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Anatolian and Indo-European Studies
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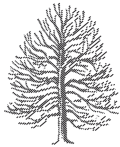
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Stative-Intransitive Aorists in Hittite

JAY H. JASANOFF



Kazu Yoshida was my first student at Cornell, and it is a pleasure to be able to offer him this small token of my continuing pride in his achievements. My topic is one that has been central to his interests since the beginning of his career—the prehistory of the Hittite middle.

As in all IE languages, the middle in Hittite descends from the pre-PIE protomiddle, the middle-like category presumed to underlie both the PIE middle proper and the h_2e -conjugation.¹ In many cases, especially in the present system, the development from protomiddle to middle was linear and uncomplicated. Thus, e.g., the inferrable protomiddle $*\acute{k}éi-h_2e$ ‘I lie’ (2 sg. $*-th_2e$, 3 sg. $*-e$, etc.) was straightforwardly renewed as $*\acute{k}éi-h_2er$, $*-th_2er$, $*-or$, etc., with partly modernized endings and (in *hic et nunc* contexts) the particle $*-r$ (cf. Hitt. 3 sg. *kitta(ri)*, Luv. *ziyar*; with substitution of $*-i$ for $*-r$ Ved. *śáye*, Gk. *keítai*).² In another common pattern, however, the protomiddle had two reflexes, a transitive h_2e -conjugation active and an intransitive middle. A well-known example is pre-PIE $*\acute{k}ónk-h_2e$ ‘I hang (tr. and intr.)’, which gave rise both to the transitive *hi*-verb Hitt. 3 sg. *kānki* (= PGmc. $*hanhiþ$) ‘hangs (tr.)’ and the intransitive middle Hitt. *kangattari* (= PGmc. $*hangaiþ$) ‘hangs (intr.)’, pointing to a 3 sg. act. $*\acute{k}ónk-e$ and 3 sg. mid. $*\acute{k}(o)nk-ór$.

Paradigm splits of the *kānki* : *kangattari* type are particularly well documented in the forms traditionally seen as the locus of the sigmatic aorist. As I argued in *HIEV* ch. 7 and Jasanoff forthcoming, the classically reconstructed “*s*-aorist” was an innovation of Inner IE, the major clade that remained after the departure of Anatolian and Tocharian from the rest of the family. Hittite and Tocharian point to an older situation. Here the active of what would become the sigmatic aorist, typically transitive, was an *s*-less h_2e -conjugation aorist (1 sg. $*-h_2e$, 2 sg. $*-th_2e$, etc.) with an apophon-

¹General familiarity is assumed with my *Hittite and the Indo-European Verb* (2003), hereinafter *HIEV*. On the meaning of the protomiddle, see further Jasanoff 2018:141–3 and the discussion below.

²The PIE *hic et nunc* particle in the middle was $*-r$. In Hittite, as classically demonstrated by Yoshida (1990), $*-r$ was lost by sound change after unaccented endings, but retained and subsequently extended to *-ri* when immediately preceded by the accent. The composite sequence *-ri* was then analogically extended to forms where $*-r$ had been lost, producing the well-known Hittite alternation of *-ri* with \emptyset .

ically aberrant, originally suppletive sigmatic form in the 3 sg., while the corresponding middle, which was intransitive, had no *s*-forms at all. This state of affairs, ablaut aside, is still well preserved in Hittite, where the active preterite of *nai-* ‘turn (tr. and intr.)’ is

ACT. pret.	sg.	1	<i>nehhun</i> ³	(whence back-formed pres. <i>nehhi</i>)
		2	<i>naitta</i>	(" " " " <i>naitti</i>)
		3	<i>naiš</i> ⁴	(" " " " <i>nāi</i>)
	pl.	1	<i>neyawen</i>	(" " " " <i>ne(y)aweni</i>)
		2	<i>naišten</i> ⁴	(" " " " <i>naišteni</i>) ⁴
		3	<i>naier</i>	(" " " " <i>ne(y)anzi</i>)

and the preterite middle is

MID. pret.	sg.	1	<i>neyahhat</i>	(whence back-formed pres. <i>neyahha(ri)</i>)
		2	<i>*neyattat</i>	(" " " " <i>neyattati, naištari</i>) ⁴
		3	<i>ne(y)at(i)</i>	(" " " " <i>ne(y)a(ri)</i>)
	pl.	1	<i>*neyawaštata</i>	(" " " " <i>*ne(y)awašta</i>)
		2	<i>*naisdumat</i> ⁴	(" " " " <i>*naisduma</i>) ⁴
		3	<i>ne(y)antat(i)</i>	(" " " " <i>ne(y)anta(ri)</i>)

A more evolved “cognate” of these forms is the fully sigmatized Vedic *s*-aorist *anaīṣam* ‘I led’ (mid. *aneṣi*). The common starting point was a late PIE “presigmatic” aorist:

ACT.	sg.	1	<i>*nóiH-b₂e</i>	pl.	<i>*nóiH-me-</i>
		2	<i>*nóiH-th₂e</i>		<i>*nóiH-(t)e</i>
		3	<i>*néiH-s-t</i>		<i>*néiH-ʔs</i>
MID.	sg.	1	<i>*néiH-b₂e</i>	pl.	<i>*néiH-med^hb₂</i>
		2	<i>*néiH-th₂e</i>		<i>*néiH-d^hu(u)e</i>
		3	<i>*nóiH-e^s</i>		<i>*néiH-ro</i>

The intertwined active and middle paradigms, with their synchronically anomalous 3 sg. forms, were the secondarily differentiated continuants of a unitary pre-PIE protomiddle:

³Here and below, displays are schematic; no attempt is made to capture the orthographic variety of the Hittite forms.

⁴As argued in *HIEV* 119–20 and 184, the “intrusive” *-š-* in the second-person forms was originally proper to the imperative, where its source was the lost *st*-imperative **nešti* (= Ved. *neṣi*) and its middle counterpart *nešlut*. Pace Kloekhorst 2008a, the *-š-* was not an inherent part of the inherited 2 pl. ending; cf. Jasanoff forthcoming:14’–24’.

⁵For the ending **-e* (rather than **-o*) in the 3 sg. middle, see Jasanoff forthcoming:51’–3’, improving on the account given in *HIEV* ch. 7.

sg.	1	* <i>nóiH-h₂e</i>	pl.	* <i>nóiH-me-</i>
	2	* <i>nóiH-th₂e</i>		* <i>nóiH-(t)e</i>
	3	* <i>nóiH-e</i>		* <i>neíH-ŕs</i>

Thus, though the new active and the new middle were set apart by very different formal means, late PIE 3 sg. **neíH-s-t* ‘turned (tr.), led’ and 3 sg. **nóiH-e* ‘turned (intr.)’ could both be said to represent the pre-PIE protomiddle 3 sg. **nóiH-e*, just as late PIE 3 sg. **kónk-e* ‘hangs (tr.)’ and 3 sg. mid. **k̂(o)nk-ór* ‘hangs (intr.)’ represented the earlier protomiddle **kónk-e*.

The treatment of the presigmatic aorist in Hittite naturally invites us to consider the fate of the other major class of protomiddle/*h₂e*-conjugation aorists—the aorists of the “stative-intransitive” type. Stative-intransitive aorists, as described in *HIEV* ch. 6, were a *h₂e*-conjugation class, likewise with **o* : **e*/zero ablaut (e.g. **b^houd^h-/*b^h(é)ud^h-* ‘wake up’, **uób₂g-/*u(é)h₂g-* ‘break (intr.)’, **pód-/*péd-* ‘fall’, etc.), that denoted entry into a state. Forms of this type are typically associated with resultative-stative perfects (3 sg. **b^heb^houd^h-e*, **ueuób₂g-e*, **pepód-e*), root stative-intransitive presents (e.g. 3 sg. **b^hud^h-ór* [> Lith. *būdi* ‘is/are wakeful/watchful’, OCS *boditi* ‘is awake’,⁶ Toch. B *pautotār* ‘flatters’⁷], **u_eh₂g-ór* [> Toch. B *wokotār* ‘bursts open’]), and sometimes intransitive *ié/o*-presents (e.g. **b^hud^h-ié/ó-* [> Ved. *būdhya-* ‘wake up’], **p_ed-ié/ó-* [> Ved. *pādya-* ‘fall’]). The resulting derivational complexes are known as “stative-intransitive systems” (*HIEV* 155). Outside Hittite, stative-intransitive aorists are most clearly reflected in the “passive” aorists of Indo-Iranian (cf. Ved. 3 sg. *ābodhi* ‘awoke’, pl. *ābudhvan*; *pādi* ‘fell’, pl. *apadran*) and the class V subjunctives of Tocharian (cf. Toch. A 3 sg. *wākaŕ*, B *wākam* ‘will burst open’ < **uób₂g-*; Toch. B subj. *pauta-*).

In Hittite two treatments are associated with these forms. Five primary verbs rest on aorists of this type:⁸

lāk-/lak- ‘bend, incline’ (: PIE **leg^h-* ‘lie down’): cf. stat.-intr. aor. Gk. *élekto*, OCS *-ležē* ‘lay down’;⁹ perf. Gk. *lelokhuān* ‘woman in childbed’; root stat.-intr. pres. OCS *ležiti* ‘lies’

lukk- ‘light up, dawn’ (: PIE **leuk-* ‘become bright’): cf. stat.-intr. aor. Ved. *aroci* ‘lit up’; perf. Ved. *ruróca*; root stat.-intr. pres. Toch. B *lyuketār* ‘becomes bright’¹⁰

⁶On the reflexes of stative-intransitive presents in the daughter languages, see Jasanoff 2002–3 [2004].

⁷For expected **putetār*, with *o*-grade generalized from the originally ablauting subjunctive and preterite; see below.

⁸A possible sixth would be *išpai-/išpi-* ‘bind’ (: PIE **sh₂ei-* ‘become entangled’(?!)), which appears to pattern like *lāk-* and *wāk(k)-*; see below. The semantics and morphological behavior of this verb, which was wrongly reconstructed in *HIEV* (94 and passim), are discussed in Jasanoff 2018:144–6.

⁹With leveling of *e*-grade and, in Greek, substitution of the “normal” middle ending *-to* for **-e*.

¹⁰Pace Adams 2012, who argues for taking *lyuketār* as a subjunctive.

park(iye/a)- ‘raise, rise’ (: PIE $*b^h_{r}erǵ^h-$ ‘rise’): cf. stat.-intr. aor. Arm. *barjaw* ‘arose’,¹¹ Toch. B subj. 3 pl. *pärkam-* ‘will go up’;¹² perf. Ved. $ʔbabṛhānā-$ ‘firm, strong’ (Kümmel 2000:329–30); root stat.-intr. pres. Toch. A *pärkatär* ‘goes up’
šupp- ‘sleep’ (: PIE $*suep-$ ‘fall asleep’): cf. stat.-intr. aor. OCS *-søpe* ‘fell asleep’; perf. Ved. *susupānā-* ‘asleep’; root stat.-intr. pres. OCS *søpitø* ‘is asleep’
wāk-/wakk- ‘bite’ (: PIE $*ueh_2g-$ ‘break’): cf. stat.-intr. aor. Toch. B *wākam;* perf. Gk. $(w)é(w)āge$ ‘is broken’; root stat.-intr. pres. Toch. B *wokotär*.

In two cases (*lāk-*, *wāk(k)-*) the Hittite reflex of the stative-intransitive aorist is a transitive *hi*-verb (cf. 3 sg. *lāki* ‘knocks out (teeth), trains (a vine)’; *wāki* ‘bites’). In the other three cases (*lukk-*, *park-*, *šupp-*) the Hittite form is an intransitive middle (cf. 3 sg. *lukkatta*, *lukta* ‘grows light’; 3 sg. impv. *parktaru* ‘let him arise’; *šuppari*, *šuptari*, *šuppatta* ‘sleeps’). Understanding the principles behind the transitive and intransitive outcomes will be our goal in what follows.

The transitivity of *lāk-* and *wāk(k)-* was discussed in *HIEV* 166. The account given there was that 3 sg. act. *lāki* was transitive by opposition to the intransitive middle *lagāri* ‘falls’, and that a parallel $*wak(k)āri$ could be assumed for the purpose of explaining the transitivity of 3 sg. *wāki*. Taken by itself this was not an unreasonable argument, since the polarizing intransitive form *lagāri* is an inherited stative-intransitive present (< PIE $*l_eǵ^h-ór$; cf. OCS *ležito*), and a pre-Hittite $*u_e h_2g-ór$ can safely be inferred from Toch. B *wokotär*. In the decade and a half since *HIEV*, however, it has become clear that the tendency of protomiddle-based formations to develop specifically transitive readings or to split into parallel transitive and intransitive paradigms is too widespread a phenomenon to be explainable on a word-by-word basis.¹³ A more systematic explanation of the transitivity of *lāki* and *wāki* becomes available if we assume, as I now believe, that protomiddle stems were capable of transitive and intransitive readings from the outset. In a recent publication (Jasanoff 2018:141–3) I suggested that the dual valency of the protomiddle might have been a leftover feature from an earlier (pre-PIE) voice alignment system in which the ancestor of the protomiddle was inherently patient-oriented and intransitive, and sentences of the attested type

$$X_{[nom.]} \text{ breaks}_{[protomid.]} Y_{[acc.]}$$

were reanalyzed from earlier intransitive structures of the type

$$\text{by-}X_{[agentive]} \text{ breaks}_{[pre-protomid.]} Y_{[nom.]}^{14}$$

¹¹ Rebuilt on the basis of a virtual 3 pl. $*b^h_{r}ǵ^h-nto$.

¹² Containing the weak stem of a subjunctive *pärk(a)-/pärk(a)-* < $*b^h_{r}ǵ^h-/*b^h_{r}ǵ^h-$.

¹³ Note especially the factitives in *-ab(h)-* (3 sg. *newabhi* ‘renews’ [; Lat. *renouāre*], etc.), which can hardly have been transitivized by polarization with the weakly attested middle.

¹⁴ The claim, in other words, would be that the transitive use of the protomiddle (and later *h₂e*-conjugation) rests on an ergative-like construction in which the underlying agent was reinterpreted as a nominative and the underlying patient was reinterpreted as an accusative. No assumptions can be made about the actual case endings at so remote a period.

Whether or not this conjecture is correct, there can be little doubt that, despite the name “stative-intransitive,” aorists of this type functioned in both a transitive and an intransitive capacity in the prehistory of Hittite. The actives *lāki* and *wāki* illustrate the transitive behavior; the middle forms of *lukk-*, *park-*, and *šupp-* exemplify the intransitive treatment.

The best attested middle form of *lukk-* is the 3 sg. *lukkatta* ‘(it) grows light’ (pret. *-attati*), also attested as *lukta* (pret. *-tat*).¹⁵ Since the form *lukkatta* is frequently written with the sign <kat>, the possibility has been raised, despite unambiguous spellings of the type *lu-ug-ga-at-ta* (OS), that the medial *-a-* may have been purely graphic.¹⁶ In point of fact, however, the genuineness of the trisyllabic spelling is unassailable. The proof, if any were needed, comes from the parallel forms of *šupp-*, where the 3 sg. appears as *šuppari*, *šuppatta* (*-up-pa-at-*), *šuptari*, and *šuptāri* (all NS).¹⁷ Putting aside the last of these as an error, we can assume an inherited **šuppa(ri)* (< **šúp-or*), with the replacement of dentalless **-o* by **-to* and **-oto* so often discussed by our honorand (see e.g. Yoshida 2007:381–6). By the same token, the common ancestor of *lukkatta* and *lukta* can only have been **lukka(ri)* (< **lúk-or*).¹⁸ The isolated *parktaru*, presupposing a 3 sg. **parka(ri)* (< **bʰǵǵʰ-or*), fits easily into the same picture.

We can say, then, that PIE stative-intransitive aorists took either a transitive or an intransitive “turn” in Hittite. The transitive turn consisted in modernizing the *h₂e*-conjugation endings, updating the inherited ablaut pattern, and back-forming a present to generate a transitive active *hi*-verb:

			PRES.	PRET.
sg.	1	<i>*uóh₂g-h₂e</i>	⇒ <i>wākhi*</i>	<i>wāklyn*</i>
	2	<i>*uóh₂g-th₂e</i>	⇒ <i>wākti*</i>	<i>wākta*</i>
	3	<i>*uóh₂g-e</i>	⇒ <i>wāki</i>	<i>wāk(k)is̄ (-as̄)</i>
pl.	3	<i>*uéh₂g-r̥s</i>	⇒ <i>wākkanzi</i> ¹⁹	<i>wāk(k)ir*</i>

The intransitive turn consisted in replacing the *h₂e*-conjugation endings with the renewed middle endings and generalizing the weak stem, retaining the accent on the root:²⁰

¹⁵Kloekhorst (2008b:s.v.) gives an overview of the Hittite forms. The active inflection (3 sg. *lukzi*, pret. *lukta*) is purely Neo-Hittite.

¹⁶See e.g. the discussions by Kloekhorst (*ibid.*) and Puhvel (2001:s.v.).

¹⁷There is also a secondary active paradigm (*šupzi*, etc.).

¹⁸On all these forms cf. also Oettinger, this volume.

¹⁹On the famously problematic *-k-* : *-kk-* alternation, see Melchert 2012, especially 180–2.

²⁰Thus producing, at least in our three-verb sample set, an accented zero grade (**lúk-*, **šúp-*, **bʰǵǵʰ-*).

			PRES.	PRET.
sg.	1	*lóuk- <i>h</i> ₂ <i>e</i>	⇒ <i>lukḫa(ri)*</i>	<i>lukḫat(i)*</i>
	2	*lóuk- <i>th</i> ₂ <i>e</i>	⇒ <i>lukta(ti)*</i>	<i>luktat(i)*</i>
	3	*lóuk- <i>e</i>	⇒ <i>lukka(ri)*</i>	<i>lukkāt(i)*</i>
			(→ <i>luk(kat)ta</i>)	(→ <i>lukkattati</i>)
pl.	3	*l(é)uk- <i>rs</i> (- <i>ér</i> ?)	⇒ <i>lukkanta(ri)*</i>	<i>lukkantat(i)*</i>

The question now arises: how much of this dual treatment was peculiar to Hittite, and how much was already a *fait accompli* in the parent language? To find the answer we will have to examine the evidence of the other branches of the family, beginning, as so often where *h*₂*e*-conjugation aorists are concerned, with Tocharian.

A salient fact about the treatment of stative-intransitive aorists in Tocharian is that the intransitive reading of these forms did not entail a switch to middle morphology. Stative-intransitive systems in Tocharian are reflected in unaccusative verbs like *wik-* ‘disappear’ (PIE **ueig-* or **ueik-*), *sruk-* ‘die’, and, with cognates in Hittite, *luk-* ‘shine forth’ and *wāk-* ‘burst open, bloom’. These have intransitive class III or IV presents (type B 3 sg. *wiketär* [III], *wokotär* [IV] < pre-Toch. **-otor* ← **-or*), continuing stative-intransitive presents in **-or*,²¹ and — of specific interest here — intransitive class V subjunctives, continuing stative-intransitive aorists.²² These subjunctives, representing the intransitive reflex of the stative-intransitive aorist, are properly morphologically *active*, with the active endings and retained **o* : **e*/zero ablaut: cf. A subj. V 3 sg. act. *wekaṣ* ‘will disappear’ (< **uoiK-*); B subj. V 3 sg. act. *sraukam* ‘will die’ (< **srouK-*; pres. III *sruketär*); B subj. V inf. *lukatsi*²³ ‘to shine’ (pres. III *lyuketär*); B subj. V 3 sg. act. *wākam*, A *wākaṣ* ‘will burst open’ (< **uoh₂g-*; B pres. IV *wokotär*). Cases where the class V subjunctive has been medialized to agree with the present, as in B 3 sg. mid. *wikätär* (for expected act. **waikam* = A *wekaṣ*; pres. B *wiketär*), or B 3 sg. mid. *lipätär* (for expected act. **laipam*), are common as well, but obviously secondary. Here, then, we have a major respect in which Tocharian is more archaic than Hittite: at least in conservative cases, stative-intransitive aorists retain their basic intransitive meaning without being converted into actual middles. It is as if Hittite, instead of converting the intransitive readings of the aorists **lóuk-*/**l(é)uk-*, **šyóp-*/**sy(é)p-*, and **b^hórǵ^h-*/**b^h(é)rǵ^h-* into middles (*luk(kat)ta(ri)*, *šup(pat)ta(ri)*, *parkta(ri)*), had kept them as active intransitive *hi*-verbs (3 sg. **lūk(k)i*, **šuwāp(p)i*, **pārki*).

Another important difference between Tocharian and Hittite is the following. In

²¹Classes III and IV are in complementary distribution and etymologically identical. Class IV is defined by the **a...o* > **ā...ā* umlaut rule, which took sequences of the type **wakotor* to PToch. **wākätär* (> B *wokotär*), thus blocking the expected class III **waketär* (> Toch. B **wāketär*).

²²Class V subjunctives, characterized by stem-final **-a-* and, in older cases, **o* : **e*/zero ablaut, are systematically discussed by Malzahn 2010:274–316. Etymologically, the class consists partly of stative-intransitive aorists, which supplied the ablaut pattern, and partly of ordinary root aorists to laryngeal-final roots, which supplied the stem-final **-a-*. The two have blended into a single type. See Jasanoff 2013 and forthcoming:42’–7’, updating the account in *HIEV* 161–5.

²³Cited to document the class V subjunctive, but of no value for telling whether the finite forms were active.

Hittite the choice of the transitive or intransitive “turn” was an either-or proposition: $*l\acute{o}g^h-/*l(\acute{e})g^h-$ and $*u\acute{o}h_2g-/*u(\acute{e})h_2g-$ became transitive active *hi*-verbs (cf. *lāki*, *wāki*), while $*l\acute{o}uk-/*l(\acute{e})uk-$, $*su\acute{o}p-/*su(\acute{e})p-$, and $*b^h\acute{o}r\acute{g}^h-/*b^h(\acute{e})r\acute{g}^h-$ remained intransitive and were converted into middles. In Tocharian a given root typically had both the transitive and intransitive treatments. The intransitive outcome, as we have just seen, was an active class V subjunctive—the lineal descendant, with assorted non-organic inner-Tocharian changes (cf. n. 21), of the original stative-intransitive paradigm. The transitive outcome is seen in the preterite of the corresponding “antigrundverb”—the transitive *Doppelgänger*, traditionally referred to as a species of causative, of the unaccusative base verb.²⁴ Thus, e.g., the antigrundverb of the root *wāk-* consists of a class VIII (*s-*) present, a class VII (*ñ-*) subjunctive, and a class III (presigmatic) preterite, all (at least in the active) meaning ‘split (tr.), take apart’. The class III preterite is poorly attested in this particular word, being limited to a single form in Toch. A (3 pl. *wākār*). But the full paradigm, which is not in doubt, would have been the Tocharian avatar of the presigmatic aorist:

sg.	1	<i>wākṵā</i> ^{*25}	(representing pre-Toch.	$*u\acute{o}h_2g-h_2e$)
	2	<i>wākāst</i> [*]	(" " "	$*u\acute{o}h_2g-th_2e$)
	3	<i>wākās</i> [*]	(" " "	$*u\acute{e}h_2g-s-t$) ²⁶
pl.	1	<i>wākmās</i> [*]	(" " "	$*u\acute{o}h_2g-me-$)
	2	<i>wākās</i> [*]	(" " "	$*u\acute{o}h_2g-(t)e$)
	3	<i>wākār</i>	(" " "	$*u\acute{e}h_2g-rs$)

The crucial 3 sg. forms are attested from the parallel root *luk-*: A *lyokās*, B *lyauksa* (*lyeuksa*) ‘illuminated’ (+ B 3 pl. *lyaukar*).

The importance of all this for Hittite and the rest of the family can be appreciated by viewing the pre-Tocharian transitive and intransitive paradigms side by side:

	PIE STAT.-INTRANS. AOR.	PRE-TOCH. INTRANSITIVE	PRE-TOCH. TRANSITIVE
sg. 1	$*u\acute{o}h_2g-h_2e$ ($*l\acute{o}uk-h_2e$)	$*u\acute{o}h_2g-h_2e$ ($*l\acute{o}uk-h_2e$)	$=$ $*u\acute{o}h_2g-h_2e$ ($*l\acute{o}uk-h_2e$)
2	$*u\acute{o}h_2g-th_2e$ ($*l\acute{o}uk-th_2e$)	$*u\acute{o}h_2g-th_2e$ ($*l\acute{o}uk-th_2e$)	$=$ $*u\acute{o}h_2g-th_2e$ ($*l\acute{o}uk-th_2e$)
3	$*u\acute{o}h_2g-e$ ($*l\acute{o}uk-e$)	$*u\acute{o}h_2g-e$ ($*l\acute{o}uk-e$)	\neq $*u\acute{e}h_2g-s-t$ ($*l\acute{e}uk-s-t$)
pl. 3	$*u\acute{e}h_2g-rs$ ($*l(\acute{e})uk-rs$)	$*u\acute{e}h_2g-rs$ ($*l(\acute{e})uk-rs$)	$=$ $*u\acute{e}h_2g-rs$ ($*l(\acute{e})uk-rs$)

Outside the 3 sg., where the etymologically correct protomiddle/ h_2e -conjugation ending $*-e$ is exclusively intransitive, the two paradigms are absolutely identical. It is easy to overlook this identity in attested Tocharian, where the intransitive and transitive forms are customarily assigned to two different verbs (grundverb and antigrundverb, respectively), and the intransitive paradigm has been secondarily invested with

²⁴For the term, cf. Malzahn 2010:50–1.

²⁵An idealized Toch. A display is shown. See Malzahn 2010:191 for the actually occurring forms.

²⁶Ablaut has been eliminated from the root *wāk-*, but \bar{e} -grade is still on display in the parallel *lyokās*, *lyauksa*. See below.

“*ā*-character.”²⁷ But none of this was early enough to have any bearing on the larger historical picture. Descriptively, the descendant of the stative-intransitive aorist in the earliest Tocharian was a *h₂e*-conjugation aorist in which *every form outside the 3 sg. was capable of functioning in a transitive or intransitive role*. Pre-Toch. 1 sg. **lók-_{h₂e}* would have meant both ‘I illuminated’ and ‘I became bright’ at this stage, and 3 pl. **ueh₂g-ʔs* would have meant ‘(they) broke’ both with and without a direct object. Only in the 3 sg. was there an overt distinction between the two readings. Here the suppletive sigmatic form represented the transitive meaning, while the *h₂e*-conjugation **-e* was confined to the intransitive.

There is every reason to suppose that, at least for the roots **ueh₂g-* and **leuk-*, the pre-Tocharian situation just described was also a stage in the development of the other non-Anatolian branches of the family. In Greek, the only language outside Anatolian and Tocharian where **ueh₂g-* is preserved as a primary verb, the position of the stative-intransitive aorist is occupied by the *ē*-aorist 3 sg. *e(w)ágē*, no doubt the replacement of PIE intransitive **uóh₂g-e* via a middle root aorist **é(w)akto* (cf. *élektō*). The transitive sense is represented by the *s*-aorist *é(w)axa*, the fully sigmatized cognate of pre-Tocharian **uóh₂g-_{h₂e}*, **uóh₂g-_{th₂e}*, **ueh₂g-_{s-t}*, etc.²⁸ Similarly, in the verb **leuk-*, the intransitive 3 sg. **lók-e* and transitive 3 sg. **léuk-_{s-t}* are reflected in Ved. pass. aor. *aroci* and OLat. *lūxit* ‘illuminated’, respectively. It is unclear whether the pattern exhibited by these roots—intransitive **R(ō)-e* vs. transitive **R(ē)-_{s-t}*—was common to all stative-intransitive roots at the post-Anatolian stage of PIE, or whether it was restricted to **ueh₂g-*, **leuk-*, and other specific lexical items. In the absence of strong evidence to the contrary, the latter is the safer assumption.

Let us now return to Hittite. We have found that Tocharian and (prior to the emergence of the fully sigmatic *s*-aorist) the other post-Anatolian languages made a partial distinction between the transitive and intransitive aorist paradigms of **ueh₂g-*, **leuk-*, and possibly other roots:

				TRANS.	INTRANS.	
sg.	1	* <i>uóh₂g-_{h₂e}</i>	/	* <i>lók-_{h₂e}</i>	✓	✓
	2	* <i>uóh₂g-_{th₂e}</i>	/	* <i>lók-_{th₂e}</i>	✓	✓
	3	a) * <i>uóh₂g-_e</i>	/	* <i>lók-_e</i>		✓
		b) * <i>ueh₂g-_{s-t}</i>	/	* <i>léuk-_{s-t}</i>	✓	
pl.	3	* <i>ueh₂g-ʔs</i>	/	* <i>léuk-ʔs</i>	✓	✓

²⁷Cf. n. 22. A fuller account of the behavior of these roots in Tocharian, not possible here, would also take note of how the stative-intransitive aorist was transformed to yield their respective intransitive preterites. Two quite different groups of intransitive preterites are found, seemingly with no difference in meaning: 3 sg. A *wāka-* and B *lyukā-* (preterite class I), with the same (analogical) stem-final *-a-* as in the class V subjunctive; and 3 sg. mid. A *wākāt*, *lyokāt* (< **-to*; preterite class o), as if built to the class III (antigrundverb) preterites *wākās** and *lyokās*. The class I and class o treatments are etymologically identical; both go back to the same intransitive **uóh₂g-_{h₂e}* (**lók-_{h₂e}*), **-_{th₂e}*, **-_e*, etc.

²⁸Otherwise LIV², where *é(w)axa* is said to be an inner-Greek creation on the basis of the present *(w)ágnumi*. In view of the common profile of **ueh₂g-* in Hittite and Tocharian and the parallelism with **leuk-*, I find this unlikely.

I would now venture to suggest that this was the situation in PIE itself. In Hittite, every verb had to make a “choice” between transitivity and intransitivity. The root **leuk-* took the intransitive path and was converted to a normal middle based on the zero-grade root form **luk-*. Thus arose 3 sg. mid. **lúk-o* (> Hitt. **lukka*), whence attested *luk(kat)ta*. **ueh₂g-*, by contrast, opted for transitivity. Apophonic leveling aside, the transitive paradigm survives essentially unchanged in the *hi*-conjugation preterite *wākhun**, *wāhta**, *wāk(k)iš̄*. Hitt. *wāk(k)iš̄* thus makes a word equation with Gk. 3 sg. *é(w)axe* and Toch. A 3 sg. pret. *wākūs**. It is notable that this is only the second “s-aorist” equation we have, the first being the well-established match of Hitt. *naiš̄* with Ved. *anaīsam*, *ánaiḥ*.²⁹

It may be useful to consider these results in the larger context of the development of the sigmatic aorist. The transitivizing 3 sg. in **-s-t* did not originally figure in the inflection of stative-intransitive aorists. The original home of the 3 sg. in **-s-t* was in the PIE presigmatic aorist proper, a formation associated with a class of bivalent (transitive-intransitive) roots that lacked perfects, stative-intransitive presents in 3 sg. **-or*, and other standard trappings of stative-intransitive systems. Well-known “presigmatic” roots were **d^héǵ^{wh}-* ‘burn (tr. and intr.)’, **pek^w-* ‘cook/grow soft’, **ueǵ^h-* ‘convey/travel in a vehicle’, **neiH-* ‘lead/turn (intr.)’, and others. As described in Jasanoff forthcoming:34’–40’, 48’–57’,³⁰ the full-blown presigmatic aorist not only made a distinction between transitive 3 sg. **d^héǵ^{wh}-s-t*, **néiH-s-t*, etc. and intransitive 3 sg. **d^hóǵ^{wh}-e*, **nóiH-e*, etc., but also implemented a transitive active : intransitive middle opposition in every other paradigmatic position (thus, e.g., trans. act. 3 pl. **d^héǵ^{wh}-rs*, **néiH-rs* vs. intrans. mid. **d^héǵ^{wh}-ro*, **néiH-ro*; see the complete display of the forms of **neiH-* above). Stative-intransitive aorists of the **uóh₂g-/u(é)h₂g-* and **lóuk-/l(é)uk-* type were less systematic, marking the difference between transitive 3 sg. **uél₂g-s-t* (**léuk-s-t*) and intransitive 3 sg. **uóh₂g-e* (**lóuk-e*) with sigmatic morphology, but otherwise using one and the same form with both values. To the extent a 3 sg. in **-s-t* figured in the PIE inflection of the stative-intransitive aorist, it was a secondary feature, imported from the true presigmatic aorist to mark the transitive : intransitive distinction in the paradigmatic position where it was most useful.

Abbreviations

HIEV = Jasanoff, Jay H. 2003. *Hittite and the Indo-European Verb*. Oxford: Oxford University Press.

*LIV*² = Kümmel, Martin, and Helmut Rix (eds.). 2001. *Lexikon der indogermani-*

²⁹The traditional view that the *hi*-conjugation 3 sg. pret. in *-š̄* (< **-s-t*) originated in the 3 sg. of the (pre)sigmatic aorist has been challenged (e.g. by Kim 2005:194) on the grounds that *nai-*, the only Hittite verb that demonstrably inherited such an aorist, would have been too narrow a basis for the later productivity of the ending. While I do not accept this argument (cf. Jasanoff forthcoming:57’–9’), another inherited example of *-š̄* is obviously welcome.

³⁰Slightly revising the account in *HIEV* ch. 7.

schen Verben: Die Wurzeln und ihre Primärstammbildungen. 2nd ed. Wiesbaden: Reichert.

References

- Adams, Douglas Q. 2012. “Shedding light on **leuk-* in Tocharian and Hittite and the wider implications of reconstructing its Indo-European morphology.” *Tocharian and Indo-European Studies* 13:21–55.
- Jasanoff, Jay H. 2002–3 [2004]. “Stative **-ē-* revisited.” *Die Sprache* 43:127–70.
- . 2013. “The Tocharian subjunctive and preterite in **-a-*.” In *Multi Nominis Grammaticus: Studies in Classical and Indo-European Linguistics in Honor of Alan J. Nussbaum on the Occasion of His Sixty-Fifth Birthday*, ed. Adam I. Cooper, Jeremy Rau, and Michael Weiss, 105–20. Ann Arbor: Beech Stave.
- . 2018. “What happened to the perfect in Hittite? A contribution to the theory of the *h₂e*-conjugation.” In *100 Jahre Entzifferung des Hethitischen: Morphosyntaktische Kategorien in Sprachgeschichte und Forschung. Akten der Arbeitstagung der Indogermanischen Gesellschaft vom 21. bis 23. September 2015 in Marburg*, ed. Elisabeth Rieken, 137–56. Wiesbaden: Reichert.
- . Forthcoming. “The sigmatic forms of the Hittite verb.” To appear in *Indo-European Linguistics*.
- Kim, Ronald I. 2005. Review of *HIEV*. *Diachronica* 22:191–200.
- Kloekhorst, Alwin. 2008a. “The Hittite 2pl.-ending *-šten(i)*.” In *VI Congresso Internazionale di Ittologia: Roma, 5–9 settembre 2005. Parte II*, ed. Alfonso Archi and Rita Francia, 493–500. Rome: CNR.
- . 2008b. *Etymological Dictionary of the Hittite Inherited Lexicon*. Leiden: Brill.
- Kümmel, Martin Joachim. 2000. *Das Perfekt im Indoiranischen: Eine Untersuchung der Form und Funktion einer ererbten Kategorie des Verbums und ihrer Weiterentwicklung in den altindoiranischen Sprachen*. Wiesbaden: Reichert.
- Malzahn, Melanie. 2010. *The Tocharian Verbal System*. Leiden: Brill.
- Melchert, H. Craig. 2012. “Hittite *hi*-verbs of the type *-āC₁i*, *-aC₁C₁anzi*.” *Indogermanische Forschungen* 117:173–86.
- Puhvel, Jaan. 2001. *Hittite Etymological Dictionary*. Vol. 5, *Words Beginning with L*. Berlin: Mouton de Gruyter.
- Yoshida, Kazuhiko. 1990. *The Hittite Mediopassive Endings in -ri*. Belin: de Gruyter.
- . 2007. “The morphological history of Hittite mediopassive verbs.” In *Verba Docenti: Studies in Historical and Indo-European Linguistics Presented to Jay H. Jasanoff by Students, Colleagues, and Friends*, ed. Alan J. Nussbaum, 379–95. Ann Arbor: Beech Stave.