PIE *–ti-stems like (16) (see Lundquist 2015; cf. Probert 2006, Yates 2015 on similar changes in Greek and Anatolian).
- Elimination of ablaut and stress mobility in Greek (*–ói / *–óy-os; cf. Hittite in §4).
  - Similar generalization of strong stem in PIE *–ter-stems in Greek, e.g., (17).
- If Greek does continue original primary deverbal *–oi-stems, they acquire analogical vocalism after the corresponding verbal stem — i.e., (18).

(16)   PIE *mn̥-tí– > RV *matí–* 'thought' > post-RV *máti–* 'id.'

(17)   a. PIE *dh₃-tḗr > Gk. δοτήρ 'giver' (NOM.SG)   (cf. Ved. *dātā́*)
       b. PIE *dh₃-tr-é/ós >> Gk. δοτῆρι 'for the giver' (DAT.SG)   (cf. Ved. *dātré*)

(18)   PIE *bʰidʰ-ói > Pre-Gk. *pitʰ-ói >> Gk. πειθώ 'P/persuasion' (F.NOM.SG)   (:: Gk. πείθω 'persuade')

[22] Broad take-away — the innovations necessary to reconcile the Greek and Vedic evidence with (15) are relatively trivial.

§3 Analyzing PIE *–oi-stems

[23] Descriptively, the paradigm of PIE *–oi-stems reconstructed in §2.4 is:

- "Amphikinetic," insofar as it is characterized by *o-vocalism of the suffix in the strong cases.
- "Hysterokinetic," insofar as it is characterized by stress mobility from suffix to endings.

  ⇒ Neither label adequately describes the class.

[24] Three (independently necessary) morphophonological assumptions provide a starting point for a new analysis of PIE *–oi*-stems (broadly following Kiparsky 2010, 2018; cf. Yates 2017):

   (i) Morphemes are lexically-specified for two accentual features: [±accent], [±dominant].

- [+accent] morphemes are inherently stress-attracting; [−accent] are stress-neutral.
- [+dominant] morphemes "override" the accentual properties of the stem to which they attach; [−dominant] do not "override" the stem.

   (ii) Athematic weak case inflectional endings are [+accent, −dominant]; strong case endings are [−accent, −dominant] (only derivational morphemes may be dominant).

   (iii) Two phonological rules, given in (19–20).

(19)   BASIC ACCENTUATION PRINCIPLE (BAP):
If a word has more than one accented vowel, word stress is assigned to the leftmost. If a word has no accented vowel, word stress is assigned to the leftmost syllable.

(20)   ZERO-GRADE ($\varnothing$-GR): */e, o/ $\rightarrow \varnothing$ (/[ə]) before an accented morpheme.   (cyclic)

[25] As already shown by Kiparsky (2010:154–5), these assumptions are sufficient to account for "true" AK stems like the archaic words for 'path' and 'earth' (cf. Yates 2017:191–2); derivations given in (21):

(21) a.

	'path.NOM.SG'	'path.GEN.SG'	b.	'earth.NOM.SG'	'earth.GEN.SG'
UR	*/pent(-)oh$_2$-/	*/pent(-)oh$_2$-/		*/d^{h}eĝ^h(-)om-/	*/d^{h}eĝ^h(-)om-/
INFL	pent(-)oh$_2$-s	pent(-)oh$_2$-ós		d^{h}eĝ^h(-)ōm	d^{h}eĝ^h(-)om-ós
$\varnothing$-GR	–	pn̥t(-)h$_2$-ós		–	d^{h}əĝ^h(-)m-ós
BAP	pént(-)oh$_2$-s	–		d^{h}éĝ^{h}ōm	–
SR	*[péntoh$_2$s]	*[pn̥th$_2$ós]		*[d^{h}éĝ^{h}ōm]	*[d^{h}əĝ^{h}mós]
	Ved. *pánthā*	*pathás*		Hitt. *tēkan*	*taknāš*
	Av. *paṇtā̊*	*paθō̄*			

· See Sandell (2015:181–4) for arguments that nominal stems like (21) are monomorphemic, perhaps already in PIE.

[26] **Proposal:** the PIE suffix *–oi*– is [+accent, +dominant] — i.e., */-ói-/.

[27] This hypothesis captures all the *–oi*-stem data — the derivation in (22a) shows that the prosodic patterns of primary deverbal *–oi*-stems are correctly predicted.

- When the suffixal vowel nucleus is eliminated by ZERO-GRADE (and resyllabification) in weak cases, its accent is deleted (or undergoes "secondary mobility" (Kiparsky 2010:146), shifting to next σ).

- For comparison, a standard HK nominal paradigm is derived in (22b); the analysis is the same modulo the suffixal vocalism (i.e., stem-final accent with deletion in weak cases).

(22) a.

	'curse.NOM.SG'	'curse.GEN.SG'	b.	'father.NOM.SG'	'father.GEN.SG'
UR	*/h$_2$wert-ói-/	*/h$_2$wert-ói-/		*/ph$_2$tér-/	*/ph$_2$tér-/
INFL	h$_2$wert-ói	h$_2$wert-ói-ós		ph$_2$tér	ph$_2$tér-ós
$\varnothing$-GR	h$_2$wr̥t-ói	h$_2$wr̥t-y-ós		–	ph$_2$tr-ós
BAP	–	–		–	–
SR	*[h$_2$wr̥tói]	*[h$_2$wr̥tyós]		*[ph$_2$tér]	*[ph$_2$trós]
	Hitt. *ḫurtāiš*	*ḫurdiyaš*		Gk. πατήρ	πατρός

[28] Non-primary *–oi*-stems are derived cyclically, as illustrated in (23–24) with the (virtual) PIE ancestor of Hitt. *ištarningai–* 'illness'.

- The suffix */-ói-/ selects the derived (verbal) stem, formed as in (23).
- Suffixation of [+dominant] PIE */-ói-/ in (24) "overrides" the inherent accent of the base.
- The derivation then proceeds as in (22a) above, except the verbal stem does not undergo ZERO-GRADE because the accented suffix is not within the same cyclic domain.

(23)

	'make.ill$_V$'
UR	*/ster-né-k̂-/
∅-GR	str̥-né-k̂-
STEM	*[[str̥nék̂-]]
	Hitt. *ištarni(n)k–*

(24)

	'illness.NOM.SG'	'illness.GEN.SG'
UR	*/[str̥nék̂]-ói-/	*/[str̥nék̂]-ói-/
INFL	[str̥nek̂]-ói	[str̥nek̂]-ói-ós
∅-GR	–	[str̥nek̂]-y-ós
BAP	–	–
SR	*[str̥nek̂ói]	*[str̥nek̂yós]
	Hitt. *ištarni(n)kaiš*	Hitt. *ištarni(n)kiyaš* (cf. *maniyaḫḫiyaš*)

§4   On the relationship between word stress & ablaut

[29] The analysis developed in §3 makes an important further prediction about the relationship between word stress and ablaut in PIE *–oi*-stems.

[30] Recall from §2.2 — Greek reflexes of PIE *–oi*-stems show no ablaut and fixed suffixal stress, e.g., (25):

(25)

	STRONG	WEAK		
a.	πειθώ	πειθοῦς	'P/persuasion'	(F.NOM/GEN.SG)
b.	καμῑνώ	καμῑνοῖ	'furnace-woman'	(F.NOM/DAT.SG)

[31] The same pattern emerges in later Hittite (only NS) reflexes of PIE *–oi*-stems — suffixal ablaut is lost and the class develops consistent fixed stress on the suffix, i.e., (26):

(26)

	STRONG	OLDER WEAK	INNOVATIVE WEAK		
a.	*ḫurdāi–*	*ḫurtiya*	*ḫurtāi*	[χ$^{(w)}$ortː-áː(y)-i]	'curse.DAT.SG'
b.	*linkāi–*	*linkiya*	*lenqāi*	[liŋk-áː(y)-i]	'oath.DAT/LOC.SG'
		linkiyaš	*lingayaš*	[liŋk-áːy-as]	'oath.GEN.SG'
c.	*maniyaḫḫāi–*	*maniyaḫḫiyaš*	*maniya[ḫ]ḫayaš*	[maniy-aχː-áːy-aːs]	'administrative district.GEN.SG'

[32] This type of development is not unique to PIE *–oi*-stems; it also occurs in Greek classes with inherited "hysterokinetic" stress mobility, including:

- *–ter*-agent nouns — e.g., DAT.SG δοτῆρι 'for the giver'; GEN.SG σωτῆρος 'of the preserver'.
- In the word for 'father' — GEN.PL πατέρων is regular already in Homer (2x *Od.* πατρῶν); GEN.SG πατέρος and DAT.SG πατέρι also occur in Homer and in the later poetic language.

[33] Under the analysis developed in §3, the emergence of columnar suffixal stress is not accidental but rather *predicted*, a direct consequence of the loss of suffixal ablaut.

- Specifically, the analysis makes the strong prediction in (27):

(27) Intraparadigmatic stress mobility between a derivational suffix and inflectional endings *cannot* occur unless the suffixal vowel nucleus is eliminated.

[34] The (transponat) derivations in (28) show why this prediction falls out from the analysis.

- If the accented suffix | fails to undergo ZERO-GRADE | (for whatever reason), it is assigned stress by the BAP because it is the leftmost accented morpheme in the word.

(28)

	'curse.DAT/LOC.SG'	'persuasion.GEN.SG'	'father.GEN.PL'
UR	$*/[h_2$wert-ói-/	$*/b^heid^h$-ói-/	$*/ph_2$tér-/
INFL	$h_2$wert-ói-í	b^heid^h-ói-ós	ph_2tér-ǿm
∅-GR	$h_2$wr̥t-| óy |-í	b^hid^h-| óy |-ós	ph_2| tér |-ǿm
BAP	$h_2$wr̥t-óy-i	b^hid^h-óy-os	ph_2tér-ōm
SR	$*[h_2$wr̥tóyi]	$*[b^hid^hóyos]$	$*[ph_2térōm]$
	Hitt. *ḫurtāi*	Gk. πειθοῦς	Gk. πατέρων

§5 Discussion & conclusions

[35] Under the widely accepted Erlangen Model (EM) (and related "paradigmatic" models) of PIE word prosody, all athematic primary nominal derivatives with suffixal *o*-vocalism are standardly assigned to the "amphikinetic" nominal class, which predicts that they all should show:

- Stressed full-grade of the root and *o*-vocalism of the suffix in the strong cases.
- Zero-grade of the root and suffix and stressed inflectional endings in the weak cases.

· EM addresses only primary athematic nominal derivation and thus makes no explicit claim about the formal patterns of PIE non-primary *–oi*-stems (and other non-primary derivatives). For a recent defense of EM, see Fellner and Grestenberger (2016).

[36] However, there are at least two formal patterns associated with primary athematic nominal formations with suffixal *o*-vocalism that are directly reconstructible for PIE (per §2.4 above):

 (i) The traditional "amphikinetic" type described by EM (PIE 'path', 'earth').
 (ii) An "amphi-hystero-kinetic" type with suffixal *o*-vocalism and stress alternations between suffix and endings (PIE *–oi*-stems).

⇒ EM *undergenerates* the set of reconstructible formal types.

[37] One possible fix — posit another paradigmatic class within EM (cf. Tichy's (2004) "mesostatic" class).

[38] But this approach still would not predict that "hysterokinetic" stress mobility depends crucially on ablaut as observed repeatedly in the daughter languages (per §4 above).

- In principle EM makes no predictions about the subsequent development of its paradigmatic classes, but in practice it is used as a starting point to explain them.
- The standard explanatory mechanism is paradigmatic leveling, with stress and ablaut treated as independent variables.
  · Thus (e.g.) late Ved. *máti*– 'thought' has been explained starting from a "proterokinetic" PIE *–ti*-stem paradigm by leveling the stress of the strong stem (*mén-ti*–) and the root vocalism of the weak (*mn̥-téy*–) (Schaffner 2001:436–40; cf. Grestenberger 2014:88, Kim 2013:82–3, *i.a.*).

· For the correct reconstruction of PIE primary *–ti*-stems — oxytone $*[-tí-]$ — see Keydana (2013), Kümmel (2014), and Lundquist (2015).

[39] Yet by this mechanism it would be possible (even trivial) to account for a Greek *–oi*-stem GEN.SG $^\text{x}$-ούς (< $^\text{x}$–*oy-ós*) or a *–ter*-stem GEN.SG $^\text{x}$-τηρ-ός by leveling the suffixal vocalism of the strong stem and the stress of the weak — but these are *unattested* (only -ούς, -τῆρ-ος).

⇒ EM in practice *overgenerates* the attested set of post-PIE prosodic changes.

[40] These issues call into question whether EM — whatever its validity for pre-PIE — offers any insight into how the morphophonological systems of "the attested languages came to be the way they are" and so in turn facilitates "the goal of the comparative reconstruction" (per Melchert to appear).

[41] In contrast, the alternative approach outlined above offers a viable starting point for a broader explanatory account of PIE word-prosody and its diachronic development into the daughter languages.

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