Suffixal **o*-vocalism without "Amphikinesis": On Proto-Indo-European **oi*-stems and Ablaut as a Diagnostic for Word Stress*

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1. Introduction

This paper is concerned broadly with the relationship between word stress and quantitative vowel alternations (ABLAUT) in Proto-Indo-European (PIE) as directly reconstructible by comparison of its daughter languages and, in particular, with the prosodic patterns exhibited by animate nouns formed with the suffix **-oi-*. Regarding these patterns there has been general agreement since Schindler (1969: 154–5), who argued that PIE **oi*-stems had "amphikinetic" (AK) inflectional paradigms (cf. Rix 1992:146–7, Weiss 2011:242, inter alia)—i.e., stressed **é*-vocalism of the root and **o*-grade of the derivational suffix in the strong cases, and zero-grade of the root and suffix and stressed inflectional endings in the weak cases. Here, I reexamine the evidence for this hypothesis and show that this reconstruction encounters empirical problems—above all, mismatching the suffixal stress pattern found in the strong cases in Greek and Hittite. I therefore propose an alternative reconstruction of PIE **oi*-stems which, significantly, requires rejecting the premise that all PIE primary athematic nominals with suffixal **o*-vocalism were characterized by intraparadigmatic stress mobility between root and inflectional endings, as assumed in the widely accepted Erlangen Model (EM) of PIE morphophonology (discussed further in §6 below).

1.1. PIE *oi-*stems: the basis for the traditional "amphikinetic" reconstruction*

PIE **oi*-stems are best represented in Ancient Greek and in Hittite, but it is generally held that their original inflectional patterns are best preserved in Indo-Iranian—specifically, in the morphologically isolated word for 'friend' in Vedic

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Sanskrit, which was treated in detail by Schindler (1969:154–5). Table 1 provides representative attested forms of this word and their corresponding PIE pre-forms under the assumption that they directly continue a "pristine" AK paradigm of the type described above:[1]

Table 1

	PIE		Vedic Sanskrit		
NOM.SG	**sékʷh₂-ōi*	>	*sákhā*	'friend'	(e.g., RV IV.4.10c)
ACC.SG	**sékʷh₂-oy-m̥*	>	*sákhāyam*	"	(e.g., RV V.31.12b)
DAT.SG	**s(ə)kʷh₂-y-éi*	>>	*sákhye*	'for a friend'	(e.g., RV V.29.7a)

Under this view, the Vedic paradigm closely reflects the PIE situation; the only major change between PIE and Vedic is in the weak cases, where Vedic has analogically introduced root stress from the strong stem (thus, e.g., *sákhye* replaced historically expected ˣ*sakhyé*).

*1.2. PIE *oi-stems: issues with the traditional "amphikinetic" reconstruction*

A problem for the traditional analysis arises, however, when the Hittite and Greek reflexes of the cognate class are taken into account. The prosodic properties of these forms are difficult to reconcile with the AK reconstruction—in particular, the suffixal stress pattern (i.e., **-ói-*) in the strong case forms that is consistently observed in both languages. Sample strong and weak case forms are given for Greek in Table 2 and for Hittite (with approximate phonetic transcriptions) in Table 3.

Table 2

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

1 For the paradigm in Table 1 see Rix 1992:146 (which offers a different segmentation). Following Rix, I assume that in the weak cases of Table 1 the "root" (i.e., stem-initial syllable) would have been a "morphological zero-grade" environment for phonotactic reasons and thus would have had a reduced vowel (represented here with **ə*), the regular Vedic reflex of which is *a* (e.g., PIE **səs-éntu* > Ved. *sas-ántu* 'let them sleep'). Nothing depends on this assumption, however, in particular since I show in §§2.2–3 below that the Vedic forms in Table 1 do not reflect a primary AK paradigm of this kind.

Table 3

	STRONG		WEAK			
a.	*ḫurdāin*	[χ͡(w)ort:-á:i-n]	*ḫurtiyaš*	[χ͡(w)ort:-y-á:s]	'curse'	(ANIM.ACC/GEN.SG)
b.	*zaḫḫāiš*	[t͡saχ:-á:i-s]	*zaḫḫiyaš*	[t͡saχ:-y-á:s]	'battle'	(ANIM.NOM/GEN.SG)
c.	*linkāuš*	[liŋk-á:(y)-os]	*linkiyaš*	[liŋk-y-á:s]	'oath'	(ANIM.ACC.PL/GEN.SG)

The Greek and Hittite strong case forms in Tables 2–3 are problematic for the AK reconstruction of PIE **oi*-stems because it is precisely the derivational suffix—the locus of stress in both languages—that is "skipped" in the AK stress alternation between root and inflectional endings. The attested forms in Tables 2–3 thus cannot reflect AK pre-forms via regular sound change. Furthermore, a PIE AK paradigm provides no viable source from which suffixal stress could be analogically generalized by paradigm leveling.

The primary aim of this paper is to advance a new reconstruction of PIE animate **oi*-stems that accounts for the formal properties of their attested reflexes in the IE daughter languages. I argue that **oi*-stems were not "amphikinetic" at all in PIE. Instead, they had the following two properties:

i. Stressed **oi*-suffix in the strong cases (as in Hittite, Greek)

ii. Zero-grade suffix (**-y-*) (as in Hittite, Vedic) and stressed inflectional endings in the weak cases (as in Hittite)

It will become clear below, moreover, that labeling this PIE nominal class "amphikinetic" does not adequately explain the variation in the vocalism of the base—i.e., the root or stem to which **-oi-* is suffixed—that is found in the daughter languages. This issue is treated in §5.

1.3. Outline

The remainder of this paper is structured as follows. The next three sections comprise a systematic survey of the attested reflexes of PIE **oi*-stems in the ancient IE languages that provide direct evidence for their reconstructible stress patterns: Vedic is treated in §2; Greek in §3; and Hittite in §4. In each case, I assess the evidence for this nominal class not only for its phonological properties but also for its morphological structure, with special attention to the relationships that obtain between the reflexes of PIE **oi*-stems and their (synchronic) derivational bases.

This survey culminates in §5, where it provides the basis for a new reconstruction of PIE **oi*-stems. I conclude, then, in §6 with a discussion of some

implications of this reconstruction for analyses of PIE word prosody—in particular, for the EM and its foundational assumptions about the relationship between word stress and ablaut.

2. Reflexes of PIE **oi*-stems in Vedic Sanskrit

2.1. Data

Reflexes of PIE animate **oi*-stems in Indo-Iranian are limited to a single lexical item, the word for 'friend', continued in Ved. *sákhā(y)-* and Av. *haxā(ii)-*.[2] The former is extremely well-attested, the majority of simplex paradigmatic forms occurring already in the Rigveda; these forms are provided in Table 4.

Table 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*	—	*sákhīnām*
LOC	—	—	—
VOC	*sakhe*	*sakhāyā(u)*	*sakhāyas*

In Avestan, simplex forms occur only in Younger Avestan and are somewhat more limited: *haxa* (NOM.SG), *haša* (INSTR.SG), *hašе* (DAT.SG), *haxaiia*/*haša* (NOM/ACC.DU), *haxaiiō* (NOM.PL), and *hašąm* (GEN.PL).[3] This lexical item is also attested in cognate compounds in Sanskrit and Avestan: Ved. *su-ṣakhā́(y)-* and OAv. *huš.haxā(ii)-*. These compounds are discussed further in §2.4 below.

2.2. The phonology of Vedic *oi-*stems*

The Vedic forms in Table 4 all show fixed stress on the stem-initial syllable. The lengthened *ā*-vowel of the suffix observed in the ACC.SG and NOM.PL is the ex-

2 Av. *kauua(ii)-* 'ruler' (cf. Ved. *kaví-* 'sage-poet') is an **ei*-stem (ACC.SG YAv. *kauuaēm*; NOM.PL OAv. *kāuuaiias*) with cognates Gk. κοίης '(type of priest)' (Hsch.) and Lyd. *kawe-* 'priest' (cf. *EWA* I 328), the latter clearly supporting this inflectional pattern (cf. Hawkins 2013:185 n.597); it is therefore not a reflex of PIE **-oi-*.

3 YAv. *hašąm* preserves the inherited GEN.PL PIE **sok*^{w}*-(h*$_2$*)-y-(oh*$_{1/3}$*)om* against remodeled Ved. *sákhīnām*.

pected reflex of prehistoric *o-vocalism in an open syllable (via BRUGMANN'S LAW). In the weak cases, the Vedic forms consistently show zero-grade of the suffix, prevocalic *-y-* and preconsonantal *-i-*. The stem-initial syllable has paradigmatic *a*-vocalism, which is historically compatible with **e, *o*, or even a morphological zero-grade **ə* (cf. n.1).

As noted already in §1.1, these properties may be explained starting from a primary AK paradigm such as Table 1 above: the *a*-vocalism of the stem-initial syllable may continue the mixture of strong **e* and weak **ə* hypothesized in Table 1 or the analogical leveling of the former, perhaps concomitant with the generalization of the initial stress pattern in those case forms. However, the consonantism of the stem makes this analysis problematic. It is generally agreed that the etymological source of Ved. *sákhā(y)-* and Av. *haxā(ii)-* is the PIE root **sek^{w}-* 'accompany; follow' (*EWA* II 684–5), but a primary deverbal formation from this root—the source of Ved. *sácate* 'id.' (cf. Lat. *sequitur,* Gk. ἕπομαι, etc.; *LIV*^{2} 525–6)—cannot account for Ved. *kh* (< PIIr. **k^{h}*). These forms thus require a different morphological analysis.

2.3. The morphology of Vedic *oi-*stems*

Recognizing the issue raised by their consonantism, Schindler (1969:164 n.65) proposed that Ved. *sákhā(y)-* and its Avestan cognate instead reflect a non-primary formation **sok^{w}-h$_2$-oi–*derived as in (1) from a collective in **-eh$_2$-*. The process would be analogous to the widely accepted derivation in (2) (see Meier-Brügger 2010:248 with references): the addition of the non-primary suffix (**-oi-*, **-o-*) induces zero-grade of the preceding morpheme, creating a voiceless stop plus **h$_2$* sequence that develops regularly into a Vedic voiceless aspirated stop (and Avestan voiceless fricative).

(1)	**sek^{w}-*	⇒	**sok^{w}-eh$_2$-*	⇒	**sok^{w}-h$_2$-oi-*
	'accompany'		'retinue'		'member of a retinue'
(2)	**ret-*	⇒	**rot-eh$_2$-*	⇒	**rot-h$_2$-o-*
	'run'		'runners/wheels of vehicle'		'wheeled vehicle'

The output of the derivation in (2) yields Ved. *rátha-* 'chariot' and YAv. *raθa-* 'id.'; the intermediate step is likely reflected in Lat. *rota* 'wheel'. The existence of the intermediate stage is less secure for (1), but may be indirectly reflected in Gk. ὀπάων 'comrade, attendant' as the historical source of its unattested base ὀπᾱ* (see Beekes 2010:112–3, 1089 with references). This form is one of several pieces of evidence that point to **o*-grade in the stem-initial syllable of **sok^{w}-h$_2$-oi-*. Additional support for its reconstruction comes from further derivatives to

this stem, produced as in (3) (see Byrd 2015:210–1 and Ringe 2017:131–2 for detailed discussion):

(3) *sok^w-h_2-oi- ⇒ *sok^w(-h_2)-y-o- ⇒ *sok^w(-h_2)-y-e-ye/o-
'member of a retinue' 'companion' 'be a companion'

Lat. *socius* 'comrade' and ON *seggr* 'id.' are most economically derived from thematized *sok^w-(h_2)-y-o- with regular deletion of *h_2 before *y by PINAULT'S LAW (Pinault 1982; cf. Byrd 2015:208–41); Gk. ἀοσσέω 'help' continues a prefixed form of the denominal verb to this stem (< *$sm̥$-sok^w(-h_2)-y-e-ye/o-).

There is therefore convergent evidence for reconstructing a non-primary formation PIE *sok^w-h_2-oi- with *o-grade of the root as the etymon of Ved. *sákhā(y)-*. For present purposes, this result has two important implications. First, Ved. *sákhā(y)-* provides no positive evidence for reconstructing a primary *oi-stem paradigm like Table 1 with*e-grade of the root in the strong cases. Second, this form (and its own cluster of further derivatives) suggests that non-primary *oi-stems "inherit" the root vocalism of their derivational base—i.e., *sok^w-h_2-oi- acquires its *o-grade from *sok^w-eh_2-. Such base-derivative transfer effects are well known cross-linguistically,[4] and a characteristic property of PIE non-primary derivation, as observed already by Schindler (1975:260): "Es besteht dabei generell die Möglichkeit, dass spezifische Ablautstufen der zugrundeliegenden Primarbildungen auch in den sekundaren Ableitungen erscheinen." This mechanism will factor prominently into the analysis developed below.

2.4. Vedic suṣakhā́(y)-*: An accentual archaism?*

One final Indo-Iranian form merits discussion, since it potentially offers insight into the formal properties of PIE *oi-stems. The form is Ved. *suṣakhā(y)-*, a compound of *su-* 'well' and *sákhā(y)-* 'friend', which is likely of PIIr. antiquity, since Avestan attests a compound built out of the same two elements, OAv. *huš.haxā(ii)-* (NOM.SG *huš.haxā*, Y 32.2*;* ACC.SG *huš.haxāim*, Y 46.13). This Vedic compound is attested four times in the Rigveda, three times with stress on the peninitial syllable of its second member (2M) (*suṣakhā́yas*, I.173.9a; *suṣakhā́*, VIII.48.9d; *suṣakhā́yas*, X.31.1c) and once with stress on the first syllable of its 2M (*suṣákhā*, X.91.1d). Oldenberg (1909–12:I.173, II.116, ad locc.) classifies the

4 Kiparsky (2015:3) refers to such transfer effects as "synchronic analogy." A more common label is "output-output correspondence" (Benua 1997), a topic which has engendered a vast theoretical literature (for one recent overview see Rolle 2018:158–61).

two NOM.SG forms (with mismatched stress) as determinative compounds and the latter two as bahuvrīhis (BV); Jamison and Brereton (2014:373, 1129, 1425, 1540, ad locc.) appear to concur with his assessment, rendering the former as 'good comrade' and the latter as 'have/be in good fellowship'.

The two BV compounds are of particular interest here.[5] The general rule for the accentuation of BV compounds with first member *su-* is that they are stressed on the same syllable of the 2M as the 2M's simplex form (Wackernagel 1905: 294–5), e.g., *su-vájra-* 'possessing a good mace (*vájra-*)'; *su-cakrá-* 'well-wheeled (*cakrá-*)'. Exceptions to this rule are rare in the Rigveda,[6] but *suṣakhā́(y)-* appears to flout it, showing 2M stem-final stress vs. stem-initial stress in the simplex form *sákhā(y)-*. This type of mismatch is especially problematic because any kind of simple analogical explanation—e.g., that the stress of the compound has been influenced by the simplex—is obviously excluded, since it is precisely in this respect that the compound diverges from the simplex form.

I therefore suggest that this synchronically unmotivated mismatch may be an archaism. In §5 below, I argue that PIE **oi*-stems, both primary and non-primary, were stressed on the **oi*-suffix in their strong case forms. Under this analysis, the expected Vedic form of the word for 'friend' is **sakhā́(y)-*; if this form were then compounded with the precursor of Ved. *su-* and the same rules of BV accentuation were applied, the output of this derivation would have developed regularly into attested Ved. *suṣakhā́(y)-*. This compound would thus reflect a historical stage prior to the "retraction" of stress that yielded the Vedic simplex from *sákhā(y)-* with fixed stem-initial stress. A possible mechanism for this diachronic stress shift is discussed further in §5.3.

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5 However the divergent stress pattern of hapax *suṣákhā* at RV X.91.1d is to be explained, it cannot be attributed to the fact that it is a determinative compound, since *suṣakhā́* at RV VIII.48.9d is a compound of the same type. Oldenberg (1909–12:II.116 ad loc.) suggests that *suṣákhā* may be an error. In my view, however, it is most likely analogical to the synchronic base *sákhā(y)-*. More precisely, it is a nonce form produced by compounding unaccented /su-/ with the synchronic nominal stem /sákhāy-/ with initial accent (cf. Lundquist 2016 on compound *s*-stem adjectives).

6 Wackernagel (1905:295) suggests that *su-* compounds with 2M stem-final stress vs. simplex stem-non-final are analogical to privative (*a(n)-*) compounds, which generally show this pattern. See Melazzo 2010:99–105 for a complete list of exceptions in the Rigveda with discussion.

3. Reflexes of PIE **oi*-stems in Ancient Greek

3.1. Data

PIE animate **oi*-stems are continued semi-productively in Greek in two functions, both of which are attested already in Homer. The Greek reflex of this suffix is used, first, to form feminine deverbal abstract nouns, and second, to form feminine denominal relational nouns referring to female persons or professions.[7] Representative examples of each type are given in (4) and (5), respectively:[8]

(4)	a.	φείδομαι	'spare'	⇒	φειδώ	'sparing'	(Hom.+)
	b.	πείθω	'persuade'	⇒	πειθώ	'persuasion'	(Hes., A.+)
	c.	λέχομαι	'lie down'	⇒	λεχώ	'woman post-childbirth'	(E.+)
	d.	χρή	'need to'	⇒	χρε(ι)ώ	'need'	(Hom.+)
	e.	μέλλω	'be about to'	⇒	μελλοῦς	'of hesitation'	(A. *Ag.* 1356)
	f.	δοκέω	'seem; think'	⇒	δοκώ	'notion'	(E. *El.* 747)
	g.	ἄπειμι	'be away'	⇒	ἀπεστώ	'absence'	(Hdt., Plu.)
	h.	πῡ́θομαι	'rot'	?⇒	Πῡθώ	'Pytho (place)'	(Hom.+)
(5)	a.	κάμῑνος	'furnace'	⇒	καμῑνώ	'furnace-woman'	(Hom.+)
	b.	ἀργός	'swift'	⇒	Ἀργώ	'Argo (ship)'	(Hom.+)
	c.	γοργός	'grim'	⇒	Γοργώ	'Gorgon (monster)'	(Hes.+)
	d.	ἐρατός	'lovely'	⇒	Ἐρατώ	'Erato (nymph)'	(Hes.+)
	e.	κῦμα	'wave'	⇒	Κῡμώ	'Cymo (nymph)'	(Hes.+)
	f.	κάλλιστος	'most beautiful'	⇒	Καλλιστώ	'Callisto (nymph)'	(E.+)
	g.	κόσμος	'order'	⇒	Κοσμώ	'Cosmo (priestess)'	(Lycurg.)

Especially in epic poetry, derivatives of both types are used as female theonyms. Yet Homeric forms like (4a) and (4c)–(d) are clear examples of deverbal abstract nouns, and this usage takes on a modicum of productivity in the tragic poets and later authors, as evident from nonce formations like (4e)–(f).[9] Similarly, (5a) es-

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7 In some cases, the process by which the **oi*-stem noun is derived is unclear—e.g., ἠχώ 'sound' could be deverbal to the denominative verb ἠχέω 'make sound' or denominal from its base ἠχή 'sound'. In principle, it could also be a primary derivative of a verbal root, although which root exactly is unclear (cf. *DELG* 418).

8 The relationship in (4h) is famously related in *h.Ap.* 371–4. While it is probably a folk etymology (cf. *DELG* 953), the fact that the poet was able to connect them this way shows that this derivational pattern was part of his grammar.

9 On hapax legomena as a diagnostic of morphological productivity, see Sandell 2015:22–5, 34–54 with references. It is perhaps notable that nearly one-third of the **oi*-stem abstracts listed in

tablishes the denominal relational usage for Homer, although only in deriving female names does the suffix appear to have any denominal productivity.

This Greek class also includes some nouns that lack any identifiable derivational base, e.g., Σαπφώ 'Sappho' (h) in Table 5 below; yet since these forms lack secure etymologies or transparent morphological structure, they are of limited relevance for determining the morphological or phonological properties of PIE *_oi_-stems.

3.2. Morphology of Greek *oi-*stems*

The majority of the Greek reflexes of PIE *–*oi*–stems cited in (4)–(5) are unambiguously non-primary derivatives just like Ved. *sákhā(y)-*. This is true for all of the examples in (5), and particularly clear in (5a) and (5d)–(g), where the **oi*-stem nouns show phonological traces of the derivational suffix(es) used to form the nominals that serve as their derivational bases—e.g., in (5d) Ἐρατώ 'Erato' contains the [t] of the suffix -το- used to form the verbal adjective ἐρατός from which it is derived.

Of the examples in (4) at least (f)–(g) are similarly unambiguous non-primary derivatives. In (4g), the noun is transparently derived from a preverb-verb compound. In (4e) and (4f), the verbal stems contain the PIE derivational suffixes *-*ye*/*o*- and -*éye*/*o*-, respectively (*LIV*^{2} 109–11; *DELG* 682–3), traces of which can also be observed in their derived nouns. Example (4d) is somewhat more complicated, but there is general agreement that the derivational base is not a verbal root (see *DELG* 1273 with references) and thus that the **oi*-stem nouns are non-primary.

The remaining three examples in (4a)–(c) are more difficult to interpret. On the one hand, the **oi*-stem nouns could be primary derivatives of the PIE verbal roots *b^heid-, *b^heid^h-, and *$leĝ^h$- with the full-grade of the root that is expected under the traditional AK reconstruction of PIE **oi*-stems. On the other hand, they could be non-primary derivatives of the "simple" thematic present stems in (4a)–(c) derived from these roots, in which case their root-full-grade may be inherited from the corresponding verbs. I argue in §5.3 below that the latter account describes the synchronic situation, but it remains possible that (4a)–(c) indirectly reflect inherited primary formations.

Buck and Petersen 1945:24–5 are hapax forms in Hesychius, although the implications of this distribution are unclear at present.

3.3. Phonology of Greek *oi-*stems*

The Greek reflexes of PIE **oi*-stems exhibit essentially uniform phonological behavior. All Greek nouns of this type have stress fixed on the suffix throughout their inflectional paradigm and non-ablauting [o]-vocalism of this suffix. This pattern is partially obscured by the historical loss of intervocalic yod, but all attested forms can be traced back to Proto-Greek paradigms with NOM.SG **-ói*, GEN.SG **-óy-os*, and LOC(>DAT).SG **-óy-i*, e.g., Table 5:

Table 5

	STRONG	WEAK		
a.	φειδώ	φειδοῖ	'sparing'	(F.NOM/DAT.SG)
b.	πειθώ	πειθοῦς	'persuasion'	(F.NOM/GEN.SG)
c.	λεχώ	λεχοῦς	'woman post-childbirth'	(F.NOM/GEN.SG)
d.	χρε(ι)ώ	χρε(ι)οῖ	'need'	(F.NOM/DAT.SG)
e.	καμῑνώ	καμῑνοῖ	'Calypso (goddess)'	(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)

The word-final circumflex in the weak case forms shows that these nouns had stress on the derivational suffix prior to yod loss and vowel contraction (cf. Schwyzer 1939:382, 478–9); if they instead had final stress, the result would have been a final acute—e.g., ˣφειδοί rather than φειδοῖ (a) in Table 5.

As can be seen in (4) and (5), Greek non-primary **oi*-stems have the same stem shape as their derivational bases. This generalization holds also for Table 5 a–c, if these are non-primary (cf. §3.2 above); otherwise, they point to inherited full-grade of the root. None of the Greek **oi*-stems that look synchronically underived (e.g., (4g)) can be traced back to PIE primary **oi*-stems with any confidence; these examples are thus uninformative with respect to the root vocalism of PIE primary **oi*-stems.

4. Reflexes of PIE **oi*-stems in Hittite

4.1. Data

PIE animate **oi*-stems are continued in Hittite as *a(i)*-stems. This class has been treated exhaustively by Rößle (2002), who provides a comprehensive collection

of forms and their attestations.[10] Much like PIE **oi*-stems in Greek, Hittite *a(i)*-stems are employed in two functions from Old Hittite onward. First, the Hittite reflex of this suffix was used semi-productively to form animate deverbal abstract and concrete nouns such as those in (6). In addition, the suffix was used to derive animate denominal abstract and concrete nouns, although this usage is not as well attested. Two relatively clear examples are given in (7):

(6)	a.	*ḫuwart/ḫurt-*	'swear'	⇒ *ḫurdāin*	[χ$^{(w)}$ort:-á:i-n]	'curse'
	b.	*zaḫ(ḫ)-*	'strike'	⇒ *zaḫḫāiš*	[t͡saχ:-á:i-s]	'fight'
	c.	*wag-*	'bite'	⇒ *wagāiš*	[wak-á:i-s]	'grain pest'
	d.	*link-*	'swear'	⇒ *linkāuš*	[liŋk-á:(y)-os]	'oaths'
	e.	*wašt-*	'sin'	⇒ *waštāiš*	[wast-á:i-s]	'sin'
	f.	*ištarni(n)k-*	'make ill'	⇒ *ištarningain*	[istarniŋk-á:i-n]	'illness'
	g.	*maniyaḫḫ-*	'administer'	⇒ [*man*]*iyaḫḫāiš*	[maniyaχ:-á:i-s]	'administrative district'
(7)	a.	*ḫullant-*	'defeated'	⇒ *ḫullanzāiš*	[χol:an͡ts-á:i-s]	'defeat'
	b.	*ḫukma-**	'?magical'	⇒ *ḫukmāiš*	[χ$^{(w)}$okm-á:i-n]	'incantation'

This Hittite class also includes nouns that appear to lack a synchronically co-existing derivational base. Some—in particular, Hitt. *šaklai-* 'custom' and *šagai-* 'omen'—have been taken to reflect PIE primary formations (e.g., Kloekhorst 2008:539–40, 700–1), but a non-primary denominal origin is more likely (see Yates 2017:92 n.58). Rößle (2002:115–8) has shown that others continue **i*-stem nouns remodeled within Hittite, e.g., *tuḫḫwi-* 'smoke' >> *tuḫḫwai-* 'id.'[11] The phonological properties of these forms do not diverge in any significant way from the synchronically derived non-primary *a(i)*-stems in (6) and (7), which constitute the focus of the discussion in §§4.2 and 4.3 below.

4.2. Morphology of Hitite a(i)*-stems*

Both of the denominal *a(i)*-stems in (7) are manifestly non-primary. In each case, the proximate base is a nominal formation that is itself derived from an attested verbal stem, *ḫulle/a-* 'fight' and *ḫuek/ḫuk-* 'conjure'; the suffixes used to form these bases (< PIE **-ont-*, **-mo-*) can be directly observed in the derived

10 Rößle (2002) also gathers and assesses the evidence for Hittite neuter **oi*-stems (e.g., *ḫaštai-* 'bone', pp.61–71); these nouns are not treated here, as there is no reason to assume a priori that the neuter suffix has the same prosodic properties as the animate one.

11 The clearest examples of this remodeling, *tuḫḫwai-* and *zašḫai-* 'dream', are themselves non-primary (see Rößle 2002:115–30, Byrd 2011).

a(i)-stems.[12] Similarly, the deverbal *a(i)*-stems in (6f)–(g) are clearly based on derived verbal stems: (6f) is a nasal-infix verb (cf. Hitt. *ištark-* 'be ill') and (6g) contains the productive denominal verb-forming suffix *-aḫḫ-* (< factitive PIE *-*eh*$_2$-).

Somewhat less clear are the *a(i)*-stem nouns in (6b)–(e), which stand beside Hittite radical verbs that have qualitatively invariant stem vocalism. One possibility for the nouns in (6b)–(d) is that they are primary derivatives of PIE verbal roots with the full-grade expected under the traditional AK reconstruction.[13] Yet such an analysis is excluded for Hitt. *waštai-* in (6e), whose stem-initial [a] cannot reflect a PIE full-grade.[14] This property is more plausibly explained under the assumption that *waštai-* is a non-primary derivative formed within Hittite based on the *ḫi*-verb *wašt-* 'sin'; the invariant vocalism of the verb—originally proper to its strong stem (< PIE **o*) (cf. Kloekhorst 2008:985–6)—was then transferred to the derived noun as in other non-primary derivatives. Significantly, this type of analysis can also be extended to the nouns in (6b)–(d), whose stem shapes similarly match their corresponding verbal stems; inner-Hittite non-primary derivation with base-derivative transfer of stem vocalism would account neatly for this identity.

The final example, *ḫurdai-* in (6a), stands beside an ablauting radical verb *ḫuwart*/*ḫurt-*. As was the case for *waštai-* in (6e), *ḫurdai-* cannot continue a PIE primary AK formation (< PIE **h*$_2$*wert-*; cf. *LIV*^{2} 291) with full-grade of the root;[15] rather, its presuffixal stem shape ([χ$^{(w)}$ort:-]) can only reflect a historical

12 I tentatively follow Hoffner and Melchert 2008:54 in deriving *ḫullanzai-* as in (8a) from the PTCP *ḫullant-* of *ḫulle*/*a-* 'fight' (with regular affrication of **-t* > *z* [t͡s] before [i] generalized from the weak cases), but see Rößle 2002:98–102 for a discussion of alternative analyses (under any of which *ḫullanzai-* must be a non-primary formation). The non-attestation of the proximate base in (8b) may simply be accidental, since deverbal **-mo-* occurs in forms like Hitt. *tarma–* 'peg' and as part of the semi-productive derivational suffix *-ima-*, e.g., Hitt. *tetḫima-* 'thundering' ⇐ *tetḫa-* 'thunder' (see Oettinger 2001; see Hoffner and Melchert 2008:58).

13 The roots (7c) and (7d) are respectively PIE **weh*$_2$*ĝ*/*g–* and **h*$_1$*leng*$^{\hat{}h}$/*g*^{h}– (cf. Kloekhorst 2008:526–8, 939–41; *LIV*^{2} 247, 664–5). The root of (7b) is uncertain; see Kloekhorst 2008: 1019–20 for discussion.

14 The etymology of the verb is unknown (cf. Kloekhorst 2008:985–6), but the root-internal **h*$_{2/3}$ that would be needed to yield Hittite [a] from a PIE full-grade is ruled out on structural grounds.

15 A PIE full-grade *[h$_2$wert-] would probably have yielded $^{\times}$[χ^{w}ert:-] in Hittite, spelled $^{\times}$⟨*ḫu(-u)-er-t*°⟩.

zero-grade of the root (i.e., *[h$_2$wr̥t-]), just as in weak forms of the radical verb's inflectional paradigm, e.g., 3PL.IMP.ACT *ḫurtandu* 'let them swear'.[16] This root zero-grade is synchronically unique among Hittite *a(i)*-stems, and in §4.3 below, I propose that the noun continues an inherited primary formation with this property.

4.3. Phonology of Hittite a(i)*-stems*

The phonological behavior of Hittite *a(i)*-stems is in most respects uniform. The forms in Table 6 are representative of the formal patterns of the oldest attested Hittite *a(i)*-stems:

Table 6

	STRONG (NOM.SG/ACC.PL)		WEAK (GEN.SG)		
a.	*ḫurdāiš*	[χ$^{(w)}$ort:-á:i-s]	*ḫurtiyaš*	[χ$^{(w)}$ort:-y-á:s]	'curse'
b.	*zaḫḫāiš*	[t͡saχ:-á:i-s]	*zaḫḫiyaš*	[t͡saχ:-y-á:s]	'battle'
c.	*linkāuš*	[liŋk-á:(y)-os]	*linkiyaš*	[liŋk-y-á:s]	'oath'
d.	[*man*]*iyaḫḫāiš*	[maniy-aχ:-á:i-s]	*maniyaḫḫiyaš*	[maniy-aχ:-y-á:s]	'administrative district'
e.	*ḫukmāuš*	[χ$^{(w)}$okm-á:(y)-os]	*ḫukmiyaš*	[χ$^{(w)}$okm-y- á:s]	'incantation'

All positive evidence in this Hittite noun class supports consistent suffixal stress (i.e., prehistoric *-*ói*-) in the strong cases. This property is evident from plene spellings of the suffixal *a*-vowel (i.e., [á:]), which are found for all well-attested nouns belonging to this class.

In the weak cases, Hittite *a(i)*-stem nouns exhibit zero-grade of the suffix and stressed inflectional endings. Plene spellings of nominal inflectional suffixes in Hittite are relatively rare and happen to be unattested in this class. Nevertheless, ending stress is secure, as no alternative position is viable: the derivational suffix cannot be stressed, since the syllable nucleus is deleted (*-*y*-); and stress cannot precede the derivational suffix, since the presuffixal stem is paradigmatically invariant, exhibiting the same prosodic properties in the weak cases as in the

16 Per Kloekhorst 2008:373 the *ḫuwart*/*ḫurt*- alternation (< **ó*/∅) was clearly the verb's original ablaut pattern (based on Middle-Script attestations), but in later Hittite this distribution was no longer consistently maintained; as a result, there are historical weak-stem forms attested in strong-stem contexts (e.g., 1SG.PST.ACT *ḫurtaḫḫun*) and vice-versa (e.g., PTCP *ḫuwartant*-). It is not plausible that this change affected the stem shape of *ḫurdai*-, however, as the noun is robustly attested as such already in MS texts (see Rößle 2002:23–7).

clearly unstressed strong cases.[17] Rößle (2002:324) arrived at the same conclusion, stating that Hittite *a(i)*-stems exhibited a "voralthethitisch virtuell hysterodynamisches Paradigma"—i.e., intraparadigmatic stress mobility from the suffix in the strong cases to inflectional endings in the weak cases with concomitant deletion of the suffixal vowel.

As discussed in §4.2, Hitt. *ḫurdai-* in (6a) and Table 6 a cannot be derived from a traditional primary "amphikinetic" paradigm and thus requires an alternative analysis. I propose that *ḫurdai-* is indeed a primary formation, but continues the (partial) prehistoric paradigm in Table 7 with the zero-grade of the root and stress mobility between suffix and inflectional endings that is standardly reconstructed for PIE "hysterokinetic" nominals:

Table 7

	PIE		Hittite		
NOM.SG	**h₂wr̥t-ói*	>>	*ḫurdāiš*	[χ(w)ort:-á:i-s]	'curse'
GEN.SG	**h₂wr̥t-y-é/ós*	>	*ḫurdiyaš*	[χ(w)ort:-y-á:s]	'of the curse'

The PIE paradigm in Table 7 would develop into the attested Hittite forms in Table 6 via regular sound change (modulo the regular recharacterization of animate NOM.SG forms with **-s*).

This proposal for *ḫurdai-* has implications for the morphological analysis of the *a(i)*-stem nouns in (6b)–(d). Specifically, if Table 7 accurately represents the prehistoric paradigm of Hittite primary *a(i)*-stems, then the nouns in (6b)–(d) cannot direct reflect primary **oi*-stems, since they do not show (historical) zero-grade of the root; rather, they must be non-primary derivatives formed within Hittite from the corresponding verbal stems in (6b)–(d) just like (6e)–(g), or else be analogically remodeled after these stems as suggested in §3.2 above for the Greek forms in (4a)–(c) (see §5.3 below for further discussion).

5. A new reconstruction of PIE **oi*-stems

Sections 2–4 presented an overview of the comparative evidence for PIE **oi*-stems in the ancient IE languages that testify directly to their reconstructible stress patterns. Having critically assessed the attested reflexes of PIE **oi*-stems

17 Moreover, presuffixal stress in the weak cases would violate the generalization—otherwise exceptionless in Hittite and Vedic and standardly assumed for PIE (e.g., under EM)—that stress mobility within inflectional paradigms was always rightward (viz., with respect to its position in the strong cases).

with respect to their morphological and phonological properties, I now develop a new formal reconstruction of this nominal category. The proposed morphological reconstruction is outlined in §5.1 and the phonological reconstruction in §5.2. The diachronic developments necessary to account for divergent properties observed in the daughter languages are laid out in §5.3.

5.1. Morphology of PIE *oi-*stems*

There is evidence from Vedic, Greek, and Hittite that the PIE animate noun-forming suffix *-*oi*- was used to derive non-primary deverbal and denominal nouns. Both of these usages are well attested in Greek and Hittite; the denominal function is also supported by Indo-Iranian, as this usage historically underlies Ved. *sákhā(y)*- 'friend' (and Av. *haxā(ii)*- 'id.').

There is also evidence, albeit more limited, that this PIE suffix was used in primary derivation. It was argued in §4.3 that Hitt. *ḫurdai*- 'curse' continues a PIE primary **oi*-stem noun derived from the root **h₂wert*-, which is also the source of the Hittite radical verb *ḫuwart*/*ḫurt*- 'swear'. Hitt. *ḫurdai*- thus provides the strongest evidence for *-*oi*- as a primary suffix in PIE. In addition, there may be indirect support for primary *-*oi*- from forms like Gk. φειδώ 'sparing' and Hitt. *lingai*- 'oath', the development of which is discussed further in §5.3 below.

Overall, the comparative evidence suggests that at the directly reconstructible stage of PIE, animate *-*oi*- was productive in non-primary deverbal and denominal derivation, but was also employed in primary deverbal derivation.

5.2. Phonology of PIE *oi-*stems*

Vedic, Greek, and Hittite provide convergent evidence for reconstructing PIE **oi*-stems with the three prosodic properties in (8):

(8) Prosodic properties of PIE **oi*-stems

a. Stressed suffixal [ó]-vocalism in the strong cases.
b. Zero-grade of the suffix (*[-y-]) in the weak cases.
c. Stressed inflectional endings in the weak cases.

(8a) is observed across the board in Hittite and Greek: all attested reflexes of PIE **oi*-stems are stressed on the suffix in the strong cases. Inherited suffixal stress is also likely preserved in the Vedic compound *suṣakhā́(y)*-. Both (8b) and (8c) are found in Hittite, where all weak case forms have the shape [-y-V́]. Vedic also shows (8b), i.e., suffixal -*y*/*i*-, which—given (8a)—is best explained under the assumption that nouns in this class were stressed on their weak inflectional

endings in the prehistory of Vedic (and Avestan) as per (8c).[18] The properties in (8) are thus established by straightforward comparative reconstruction.

While these properties were common to all PIE **oi*-stems, the stem shape of these nouns was not uniform, and depended above all on whether the suffix was used in primary or non-primary derivation. I propose here that PIE primary animate **oi*-stem nouns were characterized by zero-grade of the root. This reconstruction accounts directly for Hitt. *ḫurdai-* 'curse', which was shown in §4.3 to require a historical zero-grade root. This property is also expected for primary athematic nominals with the "hysterokinetic" stress pattern described in (8) such as **ter*-stem agent nouns (e.g., Gk. δοτήρ < PIE **dh₃-tḗr* 'giver') and, more generally, for primary nominals in which the root is pretonic, such as thematic adjectives in **-to-* (e.g., Gk. φατός, Ved. *hatá-* < PIE **gʷʰn̥-tó-* 'slain'; Gk. κλυτός, Ved. *śrutá-* < PIE **k̂lu-tó-* 'heard (of)').[19]

For PIE non-primary animate **oi*-stems the comparative evidence is abundant and effectively uniform: in unambiguous non-primary derivatives attested in the daughter languages, the stem of the derivational base surfaces presuffixally in the derived noun.[20] This pattern is thus securely reconstructible for PIE as well. The phonological properties of PIE primary and non-primary animate **oi*-stem nominal paradigms can thus be represented schematically as in Table 8:

Table 8

	PIE **oi*-STEM NOUNS	
	PRIMARY	NON-PRIMARY
NOM.SG	*R(∅)-*ói*	*STEM-*ói*
GEN.SG	*R(∅)-*y-é/ós*	*STEM-*y-é/ós*

18 Ending stress in the weak cases is also assumed under the traditional AK reconstruction. I leave open here whether root stress could induce suffixal zero-grades in the weak cases of PIE primary nominals; a PIE or pre-Vedic paradigm with suffixal stress in the strong cases and root stress in the weak cases can in any case be safely excluded for the reasons outlined in n.17 above.

19 On the post-PIE emergence of full-grade root vocalism in **ter*-stems see Kiparsky 2018:144–6, and on **to*-adjectives see Probert 2006:174–96.

20 One complication should be noted here. In non-primary derivatives of thematic stems, the **oi*-suffix descriptively appears to "replace" the stem-final thematic vowel (**-o/e-*). One possibility is that the thematic vowel undergoes regular pretonic vowel deletion in this context. How this pattern is best understood must be determined within the context of a broader analysis of PIE morphophonology, a task which necessarily calls for further research.

5.3. The einzelsprachlich *development of PIE* *oi-*stems*

If the formal reconstruction of PIE **oi*-stems advanced in §§5.1 and 5.2 is correct, then the daughter languages must have introduced certain innovations into this class. I discuss two such innovations below, along with a third possible development.

In Greek, the attested reflexes of PIE **oi*-stems have stressed [ó]-vocalism of the suffix in the weak cases as well as the strong (e.g., πειθοῦς 'of persuasion' < **-óy-os*). This development can be attributed to simple paradigm leveling: the strong stem was generalized at the expense of the weak. Within Greek, it has a close analogue in other classes with inherited "hysterokinetic" stress mobility, such as the PIE **ter*-stems mentioned already in §5.2, which have similarly eliminated suffixal ablaut and exhibit fixed suffixal stress—e.g., DAT.SG δοτῆρι 'for the giver' (<< LOC.SG PIE **dh₃-tr-í*).[21] Moreover, the same innovation is found in Hittite *a(i)*-stems (< **-oi-*), which in later Hittite (only New Script) begin to appear with suffixal [-á:(y)-] in the weak cases, e.g., Table 9:

Table 9

	STRONG	OLDER WEAK	INNOVATIVE WEAK (DAT/GEN.SG)	
a.	*ḫurdāi-*	*ḫurtiya*	*ḫurtāi*	[χ(w)ort:-á:(y)-i]
b.	*linkāi-*	*linkiya*	*lenqāi*	[liŋk-á:(y)-i]
		linkiyaš	*lingayaš*	[liŋk-á:y-as]
c.	*maniyaḫḫāi-*	*maniyaḫḫiyaš*	*maniya[ḫ]ḫayaš*	[maniy-aχ:-á:y-as]

A second innovation is the fixed word-initial stress found in 'friend' in Vedic (NOM.SG *sákhā*; DAT.SG *sákhye*). I attribute this development to the general phonological preference for word-initial stress in PIE and in Vedic (cf. §6 below), which thus tends to emerge diachronically. The tendency to replace word-internal with word-initial stress can be observed as an inner-Vedic development in PIE **ti*-stems (Lundquist 2015): this category had final stress in PIE, which is mostly preserved in early Vedic (e.g., PIE **mn̥-tí-* > RV *matí-* 'thought'), but in later Vedic texts some of the same lexical items are attested with initial stress (ŚB,

21 More specifically, Greek has analogically leveled the stem of the NOM.SG, including its characteristic long vowel. Vedic preserves the original mobile stress pattern of this class, although against Greek it has innovated full-grade of the root in this noun class (cf. n.19 above), e.g., Vedic DAT.SG *dātré* 'for the giver' << PIE **dh₃-tr-éi*).

Pāṇ. *máti-*).[22] It is likely that the shift to initial stress in 'friend' is also a quite recent (if pre-Rigvedic) innovation, since the inherited stress pattern may be maintained in the Vedic compound *suṣakhā́(y)-*.

The broad take-away from the discussion above is that the developments needed to reconcile the Greek and Vedic reflexes of PIE **oi*-stems with the reconstruction of this class proposed above are relatively few in number and independently motivated, having clear parallels within the history of these languages and/or elsewhere in the IE family. Before proceeding, however, one final point merits further discussion in this context. I previously raised the possibility (in §§3.2, 4.3, and 5.1 above) that Greek forms like φειδώ 'sparing' and πειθώ 'persuasion' and Hittite forms like *lingai-* 'oath'—although non-primary derivatives of verbal stems within their synchronic systems (Gk. φείδομαι 'spare', πείθω 'persuade'; Hitt. *link-* 'swear')—nevertheless ultimately reflect primary formations. Under this scenario, primary **oi*-stem nouns **bʰid-ói-*, **bʰidʰ-ói-,* and *h₁lr̥ĝʰ/gʰ-ói-* (with zero-grade root per §5.2 above) would have been inherited into Greek and Hittite beside cognate verbal stems (**bʰéid-e/o–*, etc.); these nouns were then remodeled after the verbs (i.e., with full-grade root vocalism) and thereby integrated into the set of non-primary derivatives formed with **-oi-*, which in this capacity remained productive going into these languages. In my view, this type of diachronic scenario seems likely for at least some primary PIE **oi*-stems, but need not have been the case for these specific examples, which may well have been non-primary derivatives already in the protolanguage. Under either analysis, however, there is no good reason to take these forms as evidence for root full-grade in PIE primary **oi*-stems; rather, these—like all other secure examples of root full-grades in reflexes of PIE **oi*-stems—can be explained by transference from their (perceived) base, a mechanism that is independently necessary to account for the formal similarities between base and derivative that are regularly observed in synchronic non-primary derivation.

22 The same type of prosodic change—i.e., the diachronic emergence of the "default" or phonologically preferred stress pattern—is also observed in the history of Greek and Anatolian (see Probert 2006:128–44, 291–4 and Yates 2015:167–74, respectively). Note, too, that this pattern of change is especially common in synchronically non-derived lexical items (cf. Sandell 2015:192–214, Yates 2015:176–8), a category in which Ved. *sákhā(y)-* would undoubtedly belong.

6. PIE *oi-stems and their implications for reconstructing PIE word prosody

It was noted in §1 that the EM and related "paradigmatic" models of PIE word prosody assign all athematic primary nominal derivatives with suffixal *o-vocalism—and thus PIE primary *oi-stems—to the AK nominal class, which is defined by stressed full-grade of the root and *o-vocalism of the suffix in the strong cases, and zero-grade of the root and suffix and stressed inflectional endings in the weak cases. In the preceding sections, however, I have argued that PIE primary *oi-stem paradigms did not have these formal properties at the stage of PIE that can be inferred by comparative reconstruction; rather, these paradigms were—in the terminology of the EM—"amphikinetic" insofar as they were characterized by *o-vocalism of the suffix in the strong cases, but "hysterokinetic" insofar as they were characterized by intraparadigmatic stress mobility from suffix to inflectional endings and fixed zero-grade of the root.

This formal reconstruction of PIE *oi-stems has two broader implications for the reconstruction of PIE word prosody: (i) PIE had primary athematic nominals with suffixal *o-vocalism that did not have "amphikinetic" stress patterns; and (ii) since the EM does not posit a nominal class with suffixal *o-vocalism and non-"amphikinetic" stress, it undergenerates the set of reconstructible formal types.[23]

That the EM undergenerates in this respect is not fatal, of course. One possible fix within the context of this framework would be to posit an additional "amphi-hysterokinetic" nominal class that does have the formal properties of PIE primary *oi-stems. This type of approach has been previously employed to account for other athematic nominal classses that do not neatly fit EM—e.g., a "mesostatic" class has been suggested for (some) *eh_2-stems (see Meier-Brügger 2010:353 with references)—although this class and others have not won wide acceptance.

Yet even if the EM were expanded in this way, it would still leave the prosodic behavior of PIE *-oi- in non-primary derivation—the more productive usage in the daughter languages and perhaps also in PIE itself—wholly unaddressed. Like other non-primary derivatives, PIE non-primary *oi-stems

23 Whether the PIE primary *oi-stem paradigm can be derived from the traditional AK paradigm by the so-called "*$k^wetwóres$-Regel" (Rix 1985:348) is a separate question. In my view, the evidence generally cited for this development is uncompelling (cf. Rasmussen 2001), but even if it did occur, it must be dated to a pre-PIE stage, since the attested reflexes of PIE *oi-stems are effectively uniform in showing suffixal stress (per §5.2 above).

stand outside the scope of the EM, which is formulated to account only for primary athematic nominal derivation. Yet is clear that PIE *-*oi*- exhibits the same kind of prosodic behavior in non-primary derivation as in primary derivation: the suffix attracts stress in the strong cases and yields it to inflectional endings when it is deleted in the weak cases. Any analysis that separates the suffix's usage in primary and non-primary derivation therefore misses an important prosodic generalization.

Whether or not the EM could be extended in such a way as to capture this generalization is unclear to me. In any case, an alternative is available: the word stress and ablaut of PIE **oi*-stems can be modeled within the general framework articulated by Kiparsky (2010). This class's formal patterns fall out straightforwardly from the assumption that the suffix is [+accent, +dominant] (i.e., PIE */-ói-/). While I cannot develop a full analysis here (due to space limitations),[24] a brief explanation is in order. The [+accent] property of the suffix explains why, in the strong case forms, it attracts stress away from the left edge of the word, where it is phonologically preferred in accordance with Kiparsky and Halle's (1977) Basic Accentuation Principle (BAP).[25] In the weak cases, deletion of the suffixal vowel nucleus is conditioned by the similarly accented prevocalic weak case inflectional endings; this deletion triggers what Kiparsky (2010:146) refers to as "secondary mobility," which allows stress to shift onto these inflectional endings. The analysis of PIE primary **oi*-stems is thus identical to that of other "hysterokinetic" classes, modulo the vocalism of the derivational suffix. In non-primary derivation, however, its [+dominant] property becomes relevant; this property allows */-ói-/ to "override" any accents associated with the stem to its left despite the BAP-driven preference for left-edge word stress (e.g., Hitt. /maniyáχ:-ái-s/ → [maniyaχ:-á:i-s] (d) in Table 6).

This alternative framework thus offers a unified explanation for the word-prosodic behavior of PIE primary and non-primary **oi*-stems. Its capacity to do so must at a minimum be regarded as an advantage over previous analyses, and more generally suggests that adopting its core assumptions will facilitate what can only be the ultimate goal of reconstructing PIE word prosody: an explanatory

24 A provisional formal analysis of this class was presented in the oral version of this paper (Yates 2018); it includes most essential details, but I intend to publish a fuller treatment elsewhere.

25 The reconstructibility of the BAP for PIE itself is now assured by its operation in Anatolian (see Yates 2017:177–96).

account of the prosodic systems of the IE daughter languages and their diachronic developments.

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