

Notes on the Internal History of the PIE Optative¹

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1. The Ablaut of the Suffix

The mark of the PIE optative was a suffix $*-\dot{i}éh_1-/*-ih_1-$, with full- and zero-grade variants. The “strong” suffix form $*-\dot{i}éh_1-$, along with its Lindeman byform $*-i\dot{i}éh_1-$, was proper to the active 1-3 sg. of accentually mobile stems, as can be seen from the present optative of the verb “to be” in Greek and Old Latin:

sg. 1 $*h_1s-(i)\dot{i}éh_1-m$ (Gk. εἶην, OLat. <i>siem</i>)	pl. 1 $*h_1s-ih_1-mé-$ (εἶμεν, <i>sīmus</i>)
2 $*h_1s-(i)\dot{i}éh_1-s$ (εἶης, <i>siēs</i>)	2 $*h_1s-ih_1-té$ (εἶτε, <i>sītis</i>)
3 $*h_1s-(i)\dot{i}éh_1-t$ (εἶη, <i>siēd</i>)	3 $*h_1s-ih_1-ént$ (εἶεν, <i>sient</i>)

The weak variant $*-ih_1-$ occurred in all other morphological environments, including 1) the active plural and dual of accentually mobile stems (cf. εἶεν, *sīmus*, etc., as above); 2) the active 1-3 sg. of acrostatic (including Narten) presents (cf. Lat. 3 sg. *uelit*, Go. *wili*, OCS *-velitŭ* < $*uélh_1-ih_1-t$ ‘would choose’); 3) the active 1-3 sg. of reduplicated presents with accent on the reduplication syllable (cf. GAv. 3 sg. *daidīt* < $*dhé-dhh_1-ih_1-t$ ‘would put’); 4) the active 1-3 sg. of acrostatic (originally h_2e -conjugation) aorists (cf. YAv. 3 sg. *vainīt* < $*uén-ih_1-$ ‘would wish for’; see below, note 8); 5) all middle forms (cf. Ved. 3 sg. *duhiyá[t]* < $*dhugh-ih_1-ó$ ‘would yield (milk)’; YAv. *oγnīta* < $*g^u hn-ih_1-tó$ ‘would be slain’; YAv. *aojīta* < $*h_1éug^u h-ih_1-to$ ‘would pronounce’; Ved. *vurīta* (aor.) < $*u\dot{h}_1-ih_1-tó$ ‘would choose’); and 6) all thematic forms (cf. Gk. 3 sg. φέροι, mid. -οιτο; Ved. *bhāret*, mid. *-eta*; Go. *bairai* < $*bhér-o-ih_1-$ ‘would bear’). The distribution of the stem forms in $*-\dot{i}éh_1-$ and $*-ih_1-$ was thus parallel to the distribution of the full- and zero-grade stem variants in an ordinary athematic present indicative. The relationship of a form like 3 sg. act. opt. $*g^u h\dot{n}_1-\dot{i}éh_1-t$, with full-grade suffix, to 3 pl. act. $*g^u hn-ih_1-ént$ and 3 sg. mid. $*g^u hn-ih_1-(t)ó$, with zero-grade suffix, was the same as that of 3 sg. act. indic. $*g^u hén-t(i)$ to 3 pl. act. indic. $*g^u hn-ént(i)$ and 3 sg. mid. indic. $*g^u hn-(t)ó(r)$. Similarly, the invariant zero grade of the optative suffix in fixed-accent stems ($*uélh_1-ih_1-t$, $*dhé-dhh_1-ih_1-t$, $*bhér-o-ih_1-t$

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for “regular” $**\text{-}\dot{i}eh_1\text{-}t$) was formally comparable to the “zeroing out” of the 3 pl. ending $*(\acute{e})nt(i)$ in the indicative of the same stems ($*\dot{u}\acute{e}lh_1\text{-}nt(i)$, $*dh\acute{e}\text{-}dhh_1\text{-}nt(i)$, $*bh\acute{e}r\text{-}o\text{-}nt(i)$ for $**\text{-}ent(i)$).

The apophonic behavior of the optative suffix was so “normal”, in a sense, that it is easy to overlook the major respect in which it was exceptional: $*\dot{i}\acute{e}h_1\text{-}/*\text{-}ih_1\text{-}$ was the only suffixed tense-aspect sign or mood sign in the entire PIE verbal system to show ablaut. This fact, which is almost never explicitly discussed, is easily checked and verified. The most conspicuous tense-aspect suffixes in late PIE were the thematic, and hence non-ablauting, suffixes $*\text{-}e/o\text{-}$, $*\text{-}\dot{i}e/o\text{-}$, $*\text{-}s\acute{k}e/o\text{-}$, $*\text{-}e\dot{i}e/o\text{-}$, $*\text{-}eh_2\dot{i}e/o\text{-}$, etc., which served to mark present stems.² Apart from the optative suffix, the only other PIE mood sign was the subjunctive sign $*\text{-}e/o\text{-}$, which was homophonous with the $*\text{-}e/o\text{-}$ of thematic presents and hence likewise non-ablauting. Among the athematic tense-aspect stems, the ablauting root and reduplicated presents were suffixless, while nasal presents, in their three principal subtypes, were marked by an ablauting infix (e.g., $*\dot{i}u\text{-}n(\acute{e})\text{-}g\text{-}$, $*k^u\text{-}ri\text{-}n(\acute{e})\text{-}h_2\text{-}$ ‘buy’, $*k^l\text{-}n(\acute{e})\text{-}u\text{-}$ ‘hear’).³ Athematic suffixes, by contrast, were mostly apophonically invariant *élargissements* like the $*\text{-}i\text{-}$ of stems of the type $*dh(\acute{e})h_1\text{-}i\text{-}$ ‘suck’,⁴ or the $*\text{-}s\text{-}$ of the *s*-aorist (e.g., $*\dot{u}\acute{e}\dot{g}h\text{-}s\text{-}/*\dot{u}\acute{e}\dot{g}h\text{-}s\text{-}$ ‘convey’) and the several varieties of *s*-presents (e.g., $*\dot{g}n\acute{e}h_3\text{-}s\text{-}/*\dot{g}n\acute{e}h_3\text{-}s\text{-}$ ‘recognize’, $*h_2\dot{u}\acute{o}g\text{-}s\text{-}/*h_2\dot{u}\acute{e}g\text{-}s\text{-}$ ‘grow’, etc.).⁵ There were also the “long-vowel” suffixes $*\text{-}eh_1\text{-}$ (“ $*\text{-}\bar{e}\text{-}$ ”) and $*\text{-}eh_2\text{-}$ (“ $*\text{-}\bar{a}\text{-}$ ”), the former figuring in a variety of stative and inchoative formations around the family, and the latter associated with preterites and modal forms in Italic, Celtic, and Balto-Slavic. Neither of these, notwithstanding claims to the contrary in the case of $*\text{-}eh_1\text{-}$ (see below), has a documented zero grade, much less an ablauting paradigm.

It is far from obvious why $*\dot{i}\acute{e}h_1\text{-}/*\text{-}ih_1\text{-}$ should have been the only ablauting finite suffix in the verbal system. The PIE lexicon was rich in nominal stems of the structure ROOT + ABLAUTING SUFFIX; deverbative nouns and adjectives containing an apophonically variable suffix were particularly common (cf., e.g., $*\text{-}\dot{u}(e)r/n\text{-}$, $*\text{-}t(e)\dot{i}\text{-}$, $*\text{-}t(e)\dot{u}\text{-}$, etc. (verbal abstracts), $*\text{-}(e)nt\text{-}$, $*\text{-}\dot{u}(e)s\text{-}$ (active participles), etc.). The apophonic uniqueness of the optative suffix naturally leads to questions about the prehistory of the verbal system as a whole. Was $*\dot{i}\acute{e}h_1\text{-}/$

² and in the case of simple $*\text{-}e/o\text{-}$, plain and reduplicated aorist stems as well.

³ This point is in no way vitiated by the fact that the group $*\text{-}n(\acute{e})\text{-}u\text{-}$ was reinterpreted as a suffix in late PIE and extended to roots that never ended in $*\text{-}u\text{-}$ (e.g., $*h_1r\text{-}n(\acute{e})\text{-}u\text{-}$ ‘cause to move’ (: Ved. $\dot{r}\dot{n}\acute{o}t\acute{i}$), $*\dot{u}\acute{a}\dot{g}\text{-}n(\acute{e})\text{-}u\text{-}$ ‘break’ (: Gk. ($\text{φ}\acute{\alpha}\gamma\upsilon\mu\iota$), etc.).

⁴ *i*-presents are discussed in *HIEV*, ch. 4.

⁵ *s*-presents are discussed in *HIEV*, ch. 5, where there is also brief treatment of $*\text{-}u\text{-}$, $*\text{-}d\text{-}$, $*\text{-}dh\text{-}$, and other non-ablauting present stem formatives.

*-ih₁- the sole survivor of a once fuller array of ablauting verbal suffixes? Or was the optative sign originally something other than a finite suffix — a nominal element, for example? Such questions are interesting to ponder; some day they may be answerable. For now, however, the lesson to be learned from the special status of the optative marker is cautionary. Problems of PIE verbal inflection often center about the reconstruction of “difficult” suffixes with phonologically incompatible reflexes in neighboring languages or within a single language. In such cases it can be tempting to posit a unitary morpheme with multiple apophonic variants. Thus, e.g., *LIV* (25), following Harðarson (1998), operates with a present-like PIE “essive” in *-h₁-ġe/o- alongside an aorist-like “fientive” in *-eh₁-; Klingenschmitt (1978:25) reconstructs a zero-grade causative suffix *-ġe/o- alongside full-grade *-ġe/o- to explain the morphology of Lat. *sōpiō* ‘put to sleep’; Kortlandt (1990:7) sets up an ablauting suffix *-ei-/*-i- to account for the difference between the Baltic presents in etymological *-ġ- (e.g., Lith. *mīni* ‘mention(s)’) and their Slavic counterparts in etymological *-ī- (OCS *mīnitŭ* ‘thinks’).⁶ Even if there were no straightforward alternatives to these proposals, the near-absence of ablauting suffixes elsewhere in the verbal system would justify a position of skepticism.

2. The Ablaut of the Root and Endings

The root and stem ablaut patterns associated with the athematic optative are mostly uncontroversial. A post-Neogrammarian addition to the *communis opinio* was the discovery that acrostatic formations — Narten presents, reduplicated presents of the **dhédheh₁ti*-type, presents and aorists with *o/e*-ablaut, etc. — retained their accented weak stem in the optative (**uélh₁-ih₁-*, **dhé-dhh₁-ih₁-*, **uén-ih₁-*). Only in the active root aorist is the descriptive situation at all in doubt. Here, for a stem like **k̂l(é)u-* ‘hear’ (cf. Ved. *ásrot*, Gk. *κλῶτε*, etc.), the parallelism with the present system might have led us to expect a paradigm **k̂lu-ġéh₁-m*, **-ġéh₁-s*, **-ġéh₁-t*, pl. **k̂luu-ih₁-mé*, **-ih₁-té*, **-ih₁-ént*.⁷ This, however, is not what we find. As pointed out by Karl Hoffmann (1968:246f.), the 1 pl. aorist optative of this verb is attested in Gathic Avestan as *srəuuīmā* (< **ŝrauīmā*), with an unexpected full grade of the root that can only be a PIE inheritance (**k̂léu-ih₁-*). Hoffmann did not attempt to spell out the full paradigm of the root aorist optative; he did, however, correctly observe that a similar stem form **dhéh₁-ih₁-* (: **dheh₁-* ‘put’) must underlie the problematic Vedic and Greek aorist optatives

⁶ In the same tradition, Beekes (1995:229f.) makes ablauting *-ei-/*-i- the source of the familiar thematic suffixes *-ġe/o- and *-eġe/o-.

⁷ with **k̂luu-ih₁-* in the dual as well, where the desinences are known only approximately.

dhe[yā]- and $\vartheta\epsilon\iota$ [η]-.⁸ In Jasanoff (1991:104ff.), I called attention to the equally old-looking Gathic Avestan 1 sg. *diiqm* and 3 sg. *diiā*t (< **dhh*₁-(i)jéh₁-) and proposed an original paradigm:

sg. 1 * <i>dhh</i> ₁ -(i)jéh ₁ - <i>m</i> (* <i>kl̥u</i> -jéh ₁ - <i>m</i>)	pl. 1 * <i>dhéh</i> ₁ - <i>ih</i> ₁ - <i>me</i> (* <i>kl̥éu</i> - <i>ih</i> ₁ - <i>me</i>)
2 * <i>dhh</i> ₁ -(i)jéh ₁ - <i>s</i> (* <i>kl̥u</i> -jéh ₁ - <i>s</i>)	2 * <i>dhéh</i> ₁ - <i>ih</i> ₁ - <i>te</i> (* <i>kl̥éu</i> - <i>ih</i> ₁ - <i>te</i>)
3 * <i>dhh</i> ₁ -(i)jéh ₁ - <i>t</i> (* <i>kl̥u</i> -jéh ₁ - <i>t</i>)	3 * <i>dhh</i> ₁ - <i>ih</i> ₁ - <i>ént</i> (* <i>kl̥u</i> _u - <i>ih</i> ₁ - <i>ént</i>)

The full-grade root vocalism of the 1, 2 pl., I suggested, was due to an inner-IE analogy. Unlike the corresponding forms of the root imperfect, the 1, 2 pl. (and 1-3 dual) indicative of the active root aorist regularly had full grade.⁹ Late PIE language learners would thus have been able to associate full grade in the 1, 2 pl. with “aoristhood” and generalize it to the optative via a proportion of the type

pres. indic. pl. **g^hh₁h₁-mé* *-*té*, *-*ént* : opt. pl. **g^hh₁h₁-ih₁-mé*, *-*ih₁-té*, *-*ih₁-ént* :
 aor. indic. pl. **dhéh*₁-*me*, *-*te*, **dhh*₁-*ént* : opt. pl. **X*-*ih*₁-*me*, *-*te*, **dhh*₁-*ih*₁-*ént*,

where the equation was solved by the creation of full-grade **dhéh*₁-*ih*₁-*me*, *-*te*, (**kl̥éu*-*ih*₁-*me*, *-*te*), etc.

A further apophonic peculiarity of the optative is associated with the 3 pl. desinence *-(e)nt. Like other ablauting elements, this ending was normally realized as full-grade *-ént under the accent and as zero-grade *-nt elsewhere, so that the 3 pl. forms corresponding to the fixed-accent optatives **uélh*₁-*ih*₁-, **dhé-dhh*₁-*ih*₁-, and **bhér-o-ih*₁- should have been **uélh*₁-*ih*₁-*nt*, **dhé-dhh*₁-*ih*₁-*nt*, and **bhér-o-ih*₁-*nt*, respectively. But there is no trace of *-*ih*₁-*nt* in our data. In Vedic, the waters are muddied by the fact that all active 3 pl. optatives end in -*yuh* < *(i)j̥s — a complex extracted from the aorist type **uón*-/**uén*- (3 pl. opt. **uén-ih*₁-*rs*), where *-*rs* was the etymologically correct *h*₂*e*-conjugation ending.¹⁰ In Avestan, athematic 3 pl. optatives end interchangeably in remade

⁸ Not all the full-grade forms discussed by Hoffmann, however, belong here. GAv. 1 pl. *varəzīmā* (: *varz*- ‘accomplish’) and *zāēmā* (: *zā*- ‘win’) are suppletive to *s*-aorist indicatives (*vārs̥*-, *zāh*-), and thus belong to the *h*₂*e*-conjugation **uón*-/**uén*- type (*HIEV* 184ff.), which had invariant full grade in the optative (cf. YAv. *vainī*t < **uén-ih*₁-*t*). Lat. *uelit*, Go. *wili*, etc., as already noted, go with the Narten present **uélh*₁-/**uélh*₁-.

⁹ as pointed out by Hoffmann (*op. cit.*, 249f.).

¹⁰ Cf. *HIEV* 186. In Indo-Iranian and perhaps late PIE, the optative of *h*₂*e*-conjugation stems, like the optative of the perfect and the indicative of the pluperfect, employed the *active* secondary endings (*-*m*, *-*s*, *-*t*, etc.) everywhere except in the 3 pl., where the perfect/*h*₂*e*-conjugation ending *-*ēr* (< *-*ers*)/*-*rs* was retained.

-iiān or *-iiārāš*, with **-nt* and **-rs* reapplied to the generalized mood sign **-iā-* < **-iēh-* (cf. YAv. *°daiθiiān*, *°daiθiiārāš* (: reduplicated present), *buiiān*, *buiiārāš* ‘would become’ (: “normal” root aorist), *°aēšiiān* ‘would seek’ (: acrostatic root aorist)).¹¹ The most important Avestan form is the thematic 3 pl., which ends in *-aiiān* < **-o-ih₁-ent* (cf., e.g., YAv. *hərəzaiiān* ‘would release’, *°baraiiān* ‘would bear’, *°isaiiān* ‘would seek’, etc.) rather than the theoretically predicted sequence ***-aēt* < **-o-ih₁-nt* or ***-aēn* < (resyllabified) **-o-ī-nt*. The unexpected substitution of full-grade **-ent* for **-nt* in the thematic optative, recurring in Gk. *-οιεν* (φέροιεν, etc. < **-o-ih₁-ent*) and Go. *-ain[a]* (opt. 3 pl. *bairaina* < **-ajin-* < **-ai(H)inþ* < **-o-ih₁-ent*),¹² is clearly an ancient feature. The most natural conclusion is that **-ih₁-nt*, proper to Narten and reduplicated presents as well as to thematic stems, was replaced by **-ih₁-ent* within the parent language.¹³

In the overall context of the late PIE optative, it is easy enough to see how and why a given configuration of suffix and ending in the 3 pl. (in this case, **-ih₁-ent*) might have been generalized over another (in this case, **-ih₁-nt*). The inflection of the optative was opaque in PIE, with little correlation between the 3 pl. and the rest of the plural paradigm. Compare the theoretically expected plural forms of a “normal” root present, a Narten present, a “normal” root aorist, and an acrostatic (*h₂e*-conjugation) root aorist:¹⁴

¹¹ Alternatively, YAv. *-iiārāš* (no Gathic forms are quotable) could be explained as the theoretically predicted 3 pl. perfect optative in **-ih₁-ér* (< **-ih₁-érs*), with secondarily re-added *-š*. A dialectal generalization of **-ih₁-ér* in Avestan, parallel to the generalization of **-ih₁-rs* in Vedic, would account for the peculiar 3 pl. present optative *hiiārā*, the Avestan counterpart of Ved. *syūh* ‘(they) would be’.

YAv. **daiδīn*, corrected by Hoffmann (1976:606f.) from *daiδī*, is a 3 pl. perfect optative in **-ih₁-ent*, with **-ent* (Iir. **-ant*) taken from the partly homophonous reduplicated present.

¹² with regular lack of *Verschärfung* after a non-initial syllable.

¹³ There is, to be sure, little *direct* evidence for the 3 pl. optative in Narten and other acrostatic athematic stems. Go. 3 pl. *wileina* could in principle go directly back to **wilijin-* < **-ih₁-ent*, but could also, like Lat. *uelint* and OCS *-veletŭ*, have been analogically remade on the basis of the general stem in **-ī-*. The Greek “Aeolic” optative 3 pl. in *-σειαν*, which has sometimes been thought to go back to a 3 pl. in **-ih₁-nt* (e.g., by Rix 1992:262), is better seen as an analogical creation on the basis of the 2, 3 sg. in *-σειας*, *-σειε*. The most archaic 3 pl. optative of the *s*-aorist is Central Cretan *φερκσιεν* (cf. *HIEV* 188, n. 28). The whole formation, of course, was the replacement of a non-sigmatic optative of the **uén-ih₁-* type.

¹⁴ If the second scenario in note 11 is correct, a fifth pattern — the perfect optative in **-ih₁-mé*, **-ih₁-té*, **-ih₁-ér* — would have to be added to this display.

	normal pres.	Narten pres.	normal aorist	acrostatic aorist
pl. 1	* <i>h₁s-ih₁-mé</i>	* <i>uélh₁-ih₁-me</i>	* <i>kléu-ih₁-me</i>	* <i>uén-ih₁-me</i>
2	* <i>h₁s-ih₁-té</i>	* <i>uélh₁-ih₁-te</i>	* <i>kléu-ih₁-te</i>	* <i>uén-ih₁-te</i>
3	* <i>h₁s-ih₁-ént</i>	* <i>uélh₁-ih₁-nt</i>	* <i>kluu-ih₁-ént</i>	* <i>uén-ih₁-rs</i>

An accented root syllable (**uélh₁-*, **kléu-*, **uén-*) in the 1, 2 pl. thus corresponded to three distinct endings (**-nt*, **-ent*, **-rs*) in the 3 pl. Such allomorphy was hard for speakers to master, as can be seen from the eventual generalization of a (different) single ending in Vedic (-*yuh* < **-ih₁-rs*) and Greek (-*ιεν* (-*αιεν*, -*ειεν*, -*οιεν*) < **-ih₁-ent*). The inner-PIE extension of **-ih₁-ent* at the expense of **-ih₁-nt* was probably an early step in this direction.

3. The Phonology of the Thematic Optative

In the Neogrammarian view, the thematic optative was formed by adding the zero grade of the optative suffix — **-ī-* in prelaryngeal notation — to the *o*-colored variant of the thematic vowel. The result was **-oi-*, which routinely surfaced as a diphthong before consonant-initial endings (cf. Ved. *bhāret*, -*ema*, -*eta*, etc., Gk. φέροι[τ], -οιμεν, -οιτε, etc.). Before vowels, however, neither Vedic Sanskrit nor Greek showed the expected resyllabification of **-oi-* to **-o.ī-*: cf. Ved. 1 sg. *bhāreyam* (mid. -*eya*), 3 pl. -*eyuh* < **-oi.(ī)-* for expected **-aya(m)*, **-ayuh* (or **-āya(m)*, **-āyuh*) < **-o.ī-*; Gk. 1 sg. (Arc.) ἐξελαινοια,¹⁵ 3 pl. -οιεν (mid. -οίατο) < **-oi.(ī)-* for expected **-οα*, **-οεν*, **-όατο* < **-o.ī-*. The retention of the diphthong in these cases was attributed by the Neogrammarians to analogical leveling from the antec consonantal forms. A translation of this position into laryngeal terms is still the standard conservative view, taken, e.g., by Sihler (1995:597 f.). The forms with apparent **-oi-* for **-oih₁-* before consonantal endings (**-ois*, **-oit*, etc.) are explainable by “Saussure-Hirt’s Law”, which deleted laryngeals in sequences of the type **#HRO-* and **-oRHC-*.¹⁶

The analogical part of this picture, however, is not very satisfactory. Homeric Greek is full of cases like 3 sg. κείται ‘lies’, 3 pl. κέαται (< **kéi-ntoi*), where an etymological diphthong “loses” its second element before an ending beginning with a vowel; yet, remarkably, there are no 3 pl. opt. forms in **-οεν* beside -οιεν, or **-όατο* beside -οίατο. In Vedic, the productive alternation of -*e-* (< Ilr. tautosyllabic **-ai-*) and -*ay-* (< Ilr. heterosyllabic **-a.ī-*) can be seen in paradigms like the imperfect (< pluperfect)¹⁷ of Ved. *ci-* (< **k^uei-*) ‘perceive’ and **bhī-* (< **bheiH-*) ‘fear’:

¹⁵ The normal ending, of course, is -οιμι.

¹⁶ So, with specific reference to the optative, Nussbaum (1997:182); also Ringe (2006:15).

¹⁷ See Jasanoff (1997:121f.) on the pluperfect origin of these forms, which were reinterpreted as imperfects and fitted out with back-formed reduplicated presents in later Vedic.

sg. 1	<i>ácikaya</i> [<i>m</i>] < *ék ^u ik ^u oi-ṃ	<i>ábibhaya</i> [<i>m</i>] < *ébh ^h hoiH-ṃ
2	<i>ácikeḥ</i> < *ék ^u ik ^u oi-s	<i>ábibheḥ</i> < *ébh ^h hoiH-s
3	<i>áciket</i> < *ék ^u ik ^u oi-t	<i>ábibhet</i> < *ébh ^h hoiH-t
pl. 1	<i>ácikima</i> < *ék ^u ik ^u i-me	<i>ábibhīma</i> < *ébh ^h hiH-me
2	<i>ácikita</i> < *ék ^u ik ^u i-te	<i>ábibhīta</i> < *ébh ^h hiH-te
3	<i>ácikayuh</i> < *ék ^u ik ^u ei-ṛs	<i>ábibhayuh</i> < *ébh ^h heiH-ṛs

In the optative, by contrast, there is no trace of a 1 sg. in **-ayam* or a 3 pl. in **-ayuh*. Here the substitution of **-ai.(i)-* for expected **-a.i-* was a *fait accompli* in the earliest Vedic, as was the replacement of **-o.i-* by **-oi.(i)-* in the earliest Greek. The effect can also be observed in Iranian. As first pointed out by Tedesco (1923:299ff.), the Sogdian 1 sg. opt. in *-ē* and 3 pl. opt. in *-ēnd* (e.g., *βarē* <βry>, *βarēnd* <βrynd> ‘I/they would bring’) go back to preforms in **-aiy-*, exactly like Ved. *-eyam*, *-eyuh* and Gk. *-οια*, *-οιεν*. In (Younger) Avestan, where the distinction between **-ai.(i)-* and **-a.i-* is no longer (orthographically?) preserved, the 3 pl. in *-aiiān* (*hərəzaiiān*, etc.) almost certainly represents etymological **-aiiant*.¹⁸

The late PIE thematic optative in **-o-ih₁-*, then, must have been realized in some way that made **-oi̯-* rather than **-oi̯-* the ordinary antevocalic reflex of this sequence in the daughter languages. What could this phonetic realization have been? A direct gemination of the glide by the laryngeal (i.e., a rule taking **-V̯ih₁-* to **-V̯i̯i̯- ~ *-V̯i̯i̯-*), as advocated by Rix (1992:74-5, 233, 262), cannot be considered a serious possibility.¹⁹ A more attractive approach was suggested by Hoffmann (1976:615, n. 12), who connected the treatment of **-o-ih₁-* in the optative with the behavior of the sequence **-o-i* in the ending of the thematic locative singular. The loc. sg. ending predictably appears as *-oi* in Greek, but, unlike the more common *-oi* of the nom. pl., bears a circumflex when accented (cf. Ἰσθμοῖ (loc.) ‘on the Isthmus’ vs. ἰσθμοί (nom. pl.) ‘necks of land’) and patterns as long for accent assignment purposes (cf. οἴκοι (loc.) ‘at home’ vs. οἴκοι (nom. pl.) ‘houses’). This meant, in Hoffmann’s view, that the loc. sg. ending had remained disyllabic and uncontracted in PIE (**-o.i*, **-ó.i*). He proposed a similar disyllabic sequence in the thematic optative (**-o.ih₁-*), with a phonetic development like the following:

¹⁸ Hoffmann, in the reference cited immediately below, convincingly adduces the example of Ved. *gáya-* ‘household’ (= YAv. *gaiia-* ‘life’) and *śréyas-* ‘more beautiful’ (= YAv. *sraiiāh-* ‘id.’) to show that Ilr. **-ai̯-* and **-ai̯-* merged in the Sasanian archetype of the Avesta text.

¹⁹ Any such rule would have to be optional, which is to say, non-explanatory. As Sihler remarks (*op. cit.*, 598), the proposed gemination “would be unlike everything known or reasonably surmised about the usual behavior of laryngeals”.

	3 sg. (_C)	3 pl. (_V)
late PIE	*-o.ih ₁ t	*-o.i.h ₁ ent
with laryngeal loss and lengthening	*-o.ī	*-o.i.ent
with post-high vowel hiatus filling	*-o.ī̄	*-o.i.ĭent
with contraction of *o + ĭ > *oi	*-oit	*-oi.ĭent

From here, *-oit would have given Gk -οἰ and Iir. *-ait, whence Av. -ōiṭ and Ved. -et.²⁰ *-oi.ĭent would have given Gk. -οἰεν and Iir. *-aiĭant, whence YAv. -aiiān and (with substitution of -uh for *-an) Ved. -eyuh.

Hoffmann's scenario works brilliantly once his initial hypothesis is granted that the sequence *-o-ih₁- could have remained uncontracted in the parent language. Sequences of the form *-V.R̥-, however, are uncanonical under the usual assumptions about PIE syllabification, and skeptics are unlikely to be convinced by the supposed parallel of disyllabic *-o.i in the locative. Hoffmann's evidence for a disyllabic loc. sg. is confined to Greek and readily accounted for without reference to PIE. Inherited diphthongs in final syllables were normally "acute" in Greek; that is, they bore the ictus on their second mora when accented. Examples include (*inter alia*) the thematic and pronominal nom. pl. in -οἰ, the stressed forms of the pronominal datives ἐμοῖ and σοῖ, and the nom. sg. forms in -εὺς (Ζεὺς, χαλκεὺς, etc.). The aberrant circumflex in the loc. sg. (i.e., -ὀι <-οἶ>, with ictus on the first syllable, for expected -οἶ <-οἶ>, with ictus on the second) can in principle be interpreted in several ways. Hoffmann's assumption of a disyllabic sequence in the parent language cannot be disproved or excluded from the list of logical possibilities. But it is also possible, and much simpler, to assume that the PIE preform ended in an ordinary monosyllabic diphthong (as if Gk. -οἰ, *-οἶ) that was analogically remade within Greek to give it the *appearance* of a late contraction product. At least two specific scenarios for such a remodeling suggest themselves:

- 1) the diphthong was reconstituted as disyllabic *-o.i (*-ó.i), with the syllabicity of the *-i restored under the influence of the loc. sg. of consonant stems (*-es-i, *-en-i, etc.) and "ā-stems" (*-eh₂-i); or
- 2) the syllabicity of the *-i was never restored phonetically, but the phonologically regular accentuation pattern *'Ισθμοῖ (i.e., *-οἶ) was replaced by 'Ισθμοῖ (i.e., -ὀι) in order to relocate the ictus in its "correct" place on the stem vowel.

²⁰ It would also have given Gmc. *-ai (= Go. -ai) and the Balto-Slavic forms to be discussed below. But Hoffmann's statement that the *-oi- that resulted from *-o.ī- probably had circumflex ("schleiftonig") intonation in the parent language is more problematic, echoing a no longer sustainable conception of PIE prosody. See note 21.

The second possibility, which is generally more attractive, would have received surface support from the circumflex accentuation of the other oblique cases of the singular (gen. Ἴσθμοῦ, dat. Ἴσθμῶ).

A few additional remarks are in order about the locative. The “special” character of the PIE loc. sg. in **-oi* is often said to be guaranteed by the identity of the circumflex in Ἴσθμοῖ with the circumflex of the petrified Lithuanian locative form *namiẽ* ‘at home’. This, however, is a fallacy, partly of terminological origin. The Greek and Lithuanian circumflexes are in no way comparable; a “circumflex” long vowel or diphthong in Lithuanian, which may or may not be accented, is in historical terms simply a long nucleus that failed to acquire the phonologically marked feature — probably a glottal catch or *stød* — that constituted “acuteness” in Balto-Slavic.²¹ Acuteness in Balto-Slavic was the product of a sound change that assigned this feature, whatever its precise phonetic character, to uncontracted long vowels, including long vowels that served as the first element of long diphthongs (cf. OLith. *mótē* ‘wife’, PSlav. **māti* ‘mother’ < **méh₂tē(r)*; Lith. *várna*, PSlav. **vǫrna* ‘crow’ < **uǫrneh₂*).²² Since ordinary diphthongs (i.e., diphthongs with a short first element) did not receive this marking, PIE **ei*, **ai*, and **oi* regularly appear as non-acute (i.e., “circumflex”) *ie*, *iẽ* in Lithuanian — a treatment illustrated by scores, if not hundreds of examples (cf. *sniẽgas* ‘snow’ (< **snóig^h-o-*), *Diẽvas* ‘God’ (< **deiu-ó-*), the *i*-stem gen. sg. in *-ies*, *-iẽs* (< **-eis*), the *i*-stem voc. sg. in *-ie*, *-iẽ* (< **-ei*), etc.). Unlike

²¹ See Jasanoff (2004) for a comparative overview of the acute : circumflex contrast in the various branches of IE. As argued there in line with a growing consensus, PIE had no “intonations” — only long and short vowels, which could be accented or not accented. A circumflex ending in historical Greek is an accented long final syllable that bears the ictus on its first mora. Since inherited long vowels and diphthongs, including those arising from tautosyllabic **-VH-* sequences, regularly assigned the ictus to the *second* mora in Greek, the circumflex accent is the marked type, arising either by contraction (across a post-IE hiatus) of an accented first with an unaccented second vowel, or by analogy to a circumflex that did. In the inherited Balto-Slavic system, by contrast, a circumflex syllable (final or non-final, accented or unaccented) is the *unmarked* type, lacking the marked feature of “acuteness” because it never contained an uncontracted long vowel (see below). When accented, a circumflex nucleus — better simply termed non-acute — situated the ictus on the first mora in early Baltic and Slavic, thereby contributing to the illusion of a PIE circumflex with cognate reflexes in Balto-Slavic and Greek.

²² In conformity with normal Balto-Slavic usage, the term “diphthong” is here understood to include tautosyllabic sequences of vowel plus liquid or nasal, which display the same intonational contrasts as other long nuclei. The historically acute (< long) diphthong of Lith. *várna*, PSlav. **vǫrna* (< **-ǫr-*) contrasts with the non-acute of Lith. *vaĩnas*, PSlav. **vǫrnĩ* ‘raven’, where the first element was etymologically short (**uǫrno-*).

Ἰσθμοῖ, with an aberrant circumflex that requires *some* explanation (even if not necessarily Hoffmann's), Lith. *namiẽ* can be — and in the unmarked state of affairs should be assumed to be — the regular reflex of a normal preform in monosyllabic accented **-ói*.

A further source of confusion involving the loc. sg. is the frequently cited contrast between Gk. οἴκοι (loc.) and οἴκοι (nom. pl.) and its supposed echo in the contrast between Lith. *namiẽ* (loc.) and the acute nom. pl. ending *-í(e)* of adjectives like *gerì* 'good, *bonĩ* (definite form *geríe-ji*). Here it is the implicit identification of the two "acute" endings — the *-οι* of οἴκοι and the *-í(e)* of *gerí(e)* — that is mistaken. The Greek ending is simply the normal reflex of PIE unaccented final **-oi*, complete with the curious but quasi-regular property of counting as a short vowel for purposes of the recessive accent and "σωτήρα" rules.²³ The Lithuanian ending, by contrast, is *not* the regular reflex of PIE **-oi*, which, as we have seen, would have been non-acute ("circumflex") *-ie, -iẽ*. The acuteness of Lith. *-í(e)* is a problem in its own right; the "wrong" intonation of this ending may have come from the parallel nominal termination **-ōs* (cf. Ved. *-āh*, Osc. *-ús*, Go. *-os*), which could have analogically transmitted its acute marking — here phonologically regular because of the long vowel — to the pronominal ending **-oi* before itself disappearing.

²³ I take the term from Probert (2006:61f.). The unexpected location of the ictus in λείπεται, ἄνθρωποι, οἴκοι, etc. is probably a grammaticalized effect of sentence sandhi. Before vowels in connected speech, the offglide of a final diphthong was assigned to the first syllable of the following word, producing sequences of the type /lei . qe . to . i# a . ga . thòs/ (≅ λείπεται ἄγαθός). In such contexts the recessive accent would naturally have been positioned further back in the word than otherwise (**leiqe-*); the surprising development in Greek was that the "hyper-recessive" accent generated in these cases was eventually generalized everywhere. A number of factors contributed to this outcome: in the verb, the hyper-recessive accentuation of the middle (λείπεται, -ονται, etc.) would have brought it accentually into agreement with the active (λείπει, -ουσι, etc.); in the noun, the hyper-recessive accentuation of the *o*-stem nom. pl. (ἄνθρωποι, οἴκοι) would have aligned it with the corresponding nom. sg., acc. sg., and acc. pl. (ἄνθρωπος, -ον, -ους; οἴκος, -ον, -ους). A locative adverb in **-oi*, of course, would have been under no pressure to conform to the pattern of the nominative and accusative; as a different part of speech, it could well have favored contexts (e.g., one-word utterances) where hyper-recessivity would never have arisen. In the 3 sg. opt. in *-οι*, which never displays hyper-recessivity (παραλείποι, not **παραλείποι*), the diphthong was protected from resyllabification by the etymological **-t* that followed.

I am grateful to Alan Nussbaum and Jeremy Rau for helping to clarify my thinking on these matters.

The “permanent syllabicity”, so to speak, of the loc. sg. in **-i* is upheld by Mayrhofer (1986:161), who (crediting Jochem Schindler) invokes it to explain the disyllabic shape of the suffix in delocalival adjectives of the type Ved. *dāmi-ya-* ‘im Hause (*dāmi*) befindlich’, *āpiya-* ‘im Wasser (*āpi*) befindlich’, etc. But no such principle is needed to account for these forms, which simply take their syllabification from the underlying free-standing locatives (i.e., **X-i* ‘in *X*’ → **X-i-(i)o-* ‘located in *X*’). In the last analysis, the totality of the evidence for special prosodic behavior on the part of “locative” **-i* reduces to one and only one linguistic fact — the aberrant position of the ictus in Greek forms of the type Ἰσθμοῖ. It would be daring indeed to project this back to the parent language.

We may now return to the optative. Hoffmann argued that the forms of the thematic optative suggest a PIE disyllabic sequence **-o.ih₁-*, in support of which he cited the allegedly parallel disyllabic loc. sg. in **-o.i*. The locative has now turned out to be a red herring; the independent evidence for an uncontracted ending **-o.i* in the parent language, as opposed to early Greek, is too weak to support significant IE-level theory-building. But this does not necessarily invalidate Hoffmann’s theory. In the end, the economy and elegance gained by operating with an optative in disyllabic **-o.ih₁-* may be sufficient to make up for the absence of an exact parallel elsewhere in the system. Although calculations involving incommensurable varieties of “simplicity” are difficult, a way forward in the present case is shown by a hitherto untapped source of evidence in another branch of the family, Balto-Slavic.

The PIE optative is represented in Baltic and Slavic by forms with imperative meaning. In standard Lithuanian, the basic reflex is the no longer colloquial “permissive”, a third person (etymologically 3 sg.) imperative characterized by the prefixed particle *te-* and the non-acute ending *-ie*; cf., e.g., *te-vediē* ‘let him (her, them) lead’, *te-dirbiē* ‘let him work’, *te-gyvėnie* ‘let him live’, etc. The ending, which is obviously cognate with Gk. *-oi*, Ved. *-et*, and Av. *-ōit*, is occasionally cited in connection with its supposedly revealing “circumflex” character (e.g., by Mayrhofer, *op. cit.*, 131). In fact, the circumflex here is no more informative than in the locative *namiē* (cf. above).²⁴ The significance of the Lithuanian permissive lies not in *how* it is accented, but *where*.

In Old Church Slavonic, the optative is the main source of the imperative, the paradigm of which is partly supplied by the indicative:

sg. 1 [do vedŏ]	du. 1 veděvě	pl. 1 veděmŭ
2 vedi	2 veděta	2 veděte
3 vedi	3 [do vedeta]	3 [do vedŏtŭ]

²⁴ The comparative evidence suggests that the circumflex in the permissive is secondary; see below.

On the segmental level, at least, the non-suppletive forms are straightforward. The starting point was a pre-Slavic stem-form **vedai-*, which gave *vedě-* before syllabic endings and *vedi* in the 2, 3 sg. (< **-ais*, **-ait*). Accentual information from the modern Slavic languages shows that the Proto-Slavic accent was on the second syllable, as in Lithuanian. The major difference between Slavic and Lithuanian is that the mood sign, which is circumflex in Lithuanian, is acute in Slavic (PSlav. 2, 3 sg. **vedi*¹, 1 pl. **veděmŭ*, 2 pl. **veděte*, etc.; cf. note 31).

The Balto-Slavic present **ved-e/o-* ‘lead’ (> Lith. *vedù*, *-ì*, etc.; OCS *vedo*, *-eši*, etc.) is traceable to a PIE thematic present **uédh-e/o-*, with uncontroversial fixed accent on the root. The location of the accent on the second syllable in Lith. *te-vediē* and the reflexes of PSlav. **vedi*¹ shows that this stem has given up being root-accented and has become *mobile* — a term with a very specific meaning in Balto-Slavic. All nouns and verbs in the more conservative Baltic and Slavic languages can be assigned to one of two accentual types:

- 1) immobile, in which the accent occupies a fixed location in the word, subject only to late and transparent movement rules like Saussure’s Law in Lithuanian and Stang’s Law in Slavic;²⁵
- 2) mobile, in which the accent — again subject to low-level movement rules — alternates for no phonologically obvious reason between the first and last syllable.²⁶

The origin of mobility in this sense, which has virtually nothing to do historically with mobility in Sanskrit and Greek, is one of the most intensely debated topics in Balto-Slavic historical grammar. In nouns, it is generally agreed that mobility arose from oxytonicity: nouns with an accented ending in the nom. sg. retracted the accent to the first syllable in some forms and retained it *in situ* (or moved it even further to the right) in others. Thus, e.g., Lith. nom. sg. *sūnūs* ‘son’ and gen. sg. *sūnaūs* continue the accentuation of Ved. *sūnúh*, *sūnóh*, while Lith. acc. sg. *sūnu* and nom. pl. *sūnūs* show retraction vis-à-vis Ved. *sūnúm*, *sūnávaḥ*. The problem of the *mechanism* of the retraction in the latter two forms, and in other root-accented case forms, has never been fully resolved.²⁷

²⁵ Saussure’s Law is the diachronic and synchronic rule of Lithuanian that advances the accent from a non-acute to a following acute syllable (e.g., nom. sg. *rankà* ‘hand’ < **rañkā*). Stang’s Law was a rule of late Proto-Slavic that retracted the accent from certain internal syllables, producing a distinctive rising (“neo-acute”) accent (e.g., **pròsiti* ‘asks’ < **prositi*).

²⁶ It is common practice in Slavic accentology to interpret the forms with “left-marginal” (= initial) accent as phonologically unaccented.

²⁷ The most widespread approach, following Saussure (1922 [1896]:533ff.), takes the retrac-

The prehistory of mobility in verbs is even less well understood than in nouns. Here too, however, certain facts are clear. A major locus of mobility was the simple thematic type represented by **ved-e/o-* ‘lead’ and other familiar staples of the comparative lexicon, including **vež-e/o-* ‘convey’ (Lith. *vežù*, OCS *vezq*), **neš-e/o-* ‘carry’ (Lith. *nešù*, OCS *nesq*), **pek-e/o-* ‘bake’ (Lith. *kepù*, OCS *pekq*), and **deg-e/o-* ‘burn’ (Lith. *degù*, OCS *žegq*). Being mobile, these forms were partly root-accented and partly ending-accented in Proto-Balto-Slavic. The accentual paradigm, inferred mainly from the Slavic evidence, can be reconstructed as follows:²⁸

		PIE	Proto-BS
present	sg. 1	<i>*uédh-o-h₂</i>	<i>*vèdō</i>
		<i>*uédh-e-si</i>	<i>*vedesi</i>
		<i>*uédh-e-ti</i>	<i>*vedeti</i>
	pl. 1	<i>*uédh-o-mos</i>	<i>*vedomòs</i>
		<i>*uédh-e-te</i>	<i>*vedetè</i>
		<i>*uédh-o-nti</i>	<i>*vedontì</i>
imperfect	sg. 2	<i>*uédh-e-s</i>	<i>*vèdes²⁹</i>
	3	<i>*uédh-e-t</i>	<i>*vèdet</i>
pres. ptcp. nom.	sg.	<i>*uédh-o-nt-s</i>	<i>*vèdonts</i>
	acc. sg.	<i>*uédh-o-nt-ṃ</i>	<i>*vedontin</i>

In the verb, unlike the noun, mobility was produced by advancement, rather than retraction of the accent. Proto-BS 1 sg. **vèdō* thus maintains the accent in its inherited PIE location, while 3 sg. **vedeti* has shifted it rightwards. And although the precise nature and motivation of the shift are disputed, the rule that determined whether the accent would move in a given form is directly readable from the surface paradigm: *disyllabic forms retained the accent in its original*

tion in *u-* and other vowel stems to be analogical to the mobile pattern of consonant stems. The “founding paradigm”, according to this view, was the type of Proto-BS **duktē* ‘daughter’, acc. **dukterin* < **duktèrin*, gen. **dukterès* < **duktèrès*, nom. pl. **dukteres* < **duktères*, etc., where a quasi-regular rule (though whether or not a sound change is disputed) retracted the accent from word-internal syllables.

²⁸ After Lehfeldt (2001:57ff.). Here and throughout, the vertical wedge denotes the position of the ictus without reference to acute, circumflex, or other intonational variables.

²⁹ The 2, 3 sg. imperfect forms survive only in Slavic, where they are synchronically embedded in the paradigm of the *s*-aorist:

sg. 1	<i>věšŭ</i>	du. 1	<i>věšově</i>	pl. 1	<i>věsomŭ</i>
2	<i>vede</i>	2	<i>věsta</i>	2	<i>věste</i>
3	<i>vede</i>	3	<i>věsta</i>	3	<i>věse</i>

position; longer forms moved it to the end of the word.³⁰ With this observation, we are in a position to understand the import of the forms that initially triggered our excursus into Balto-Slavic — Lith. *te-vediẽ* and PSlav. **vedi*.

The etymological optatives *te-vediẽ* and **vedi* together point to a Balto-Slavic 2, 3 sg. imperative **vedais*, **-ait*, with the accent unambiguously positioned on the second syllable. The significance of the place of the accent is clear: it shows that these synchronically disyllabic forms must have been *trisyllabic* at the time of the advancement rule. The ultimate preforms were Hoffmann's stipulated **uẽ.dho.ih₁s*, **uẽ.dho.ih₁t*, with the thematic vowel and the mood sign uncontracted; only after the rightward shift of the accent to **ue.dho.ih₁s*, **ue.dho.ih₁t* (or, with later phonology, **ve.da.ĩs*, **ve.da.ĩt*) did contraction produce the quasi-attested **-ais*, **-ait*.³¹ The testimony of the accent in Balto-Slavic thus confirms the evidence of Greek and Indo-Iranian. The disyllabic reading of the thematic optative complex (**-o.ih₁-*) can be considered a virtual certainty.

4. The Relative Chronology of the Thematic Optative

The failure of the thematic vowel to contract with the optative suffix into a monosyllabic PIE sequence **-oih₁-* [-oih₁-] is at first glance surprising. There was clearly no constraint against strings of the form **-VĩH-* in the parent language; indeed, the normal operation of the ablaut system guaranteed that such sequences would be fairly common (cf. Ved. *kráya-* ‘purchase’ < **k^uróih₂-o-*, Gk. *δέατο* ‘appeared’ < **déih₂-to*, Go. *waddjus* ‘wall’ < **uóih₁-*, etc.). Yet examples of the behavior of **V + i/ĩH* sequences at synchronically transparent morpheme boundaries — or, more generally, of **V + i/ĩ(H)* sequences, with or without a laryngeal in the picture — are very rare. Apart from the two cases

³⁰ The correlation of accent place and word length was made by Ebeling (1967:580), who, however, wrongly posited retraction in the shorter forms. My own views on the origin of mobility in the verb will be presented elsewhere.

³¹ The date of the contraction relative to the change of **-ih₁-* to **-ĩ-* is hard to determine, but an acute diphthong would probably have been the expected output in either case. This is in fact what we find in Slavic (2 pl. **veděite*), apparently confirmed by the “level tone” of the Latvian 2 pl. impv. in *-iēt* (*vediēt*, etc.; cf. Rasmussen 1989:224). The circumflex in Lithuanian (*te-vediẽ*) can be explained in a number of ways, the likeliest perhaps being “*métatonie douce*” — the replacement of acute by circumflex intonation in order (e.g.) to maintain a long vowel or diphthong in a final syllable (cf. 3 p. fut. *duõs* ‘will give’ for expected *dūs* < **díuos*). As a general caveat, however, it should be remembered that imperatives, because of their special status in discourse, are typologically prone to “irregular” truncations, prolongations, and intonational distortions of every kind.

already discussed — the thematic loc. sg., where the evidence for an inherited disyllabic reading is indeterminate at best, and the thematic optative, where the evidence is decisive — the only other important case is the nom.-acc. neuter dual of thematic stems.³² Here the underlying desinence was $*-ih_1$, familiar from Ved. *aksī*, Gk. ὄσσε, Lith. *akì*, OCS *oči*, etc. ‘two eyes’. In thematic nouns, the result was a sequence $*-o-ih_1$, morphophonemically homophonous with the $*-o-ih_1-$ of the optative. Unsurprisingly, the thematic neuter dual in “ $*-oih_1$ ” is not widely attested, being confined to Indo-Iranian (Ved. *-e*, YAv. *-e*) and Slavic (OCS *-ě*). But the Vedic ending *-e* stands out in being *pragr̥hya*, or exempt from sandhi. In practice, this means that the final *-e* fails to resolve into *-ay#* (> *-a#*) before a word beginning with a vowel — precisely the behavior (*mutatis mutandis*) noted earlier in the optative. Compare:

loc. sg. *yugé a-* > *yugá(y) a-* > *yugá a-* (cf. impf. 3 sg. *áciket*, 1 sg. *ácikayam*)
 n.-a. du. *yugé a-* > *yugé(y) a-* > *yugé a-* (cf. opt. 3 sg. *bháret*, 1 sg. *bháreyam*)

The dual ending was thus disyllabic $*-o.ih_1$, which, like the $*-o.ih_1-$ of the optative, gave $*-o.ī$ (> $*-ai$ > *-e*) before consonants and $*-o.īī$ (> $*-ai(ī)$ > *-e*) before vowels.³³

The zero-grade optative suffix $*-ih_1-$ and the homophonous neuter dual ending $*-ih_1$ thus shared a property more often, but with less justification, claimed for the $*-i$ of the locative — the quality of permanent syllabicity. Morphological combinations of the type 3 sg. opt. $*bhéro-ih_1-t$ or nom.-acc. du. $*iugó-ih_1$ failed to undergo the normal desyllabification of $*-ih_1(-)$ to $*-īh_1(-)$, not because the sequence $*-oīh_1(-)$ was phonologically prohibited, but because desyllabification would have led to an output inconsistent with the intuition on the part of speak-

³² There are other cases, of course, where the boundary is too old or too recent to allow for meaningful comparison. Thus, e.g., the monosyllabic sequence $*tói-$ that appears in many of the plural forms of the demonstrative pronoun (cf. nom. pl. masc. $*tói$, gen. pl. $*tói-s-oHom$, dat. pl. $*tói-bh(i)os$, loc. pl. $*tói-su$, etc.) is historically, but not synchronically segmentable; a hypothetical disyllabic $*tói-$, if such a string ever existed, would have had centuries or millennia to contract to its late PIE form. At the other chronological extreme, the primary middle endings in $*-oi$ (3 sg. $*-toi$, pl. $*-ntoi$, etc.) were created in post-PIE times by adding the *hic et nunc* $*-i$ — the same particle, presumably, as in the locative — to the corresponding secondary endings. Interestingly for the case of the locative, these are resolutely monosyllabic as well.

³³ The corresponding ending in feminine \bar{a} -stems was homophonous with the neuter ending in both Indo-Iranian (where it is likewise *pragr̥hya*) and Slavic (cf. Ved. *séne* ‘two weapons’, OCS *rpcě* ‘two hands’). The preform was $*-eh_2-ih_1$, which, following the loss of laryngeals and the merger of $*o$ and $*a$, would have merged with $*-o.ih_1$ as $*-ai(ī)$ in Indo-Iranian.

ers, evidently robust, that these morphemes had the invariant phonetic shape [-ih₁(-)]. The disyllabic reading **-o.ih₁(-)* can therefore be described as analogical. As in the case of the Greek loc. sg. in -oî, however (cf. above), this term covers a range of possibilities. Under one imaginable scenario, the phonologically “correct” optative complex **-oih₁-*³⁴ would have been remade to **-o.ih₁-* under the influence of the athematic optative type in **-ih₁-m̥*, **-ih₁-s*, etc. Such a remodeling could easily be formulated in proportional terms and would meet the minimum technical requirements for an analogical explanation. Yet it is hard to believe that at a stage of late PIE when monosyllabic **-oih₁-* was already firmly entrenched in the system, speakers would for no apparent reason have felt the need to resolve it into a disyllabic sequence that until then had been phonotactically impossible.³⁵

For this reason it is better to dispense with the intermediate stage of a “monosyllabic” optative in **-oih₁-* altogether and to proceed on the theory that the disyllabic complex **-o.ih₁-* was created *de novo* by adding the syllabic mood sign **-ih₁-* to the thematic vowel. Under this conception, the thematic optative as we know it would have to have been a relatively late formation — late enough, at all events, to escape the contraction to which it would certainly otherwise have been subject. As it happens, a late date for the creation of the thematic optative is eminently consistent with the details of its distribution around the family. Anatolian, the first branch to leave the main body of IE languages,³⁶ has lost the optative entirely. Tocharian, the next branch to leave, preserves reflexes of the PIE optative in two categories, the Toch. A and B optative and the Toch. B imperfect; the mark of these, however, is uniformly *-i-* (< PIE **-ih₁-*) in both languages, even in thematic stems.³⁷ The third group to part company from the others was probably the Italo-Celtic complex; in this light, it is interesting to

³⁴ The dual will be briefly returned to below.

³⁵ Note the crucial difference between this case and that of the *o*-stem loc. sg., where precisely such a secondary “distraction” of **-oi* to **-o.i* was discussed above as a possible explanation for Gk. Ἰσθμοῖ. The **-i* of the locative was a separable particle, capable of being added (at least until a late stage of pre-Greek) to the endless locatives of consonant stems, and hence also capable of being reapplied to the bare stem form of an *o*-stem. The **-ih₁-* of the optative enjoyed no such autonomy.

³⁶ My views on the upper branches of the IE family tree are presented in *HIEV* (46, n. 42; 204ff.). Ringe (2006:5f.) gives an almost identical view, arrived at on partly different grounds.

³⁷ Toch. *-i-* can only be derived from **-oi-* with massive special pleading. See Ringe (1996:84f.) for discussion, and compare the same author’s more recent opinion: “The situation in Tocharian is less clear, but it looks as if the thematic vowel of stems may actually have been deleted before the subjunctive and optative suffixes were added” (Ringe 2006:31).

note that Italic, like Tocharian, maintains the athematic, but not the thematic optative (cf. (O)Lat. *siem*, *faxim*, *edim*, *dīxerim*, etc.; but *dīcam*, *moneam*, etc. for expected **-oi-*).³⁸ Celtic has lost the optative completely. It is only in the branches that remained after the departure of Anatolian, Tocharian, and Italo-Celtic — the “southern” dialect group (Greek, Armenian, Indo-Iranian), the “northern” dialect group (Germanic, Balto-Slavic), and the hard-to-place Albanian — that the “oi-optative” really appears — *and it appears in every one of these branches*.³⁹ The surprising possibility thus suggests itself that the optative in **-o.ih₁-* may not have been a PIE formation in the strict sense at all.

Is it conceivable that the thematic optative was first created in what we might informally call “Rump IE”, the large core dialect that remained after the three early departures?⁴⁰ The raw comparative evidence is certainly favorable to this interpretation. What weighs against it is the *reductio ad absurdum* argument that thematic presents, including the highly productive derived types in **-īe/o-*, **-s̄ke/o-*, and **-eje/o-*, must have had *some* kind of optative in “true” PIE; and if this was not the optative in **-oih₁-*, what could it have been? This reasoning, however, is not compelling. We know that the sigmatic aorist had no optative in PIE, despite presumably “needing” one as much as any other aorist; the gap was filled by the optative of the root aorist type **uón-/uén-*, which the classical *s*-aorist had replaced in the indicative and subjunctive (cf. note 8). Like the *s*-aorist, thematic presents are typologically “late” in IE and known in many instances to have replaced earlier athematic formations. The possibility cannot be ruled out, therefore, that the optative of the older athematic stem survived in such cases as the synchronic optative of the newer thematic stem, giving rise to suppletive patterns that were later eliminated by the creation of the classical thematic optative.⁴¹ As a thought experiment, consider the following specific cases:

³⁸ This statement is not, of course, falsified by the occurrence of the letter sequence OPETOIT in a particularly obscure section of the Old Latin Duenos inscription. See Eichner (1988-90:213).

³⁹ For Albanian, cf. Klingenschmitt (1994:229).

⁴⁰ The term, not proposed seriously, corresponds to Ringe’s “Central IE” (2006:5).

⁴¹ Nor is this the only possibility. The Italo-Celtic *ā*-subjunctive, often thought to have been an optative or close to an optative, is a category of obvious interest in this context. My now quarter-century-old analysis of the *ā*-subjunctive as a kind of “conditional” based on the PIE subjunctive (Jasanoff 1983:80ff.) is not incompatible with the possibility of its having played a systematic role in the grammar of PIE prior to the creation of the classical thematic optative.

1) Simple thematic presents of the “**bhēreti*-type” (*HIEV* 224ff., with references) are often the successors to more archaic Narten presents; in the case of the stem **bhēr-e/o-* itself, the parallel Narten present **bhēr-/*bhēr-* is fragmentarily attested around the family. If the introduction of the thematic optative was chronologically later than the creation of the thematic indicative, there might well have been a time in predialectal PIE when the synchronic optative of the thematic stem **bhēr-e/o-* was still the Narten optative **bhēr-ih₁-*; a possible reflex of this survives in Toch. B 3 pl. impf. *priyem* < **bher-ih₁-ont*.

2) Some of the oldest presents in **-s $\acute{k}e/o-$* are the replacements of Narten *s*-presents, which were themselves partly relegated to the aorist.⁴² In the case of **pr \acute{e} (\acute{k})-s $\acute{k}\acute{e}/\acute{o}-$* ‘ask’, which is typical, the subjunctive (**pr \acute{e} \acute{k} -s-e/o-*) and 3 sg. imperfect indicative (**pr \acute{e} \acute{k} -s-t*) of the Narten present, but not the optative (**pr \acute{e} \acute{k} -s-ih₁-*), were incorporated into the paradigm of the nascent *s*-aorist. The failure of the optative **pr \acute{e} \acute{k} -s-ih₁-* to join the aorist paradigm suggests that it may still have played a role in the present system — probably supplying the missing optative to the thematic stem **pr \acute{e} (\acute{k})-s $\acute{k}\acute{e}-$* .⁴³

3) *īe/o-*presents come in many varieties, one of the most deeply entrenched of which is the “stative-intransitive” type represented by 3 sg. **m \acute{n} -ī \acute{e} -tor* ‘thinks’, **bhudh-ī \acute{e} -tor* ‘is awake’, etc. Such forms are often associated with synonymous root deponents in 3 sg. **-ór* (**m \acute{n} (n)-ór*, **bhudh-ór*, etc.; *LIV* class I c), which they have wholly supplanted in some branches.⁴⁴ Here, and possibly in other cases where **-īe/o-* is the morphological replacement of a zero suffix — the synchronic optative may have been supplied by the older root formation.

It is thus by no means out of the question that the thematic optative in **-o.ih₁-* — or the thematic nom.-acc. neuter dual in **-o.ih₁*, for that matter — was a creation of the latest or “Rump IE” period.⁴⁵ A specific chronology cannot be

⁴² Cf. *HIEV* 192f. and the reference there cited. The classic case of a *s $\acute{k}e/o-$* -present that seems to have replaced a Narten *s*-present is **g $\acute{n}h₃-s $\acute{k}e/o-$$* beside **g $\acute{n}h₃-s-/*g $\acute{n}h₃-s-$$* ‘recognize’. The *s*-present, seen in Hitt. *ganešzi* and other forms, has contaminated the vocalism of the *s $\acute{k}e/o-$* -present, which shows the expected zero grade in Arm. *čanačem*, but *e*-grade in Lat. (*g*)*nōscō* and *ē*-grade in Alb. *njoh*.

⁴³ Looked at from a different angle, this would solve the longstanding mystery of why the PIE sigmatic (*recte* “presigmatic”) aorist had a non-sigmatic optative (**pr \acute{e} \acute{k} -ih₁-*, like **u $\acute{e}n$ -ih₁-*): the expected sigmatic optative (**pr \acute{e} \acute{k} -s-ih₁-*) was still needed in the present.

⁴⁴ These are the “root stative-intransitive presents” of *HIEV* 155ff., summarizing and updating Jasanoff (1978).

⁴⁵ One can only speculate on how the sense of a form like **īug-ó-ih₁* ‘two yokes’ would have

proved for either category. At the very least, however, it can be said that the impression of relative lateness created by the non-contraction of the sequence $*-o.ih_1(-)$ is supported by a variety of morphological and distributional indices.⁴⁶

We can now review the high points of our “history” of the optative. The mood sign $*-iéh_1-/*-ih_1-$ was the only finite suffix in the PIE verbal system to exhibit apophonic behavior. As an ablauting suffix, it participated in complex paradigmatic alternations, some of which were simplified by analogy. Among the analogical changes assignable to one or another chronological dialect of PIE were the substitution of *e*-grade for zero grade in the root syllable of the 1, 2 pl. (and 1-3 du.) root aorist optative, and the replacement of $*-ih_1-nt$ by $*-ih_1-ent$ in the 3 pl. optative of Narten and other root-accented stems. Likewise basically an analogical development, though not usually recognized as such, was the late creation of the thematic optative in $*-o-ih_1-$, made by adding the optative morphology of a Narten present ($*-ih_1-m_0, *-ih_1-s, \dots, *-ih_1-ent$) to the thematic stem in $*-o-$.⁴⁷ Since the mood sign $*-ih_1-$ was always syllabic when applied to athematic stems, it remained syllabic in the sequence $*-o-ih_1-$, which was realized as disyllabic $*-o.ih_1-$ until well into the history of three individual branches (Indo-Iranian, Greek, Balto-Slavic). Analogically driven non-contraction can also safely be posited for the thematic neuter dual in $*-o.ih_1$. The purported disyllabicity of the loc. sg. in $*-oi$, on the other hand, is probably illusory, the result of developments specific to Greek.

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been expressed prior to the creation of the disyllabic combination $*-o-ih_1$. The two obvious possibilities are a root formation ($*iug-ih_1$) and a dual based on the collective in $*-eh_2$ ($*iug-eh_2-ih_1$).

⁴⁶ The lateness of the thematic optative has, of course, been repeatedly suspected. In an interesting anticipation of the position taken here, Cowgill (1965:160) writes, “It appears from this [= the phonology of Gk. φέροι] that the Indo-European thematic optative is a relatively recent formation; evidently *oy*-optatives were not put together in the dialect ancestral to Greek until $*iH-C$ had already become $*\bar{i}-C$.”

⁴⁷ The reason why the *o*-variant of the thematic vowel was chosen is not obvious. The supposed rule by which PIE $*-e-$ became $*-o-$ in post-tonic closed syllables, which might have explained preforms in $*-oi(h_1)s, *-oi(h_1)t$, etc., would not have applied to disyllabic $*-o.ih_1s, *-o.ih_1t$. Perhaps, here and in the dual ending $*-o.ih_1$, we should simply think of $*-o-$ as the regular treatment of the thematic vowel in hiatus.

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