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PIE *ueid- 'Notice' and the Origin of the Thematic Aorist

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PIE *u̯eid- 'notice' and the origin of the thematic aorist

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In memory of Calvert Watkins (1933-2013)

There can hardly be any doubt that the zero-grade thematic aorist, as we know it especially from Greek (e.g., ἔλιπον, -ες, -ε 'left'), Armenian (3 sg. *ebarj* 'lifted' < *-bhr̥ǵhet*), and Indo-Iranian (*ásicam, -aḥ, -at* 'sprinkled'), was a PIE formation.[1] While the great majority of thematic aorists are either thematizations of root aorists or wholly new creations, the aorists of the roots *u̯eid-* 'perceive, notice' and *h₁leudh-* 'go out' cannot be explained in this way. Thematic *u̯id-é/ó-* is found in all three "Southeast" branches (cf. Gk. εἶδον < *ἔϝιδον 'saw', Arm. *egit* 'found', Ved. *ávidat* 'id.'), while *h₁ludh-é/ó-* (: *h₁leudh-* 'go out') occurs in Greek (ἤλυθον 'came', inf. ἐλυθεῖν) and in Celtic and Tocharian, languages where the thematic aorist is otherwise unknown (cf. OIr. 3 sg. *luid*, Toch. A *läc*, B *lac* 'went out' < *h₁ludhet*).[2] Neither *u̯eid-* nor *h₁leudh-* made any other kind of active aorist in PIE. *u̯eid-*, with telic semantics and a nasal present (cf. OAv. *vīnastī*, Ved. *vindáti*), patterns as if it should have had a root aorist (*u̯eid-m̥*, etc.; cf. *ḱl̥-né-u-ti* 'hears', aor. *ḱléu̯-m̥*). Such a stem has been claimed to underlie Lat. *uīdī* 'saw' (so, e.g., LIV² 665 f. with references). But *uīdī*, as I have pointed out elsewhere (HIEV 230), is rather to be taken from a pre-Latin reduplicated perfect *wiwid-*, formed in the same way as *uīcī* 'conquered' and OIr. *-fích* 'fought', both

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1 The ideas in this paper have greatly benefited from discussion with Laura Grestenberger.

2 The PIE character of *u̯id-é/ó-* was commented on over a century ago by Thurneysen (1894: 84). After the discovery of Tocharian, *h₁ludh-é/ó-* was granted equal status by Cardona (1960).

< *wiwik- (: PIE *u̯eik- 'overcome'). As for the less well-documented *h₁leudh-, the thematic aorist *h₁ludh-é/ó- is one of only two tense stems reconstructable for this verb in the parent language.[3]

There is no reason to assume, of course, that the PIE thematic aorist, such as it was, would have been confined to precisely the two roots, *u̯eid- and *h₁leudh-, that happen to be reflected in three-way word equations in the daughter languages. Other inherited forms may have included *sed-e/o- (accent uncertain) 'sit (down)' (cf. Ved. ásadat, OCS sěde 'sat down')[4] and *sku̯-é/ó- 'say' (cf. Gk. ἐνισπεῖν 'say', Lat. in(s)quit 'says, said'); the latter was probably the source of the quasi-"root" *sku̯e- in OIr. scél 'story' < *sku̯e-tlo-. But the number of thematic aorists could not have been large. If the thematic aorist had been a genuinely common formation in PIE, it would not have left so obviously innovative a profile in the comparative record.

The prehistory of individual PIE tense-aspect formations is not in general accessible to us; we cannot, as Kuryłowicz said, reconstruct ad infinitum. Yet the question of the origin of the thematic aorist — and of the stem *u̯id-é/ó- in particular — invites speculation. As we have seen, the nasal present *u̯i-n(é)-d- / vīnastī / vindáti implies the former presence of an active root aorist. Likewise pointing to a root aorist is the Vedic "passive" aorist 3 sg. ávedi 'was found / recognized (as)'; compare the semantically related passive aorists śrā́vi (OAv. srāuuī) 'was heard' and ádarśi 'appeared', respectively paired with the transitive root aorists áśrot 'heard' (cf. OAv. impv. sraotū) and 1 sg. inj. dárśam 'I see' (= OAv. darəsam). The core thematic aorist *u̯id-é/ó- would thus seem to have been the inner-PIE replacement of an older athematic *u̯(é)id-. The question "Where did the thematic aorist come from?" can be reformulated more concretely, and perhaps more usefully, as "How did the root aorist *u̯éidm̥, *-s, *-t come to be replaced by thematic *u̯idóm, *-és, *-ét?"

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3   The other is the perfect *h₁eh₁l(ó)udh-. I know of no evidence that would support the LIV² reconstruction (248) of an active root aorist rather than a thematic aorist for this verb. Ved. ruh- 'climb, grow' and its congeners are best kept separate on semantic grounds; see below.

4   Although the Vedic and Slavic aorist forms can attractively be identified in this particular case, it is not clear to me that the Slavic "root aorist" in 1 sg. -ъ, 2-3 sg. -e (type u-sъpe 'fell asleep', sъ-bъde 'woke up', etc.) should generally be compared with the classical thematic aorist at all.

A hundred years ago this question would have received the one-word answer "thematization." But this response is no longer adequate. Spontaneous thematization was not a significant phenomenon in PIE; it was a characteristic process of the daughter languages, where it was favored by such post-IE developments as the proliferation of *bhéreti- and *u̯éǵheti-type thematic presents,[5] the decline of the *h₂e*-conjugation (see below), and the confusion, especially in Indo-Iranian, of the athematic 3 pl. ending *-(é)nt with thematic *(-o)-nt. The replacement of *u̯éid-m̥, *-s by *u̯idóm, *-és within the parent language must therefore have had some particular motivation, some "story" that set it apart from the innumerable athematic presents and aorists that were *not* thematized in the common period. Our task, if we want to understand the position of the thematic aorist in the PIE verbal system, must be to find that story.

We are well informed about the PIE averbo of the root *u̯eid-. There were two primary active tense stems, the nasal present and its thematic (earlier root) aorist. Both were unambiguously transitive. There was also a rich system of historically non-active ("protomiddle") forms, charac- terized by one or another variant of the endings of the "*h₂e*-series."[6] To this group belonged 1) the "stative-intransitive" *h₂e*-conjugation aorist *u̯óid-/*u̯(é)id-, which gave the passive aorist *ávedi*;[7] 2) the related stative-intransitive root present *u̯id-h₂é(r), *u̯id-th₂é(r), *u̯id-ó(r), etc., whence Ved. 3 sg. *vidé* 'is found, is known (as)' and (as argued most recently in Jasanoff 2004: 160 f.) Go. *witai[þ]* 'observes', Lith. *pavýdi* 'envies', and OCS *vidit̄ъ* 'sees'; 3) the unique unreduplicated perfect *u̯óid-/*u̯id-´* 'know' (cf. Ved. *véda*, Gk. (ϝ)οῖδα, etc.), relexicalized as a separate verb within the protolanguage; and 4) in all likelihood, the productively formed reduplicated perfect *u̯eu̯óid-/*u̯eu̯id-´*, the source of Ved. *vivéda* 'has found' and Lat. *uīdī*. Protomiddle-based forms that pattern synchronically as middles (e.g., *ávedi*, *vidé*) are mostly intran-

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5   For the distinction between the two types, only the first of which is attested in Anatolian and Tocharian, see HIEV 224-227.

6   The "two-series" framework adopted here starts from the assumption that the earliest PIE had two sets of verbal endings, respectively characterized by *-m(i)* and *-h₂e* in the 1 sg. The latter was the source of the endings of the classical perfect and middle, as well as of the "*h₂e*-conjugation" (cf. HIEV 70 ff., 144 ff., and *passim*).

7   Stative-intransitive aorists, an archaic class with distinctive reflexes in Hittite, Tocharian, and Indo-Iranian, are discussed in HIEV 153 ff.

sitive; those that pattern synchronically as actives (e.g., *véda*, *vivéda*) are transitive. It is theoretically possible, therefore, that the transitive active thematic aorist **u̯id-é/ó-* had its origin not in the active proper, but in some morphological formation associated with the endings of the *h₂e-*series.

An ingenious explanation along *h₂e-*series/protomiddle lines was proposed nearly a half century ago by the late Calvert Watkins, who likened Ved. *ávidat* to the imperfects *áduha*[*t*] 'produced (milk, etc.)' and *áśaya*[*t*] 'lay', with secondary *-t* (Watkins 1969: 100):[8]

> From the root *vid-* we have attested in Vedic the athematic forms with primary ending 3sg. *vidé*, 3pl. *vidré*, ipv. *vidām*, exactly like *duhé*, *duhré*, *duhām* and *śáye*, *śére*, *śayām*. But while for the latter two we have the forms with secondary ending *áduha*[*t*], *áśaya*[*t*], no comparable secondary forms are found from athematic *vid-*. The reason is not hard to seek. On the pattern *duhé* : *áduha*[*t*] = *śáye* : *áśaya*[*t*] we expect *vidé* : **ávida*[*t*]. I submit that the latter form is in fact the well-known thematic aorist *ávidat*, the only thematic aorist with any clear claim to antedialectal antiquity in Indo-European. . .
>
> We thus suppose an Indo-European 3sg. mid. secondary **u̯id-é/ó*, primary (with deictic *-i*) **u̯id-é/ói*. . . The primary form is continued intact in RV *vidé*, later renewed to *vitté* (AV). The secondary form was perhaps the first such verb to receive the affixation of an empty *-t*, in an Eastern dialect area of Indo-European; from this was formed the paradigm I-Ir. *(á)vidam (á)vidas (á)vidat*, Gk. (with variant apophonic form of the ending) (ἔ)ϝιδον (ἔ)ϝιδες (ἔ)ϝιδε. In the injunctive form thus obtained we may see the nucleus for the great development at a later period in both dialects — alone in Indo-European — of the category of thematic aorist and *tudáti*-class present.

The idea of referring the 3 sg. of the thematic aorist to a middle form in "**-e/o*" was part of Watkins' larger project of explaining *all* thematic formations on the basis of a 3 sg. in **-e* or **-o*, which he considered mere apophonic variants. Whatever the merits of this system as a whole, however, it is clear that the comparison of *ávidat* with *áduhat* cannot be
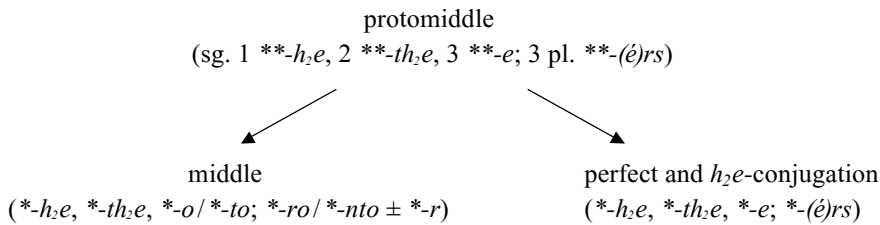
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8   Quoted from pp. 153-4 of the author's unpublished English version.

correct as it stands. The two forms pattern quite differently: *áduhat*, despite its late added *-t*, is synchronically middle, corresponding to 3 sg. pres. *duhé* 'produces (milk)' and to 3 pl. pres. *duhré*, impf. *áduhran*; *ávidat* 'found' is synchronically active, corresponding to the active present *vindáti* 'finds', and not (*pace* Watkins) to *vidé* 'is found, known (as)'. The predesinential *-a-*'s of *áduhat* and *ávidat* are not equatable; the *-a-* of *áduhat* goes back to *-o*, the secondary form of the middle ending *-o(r)*, while the *-a-* of *ávidat*, if the comparison with Gk. ἔ(ϝ)ιδε is taken seriously, can only go back to *-e-*. The etymologically related endings *-e* and *-o* were distinct in late PIE. There is no IE daughter language in which *-e* (*-ei*) is middle or *-o* (*-oi*, *-or*) is active.

The direct equation of *ávidat* (< PIE *u̯idét*) and *áduhat* (< PIE *dhughó*) must accordingly be abandoned. But the basic elements of Watkins' theory, which is in many respects highly attractive, can be reassembled into a more acceptable package. The position taken here will be that Watkins' analysis of *ávidat* as *ávida + t* was correct in all but one particular: the late PIE form to which the *-t* was added was not a 3 sg. middle in *-o*, *-e*, or "*-e/o*," but a 3 sg. *active* in *-e*. The possibility of an active form *u̯id-é* 'saw' was not contemplated in 1969. The notion that PIE had present and aorist actives in *-h₂e*, *-th₂e*, *-e*, etc. — the "perfect" endings — was the distinctive contribution of the *h₂e*-conjugation theory, which was first proposed a decade later to deal with the problem of the Hittite *ḫi*-conjugation (Jasanoff 1979).

The developed form of the *h₂e*-conjugation theory posits a unitary pre-PIE protomiddle, characterized by the undifferentiated endings of the *h₂e*-series and expressing a range of processual and stative meanings.[9] In the transition from pre-PIE to PIE proper the protomiddle underwent formal renewal to yield the "true" middle. Forms not renewed as middles were reinterpreted as *h₂e*-conjugation actives, of which the perfect can be considered a special case. In schematic form:

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9 The "real" or "original" function of the protomiddle, to the extent it is meaningful to employ such terminology, is an obvious topic for speculation. I plan to discuss it in a future publication.

protomiddle
(sg. 1 **-*h₂e*, 2 **-*th₂e*, 3 **-*e*; 3 pl. **-*(é)rs*)

middle	perfect and *h₂e*-conjugation
(*-*h₂e*, *-*th₂e*, *-*o* / *-*to*; *-*ro* / *-*nto* ± *-*r*)	(*-*h₂e*, *-*th₂e*, *-*e*; *-*(é)rs*)

In some cases a single protomiddle form or paradigm yielded *both* a true middle, often intransitive, and an active, typically transitive. Thus, e.g., the root **ḱenk-* 'hang' made an ablauting protomiddle present ***ḱónk-* / ***ḱénk-*; in PIE proper this gave both a transitive *h₂e*-conjugation active with 3 sg. **ḱónk-e* (cf. Hitt. 3 sg. (*ḫi*-conj.) *kānki*, Go. *hahiþ* < **hanhiþ* 'hangs (tr.)') and an intransitive middle with 3 sg. **ḱónk-or* (cf. Hitt. *gangattari*, OHG *hangēt* < **hangai[þ]*[10] 'hangs (intr.)', late Ved. *śaṅkate* 'hesitates'). A comparable split underlies the contrast between 1 sg. act. **bhéro-h₂* (= Lat. *ferō*) 'I carry', presumably shortened from a *h₂e*-conjugation 1 sg. ***bhéro-h₂e*, and the corresponding 1 sg. mid. **bhéro-h₂e-r* (= Lat. *feror*). The history of the *s*-aorist furnishes a more complex example, as described in HIEV 190-195. What is important for our present purposes is that PIE could have — and sometimes did have — synchronic actives in 3 sg. **-e* alongside middles in 3 sg. **-o(r)*.

Returning to **u̯eid-*, we have seen that this root made a stative-intransitive present that inflected as a middle (3 sg. **u̯id-ó(r)* = Ved. *vidé*, Go. *witaiþ*, etc.) and a *h₂e*-conjugation stative-intransitive aorist (3 sg. **u̯óid-e* ≅ Ved. *ávedi*). Pairs of this type continue an inherited pattern, both in Indo-Iranian (cf. further Ved. *cité* 'appears' : *áceti*, OAv. *sruiiē* 'is famed (as)' : Ved. *śrā́vi*)[11] and across the family as a whole. The following are representative cases:

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10 With the voiced Verner's variant *-g-*, presumably due to analogical accent on the athematic ending.

11 The pattern is discussed, though against the background of very different starting assumptions, by Kümmel (1996: 20 f.).

STATIVE-INTRANS. PRES. IN 3 SG. *-OR	STATIVE-INTRANS. H_2E-CONJ. AORIST
Hitt. *ištuwāri* 'becomes known', OHG *stuēt* < *-aiþ* 'atones for' (< *stuu̯ór*)[12]	Ved. *ástāvi* 'was praised' (< *stóu̯*-)
Toch. B pres. class III *lyuketär* 'lights up' (← *lukór*)[13]	Ved. *ároci* 'shone forth' (< *lóuk*-)
Lith. *sė́di*, OCS *sěditъ* 'sits' (← *sedor*)[14]	Ved. *ásādi* 'sat down' (< *sód*-)
Hitt. *lagāri* 'bends (intr.)', OCS *ležitъ* 'lies' (← *leghór*)	Hitt. *lāki* 'bends (tr.)' (< *lógh*-)[15]
Toch. B pres. IV *wokotär* 'blooms' (← *u̯h₂ǵór*)[16]	Toch. B subj. class V *wākaṃ* 'will bloom', Hitt. *wāki* 'bites' (< *u̯óh₂ǵ*-)
Toch. B pres. III *wiketär* 'disappears' (← *u̯iKór*)	Toch. A subj. V *wekaṣ* 'will disappear' (< *u̯óiK*-)

etc.

The Tocharian pattern seen in the last two cases, which pair a class III or IV present with an ablauting class V subjunctive, is quasi-regular; cf. Malzahn 2010 (henceforth "Malzahn"): 371.

These facts point to a still deeper regularity. In the h_2e-conjugation/protomiddle framework, all middles of sufficient antiquity go back to pre-PIE protomiddles. At the "protomiddle stage," therefore, the stative-intransitive presents (3 sg.) *u̯id-ó(r)*, *ḱluu̯-ó(r)*, *luk-ó(r)*, *stuu̯-ó(r)*, etc. would have been represented in pre-PIE by the protomiddles **u̯id-é*, **ḱluu̯-é*, **luk-é*, **stuu̯-é*, etc. As I have suggested elsewhere (HIEV 169-171), forms of this type — or rather, their full paradigms (1 sg. **u̯id-h₂é* 'I notice/become noticeable' (*vel sim.*), 2 sg. **u̯id-th₂é*, 3 sg.

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12 The Germanic word is discussed in Jasanoff forthcoming, expanding upon and partly correcting HIEV 170.

13 With Toch. B *-etär* (A *-atär*) < *-otor*, renewed from *-or*. The normal PIE thematic ending *-etor* yielded AB *-(ä)tär* with preceding palatalization.

14 With the Balto-Slavic theme vowel *-ĭ-*, extracted from the 3 pl. in *-intor* < *-n̥tor*; cf. Jasanoff 2004: 152 ff.

15 Secondarily specialized as transitive vis-à-vis the middle *lagāri*; so too (*mutatis mutandis*) *wāki* 'bites' in the example immediately following.
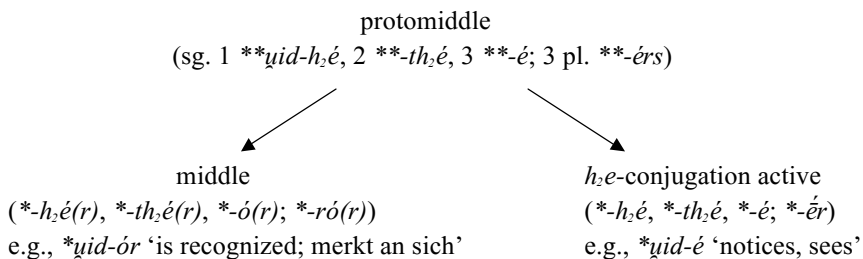
16 Classes III and IV are in complementary distribution; when the root contained an *a*-vowel there was bidirectional assimilation with the *-o-* of the following syllable (*wagotor* > *wåkåtär* > B *wokotär*, A *wakatär*).

****ṷid-é*, 3 pl. ***ṷid-érs*) — were created via an inner-PIE derivational process from the corresponding protomiddle aorists (***ṷóid-h₂e* 'I noticed/became noticeable', ***-th₂e*, ***-e*, 3 pl. ***ṷéid-r̥s*). Schematically,

protomiddle aorist ***ṷóid-e*   ⇒   protomiddle present ***ṷid-é*
"   "   ***ḱlóṷ-e*   ⇒   "   "   ***ḱluṷ-é*
"   "   ***lóuk-é*   ⇒   "   "   ***luk-é*

etc.

Reconstructing forward, let us now consider the treatment of the pre-PIE protomiddle ***ṷid-é* as it developed into PIE proper. We know *ex hypothesi* that ***ṷid-é* was renewed as the "true" middle **ṷid-ó(r)*, whence Ved. *vidé*, etc. But we also know, from cases like ***ḱónk-/**ḱénk-* 'hang', that the renewal of a protomiddle as a middle (e.g., ***ḱónk-e → *ḱónk-o(r)* 'hangs (intr.)') did not preclude the possibility of the original paradigm surviving as a *h₂e*-conjugation active (***ḱónk-e → *ḱónk-e* 'hangs (tr.)'). In principle, therefore, we can envisage a development

protomiddle
(sg. 1 ***ṷid-h₂é*, 2 ***-th₂é*, 3 ***-é*; 3 pl. ***-érs*)

middle   *h₂e*-conjugation active
(**-h₂é(r)*, **-th₂é(r)*, **-ó(r)*; **-ró(r)*)   (**-h₂é*, **-th₂é*, **-é*; **-ḗr*)
e.g., **ṷid-ór* 'is recognized; merkt an sich'   e.g., **ṷid-é* 'notices, sees'

Not shown in this diagram is the distinction between the primary (*hic et nunc*) and secondary (imperfect/injunctive) forms of the *h₂e*-conjugation present. To judge from the limited evidence available, the relevant forms of the present proper would have been 1 sg. **ṷid-h₂éi*, 2 sg. **ṷid-th₂éi*, and 3 sg. **ṷid-é*, with *hic et nunc *i* in the first and second persons but not the third. In the imperfect/injunctive, the corresponding forms would have been 1 sg. **ṷid-h₂é*, 2 sg. **ṷid-th₂é*, and 3 sg. **ṷid-ét*, with **-et* in the 3 sg. going back to **-e* extended by secondary **-t*.[17] It was this **ṷid-é[t]*

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17 The problem of the primary : secondary distinction in the *h₂e*-conjugation is discussed at length in HIEV 86 ff. The secondary 3 sg. in **-e[t]* was the *Scharnierform* on the basis of which *h₂e*-conjugation presents were thematized in the later languages.

'noticed, saw', I submit, that served as the take-off point for the creation of the thematic aorist in the way suggested by Watkins. The essential difference vis-à-vis Watkins' scenario is that the underlying 3 sg. *u̯id-é was not a middle, but a *h₂e*-conjugation active.

An updated Watkins-style account of the thematic aorist *u̯id-é/ó- would require two further steps: 1) reanalysis of 3 sg. *u̯idét as root (*u̯id-) + thematic vowel (*-e-) + ending (*-t), with attendant creation of a full thematic paradigm; and 2) displacement of *u̯idét and its paradigm from the present system to the aorist. Either one of these developments could have preceded the other. If thematization came first, *u̯id-é/ó- would have begun its thematic life as a *tudáti*-present, competing with, and ultimately being forced into the aorist by the more highly characterized nasal present *u̯i-n(é)-d-.[18]   If displacement to the aorist came first, there would have been a period, perhaps only brief, when the thematic aorist was preceded by an athematic *h₂e*-conjugation aorist *u̯id-h₂é, *u̯id-th₂é, *u̯id-é[t], etc. In either case, the migration of 3 sg. *u̯idét to the aorist system would have paved the way for the eventual spread of thematic *u̯id-é/ó- at the expense of the original but no longer extant root aorist *u̯éid-m̥, *u̯éid-s, *u̯éid-t, etc.

The *h₂e*-conjugation "translation" of Watkins' theory preserves what was attractive in Watkins' original version, in that it links the creation of the thematic aorist *u̯id-é/ó- to the specific morphological profile of the root *u̯eid-. At the same time, it eliminates Watkins' unviable intermediate stage of a 3 sg. *middle* *u̯id-é — a form which, even if it had existed, would probably have meant 'appeared' (*vel sim.*; cf. Ved. *vidé*) rather than 'noticed' (cf. Ved. *vindáti*, *ávidat*). Yet all this has been purely schematic. It is true that the 3 sg. protomiddle **u̯id-é could theoretically have split into a middle *u̯id-ó(r) and a *h₂e*-conjugation active *u̯id-é (→ *u̯id-é[t]); but it is also true that *any* protomiddle, under the *h₂e*-conjugation theory, could have split in this way, and not all did. The task

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18 The development can be thought of as a kind of chain shift: *u̯in(é)d- (new impf.) ⇢ *u̯idé/ó- (old impf./new aor.) ⇢ *u̯(é)id- (old aor.; lost). Aorists based on imperfects are found across the IE family, Armenian being particularly rich in examples (cf. *eber* 'brought' < *ebheret, *elēz* 'licked' < *eleiǵh(e)t, etc.)   At the PIE level, following Weiss (1993: 178 ff.), I have argued (Jasanoff 2012) that Lat. *lēgī* 'I read, gathered' and similar forms were originally the imperfects of Narten presents.

must now be to show that zero-grade protomiddle presents of the type ancestral to Ved. *vidé*, *cité*, Hitt. *ištuwāri*, *lagāri*, Toch. B *lyuketär*, *wiketär*, etc. really did give rise to h_2e-conjugation actives as well as to stative-intransitive middles. Hints in this direction come from scattered pairs like Ved. *cité* (< *$k^{(u)}it$-$ó(r)$)[19] beside the *tudáti*-present OCS *čьtǫ* 'count, read' (< *$k^{(u)}it$-$é/ó$-), or Gmc. *fulgai[þ]* 'follows' (< *$(s)pl̥ḱ$-$ó(r)$) beside Ved. *spr̥śáti* 'touches' < *'reaches after' (< *$(s)pl̥ḱ$-$é/ó$-). The *tudáti*-presents in these cases are best interpreted as protomiddle/h_2e-conjugation presents (*$k^{(u)}it$-$h_2é$, *-$th_2é$, *-$é[t]$, etc.) which, unlike the corresponding forms of *$ueid$-, did *not* migrate to the aorist. Pairs of this type have never been systematically described or identified, much less in a single language. As will emerge below, however, they are a significant phenomenon in Tocharian.

The now familiar class III present B *wiketär*, A *wikatär* goes back to a stative-intransitive present in 3 sg. *-*or*. The other "principal parts" of this verb are a class V (-*ā*-) subjunctive with historical *o : zero ablaut (3 sg. act. A *wekaṣ* < *waik-, mid. B *wikātär*) and a class I (-*ā*-) preterite (3 sg. B *wīka*, A *wikā-m*), both representing transformations of the stative-intransitive h_2e-conjugation aorist (cf. above).[20] The pattern pres. III – subj. V – pret. I is firmly established in Tocharian grammar. Importantly, a subset of the verbs with this profile also form a transitive "antigrundverb," which in the case of *wik-* has the meaning 'avoid'.[21] The antigrundverb of *wik-* has by definition a class VIII (-*s*-) present (3 sg. B *wikṣäṃ*, A *wikäṣ* < *wik-se/o-) and a class III (-*s*-) preterite (3 sg. A *wekäs* < *waik-s-),[22] both illustrating the productive extension of sigmatic morphology to mark transitivity in Tocharian. More interesting than these for our present purposes, however, is the simple thematic (class II) subjunctive of the antigrundverb (3 sg. B *wiśäṃ*, infin. *wiśśi*), a form that points, in Tocharian terms, to a present *wik-e/o-. This present, displaced to the subjunctive by the innovated transitive stem *wik-se/o-, is

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19 Kümmel (2000: 179 f.) argues for *keit-, against the traditional *$k^u eit$-.

20 Cf. Jasanoff 2012, elaborating on HIEV 161 ff.

21 The term "antigrundverb" is used by Malzahn to characterize the subtype of traditional "causatives" with class VIII (not IX) presents and class III (not II or IV) preterites in both languages. Such forms are normally transitive, and in the great majority of cases opposed to intransitive "grundverbs" with presents of classes III or IV.

22 Implied by the participle *wawiku*. Compare also 2 pl. impv. B *pwikso*.

most simply regarded as the *tudáti*-present companion to the stative-intransitive middle in *-or*. Depending on whether the root is compared with Ved. *viś-* 'enter' or *vij-* 'fall back', the antigrundverb subjunctive *wik-e/o-* can be identified with the attested *tudáti*-present *viśáti* or *vijáte*.[23] The averbo of *wik-* can accordingly be interpreted as follows:

GRUNDVERB (INTRANS.)	PRE-TOCH.	PIE
pres. III B *wiketär*, A *-atär*	*wikotor*	stative-intrans. pres. ***u̯iK-ór***
subj. V B *wikātär*, A *wekaṣ*	*waika-/*wika-*	stative-intr. aor. *u̯óiK-/ *u̯(é)iK-
pret. I B *wīka*, etc.	*wika-/*waika-*[24]	" " " " "

ANTIGRUNDVERB (TRANS.)	PRE-TOCH.	PIE
pres. VIII B *wikṣäṃ*, A *-äṣ*	*wikse/o-*	[presigm. aor. subj. *u̯éiK-se/o-][25]
subj. II B *wiśäṃ*, etc.	*wike/o-*	*tudáti*-pres. ***u̯iK-é/ó-***
pret. I B *waiksa*, etc.	*waik(s)-*	[presigm. aor. *u̯ḗiK-s-/ *u̯óiK-][26]

It will be noted that the formal relationship of the intransitive class III present (*wiketär ← *u̯iKór*) to the transitive class II subjunctive (*wiśäṃ ← *u̯iKét(i)*) is the same, *mutatis mutandis*, as that of Ved. *vidé* to the thematic aorist *ávidat*.

The case of transitive *wiśäṃ* beside intransitive *wiketär* is not isolated. Other verbs showing the same pattern are *luk-* 'light up', antigv. 'illuminate' (pres. III B *lyuketär*; antigv. subj. 3 sg. mid. *lyuśtär*),[27] *trik-* 'be confused', antigv. 'lead (+ go) astray' (B *triketär*, A *trikatär*; antigv. subj. 3 sg. B *triśäṃ*, A abstr. II *triślune*);[28] *pälk-* 'burn (intr.)', antigv. 'burn (tr.)' (B *pälketär*; antigv. abstr. II *pälyśalñe*, A *pälyślune*); *pläṅk-*

23 Cf. Malzahn 321. I informally write the zero grade of the root as *wik-* in both pre- and Proto-Tocharian, even though the notation *wəyk-*, with morphologically restored *-əy-* for phonologically regular *-ə-*, would have been more accurate at the latter stage (similarly *luk-* for *ləwk-*, etc.). On the absence of initial palatalization in *wik-* see note 35.

24 An explanation for the remarkable *o*-grade in the preterite active plural is proposed in Jasanoff 2012: 113-115.

25 A back-projection ("transponat") of the class VIII present; it is not in fact likely that *u̯eiḱ-* or *u̯eig-* made a (pre)sigmatic aorist in PIE.

26 Likewise a back-projection.

27 With the middle presumably expressing subject involvement; the passage is unclear (cf. Hackstein 1995: 124).

28 The second verbal abstract ("abstr. II") is formed from the subjunctive stem.

'come on sale', antigv. 'sell' (B *plänketär*, antigv. subj. 3 sg. *plyañcän*); and *krämp-* 'be disturbed', antigv. 'disturb' (B *krämpetär*, antigv. inf. *kramtsi*).[29] In three of these roots, *luk-*, *pälk-*, and *plänk-*, the antigrundverb subjunctives have root-initial palatalization (*lyuś-*, *pälyś-* (< *plyäś-*), *plyäñś-*), giving rise to the common view that they go back to *e*-grade preforms — either root aorist subjunctives (so especially Kim 2007: 189 ff.) or thematic presents (so Malzahn 321 f.). But neither of these is an attractive option. As Malzahn points out (267), Tocharian subjunctives, including the frequently cited A 3 sg. *śmäṣ*, pl. *śmeñc* 'will come' (< *g^{u}ém-*, not *g^{u}éme/o-*), invariably go back to PIE indicatives, not subjunctives; it would be extraordinary if the only exception to this rule were the small and specialized class of anticausative subjunctives associated with verbs with class III presents. Yet it would be equally extraordinary if the subjunctives *lyuś-*, *plyäś-*, and *plyäñś-* went back to primary *e*-grade thematic presents. Such stems are notoriously rare in Tocharian, being confined to two inherited examples, B *paräṃ* 'carries', A mid. *pärtär* (: Lat. *ferō*, Gk. φέρω, etc.), and B *āśäṃ*, A *āśäṣ* 'leads' (: Lat. *agō*, Gk. ἄγω, etc.). As we know from Anatolian, the rarity of thematic presents in Tocharian is an archaic feature; we cannot posit new cases *ad libitum*.

The antigrundverb class II subjunctives of *luk-*, *trik- pälk-*, *plänk-*, and *krämp-* are inseparable from the antigrundverb subjunctive of *wik-*: if B subj. *wiśäṃ*, *wiśsi*, etc. goes back, as claimed, to a *tudáti*-present *μiK-é/ó-*, then the palatalizing subjunctives *lyuś-*, *plyäś-*, and *plyäñś-* must go back to *tudáti*-presents as well. If so, however, the initial palatalization in these forms must be secondary. To understand how palatalization could have "infected" the class II subjunctive, let us consider the distribution of this feature in the case of *luk-*. The root *luk-* offers a salutary object lesson in how the presence or absence of palatalization in a Tocharian form is not always a reliable indicator of its original vocalism. In the simple non-causative verb, the present (B *lyuketär*) goes back to a zero-grade stative-intransitive (pre-Toch. 3 sg.

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29 I assign the technically ambiguous antigrundverb subjunctive of *krämp-* to class II rather than class I on grounds of general patterning. The aberrant antigrundverb of *spärk-* 'disappear, perish', which is uniformly intransitive and seems to make a class I subjunctive in Toch. A (Malzahn 970), will not be discussed here.

*lukór) that would regularly have given B *luketär; the palatalized initial must have come from another tense stem in the extended paradigm, such as the class I preterite (3 sg. lyukā-me).[30] But palatalization is not phonologically regular in the preterite either. It was extended to the preterite of luk- from a-character roots of the type kärs- 'know', where the PIE source was an active root aorist with *e : zero ablaut (3 sg. B śarsa < *kersH-t).[31] In the antigrundverb, initial palatalization was *suppressed* in the present (3 sg. B lukṣäṃ), which goes back, at least notionally, to a pre-Toch. s-aorist subjunctive with e-vocalism (*leuk-se/o-).[32]

The preterite of the antigrundverb of luk- is an s-preterite with phonologically regular palatalization in both languages (3 sg. B lyauksa, A lyokäs, as if < *lēuk-s-). The latter fact is significant. Palatalization is not as a rule preserved in the active of the s-preterite in Toch. B; Malzahn (301) lists only seven or eight Toch. B verbs with palatalized s-preterites, of which three are precisely the antigrundverbs of luk-, pälk-, and pläṅk-, and two of the others (lut- 'remove', plu- 'float') are from other roots beginning with l- or a historical l-cluster. The participle associated with B lyauksa is lyelyuku, likewise with palatalization. The match in palatalization between the participle and the finite forms is normal in Toch. B, but not in Toch. A, where the palatalized participle lyaly(u)ku (= B lyelyuku) is synchronically irregular (the expected form would have been *lal(u)ku; cf. ñakäs 'destroyed', ptcp. nanku).[33] For Proto-Tochar-

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30 Given the general make-up of class III, the idea that lyuketär originally had full grade, like Ved. rócate 'id.', cannot be seriously entertained.

31 As detailed in Jasanoff 2012, the class I preterite, as we have it, was formed through the mutual assimilation and merger of two entirely distinct input formations: 1) the "normal" root aorist (with *e : zero ablaut) of a-character roots; and 2) the h₂e-conjugation root aorist (with *o : zero ablaut) of non-a-character roots. Only the first of these historically had palatalization.

32 The identification of class VIII with the (e-grade) s-aorist subjunctive has been contested (e.g., by Adams (1994: 4 f.)), precisely on the grounds that the palatalization expected in a historically e-grade formation is absent. But the near-total absence of even *analogical* palatalization in this class (as against, e.g., class IX lyutaskau 'I drive away', śarsäskau 'I announce', etc.), suggests a late depalatalization process.

33 The participle type B lyelyuku = A lyaly(u)ku is proper to class II, and some of the roots in question have finite class II (< reduplicated aorist) forms as well (cf. A 3 sg. mid. papälykāt, B 2 sg. impv.(!) peplyaṅke). Whatever the historical relationship of the class II to the class III forms in these cases, it is a

ian, both the finite preterite and the past participle must exceptionally be set up with palatalization — a descriptive situation we may refer to as "hyperpalatalization." The only other verbs with reconstructable hyper-palatalized *s*-preterites in Proto-Tocharian are the antigrundverbs of *pälk-* (cf. B pret. *pelyksa*, ptcp. *pepalyku* = A *papälyku*), *pläṅk-* (B pret. *plyeṅksa*, vb. n. *peplyaṅkor*), and probably *lip-* 'remain' (A pret. *lyepäs*, ptcp. *lyaly(i)pu*), along with *lut-* (B pret. *lyautsa*, A ptcp. *lyal(u)tu*), *nusk-* 'press' (B pret. 1 sg. *ñauskuwa*, ptcp. *ñeñusku*), and a few less certain cases.

Given all this, there can be only limited surprise value in the fact that root-initial palatalization is also found in the antigrundverb subjunctives of *luk-*, *pälk-*, and *pläṅk-* and the identically formed class II subjunctives of *lut-* (B 2 pl. *lyuccer*) and *nusk-* (B abstr. II *ñuṣṣalñe*). The latter two cases are transparently analogical. The "root" *nusk-* is a back-formation from the etymologically obscure pre-Toch. -*śke/o*-present **nuske/o-*; this stem, which would regularly have yielded forms in **nuṣṣ-* in Tocharian, was the source of the actual subjunctive *ñuṣṣ-*, with palatalization imported from the *s*-preterite *ñausk-*, presumably on the model of, or following the lead of, the "*l*-roots." The class II subjunctive **lyuc-* likewise owes its palatalization to the *s*-preterite; indeed, the whole averbo of the root *lut-* appears to have been formed on the basis of the *s*-preterite *lyautsa*, which was created within Tocharian as a transitive *Oppositions-bildung* to the intransitive thematic aorist (B *lac*, A *läc*).[34] The locus of the pattern *hyperpalatalized* s-*preterite* ⇒ *palatalized class II subjunctive* would thus seem to lie precisely in the trio of *luk-*, *pälk-* (< **pläk-*), and *pläṅk-*, all beginning with **l-* or an *l*-cluster, and all with the same distinctive morphological profile. If our goal is to find the origin of this pattern, we must look here.

It is not a difficult search. The unpalatalized pre-class II subjunctives **luś-* (< *tudáti*-pres. **luk-é/ó-*), **pläś-* (< **bhl̥g-é/ó-*), and **pläñś-* (< **Pl̥nK-é/ó-*) would have been synchronically irregular in the verbal system of Proto-Tocharian. Proto-Tocharian class II subjunctives nor-

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safe inference that the retention of palatalization in the finite class III forms in Toch. B was linked to the palatalization of the corresponding participles. The association with roots in **(C)l-* is noted by Malzahn (203).

34 Compare Kümmel (LIV[2] 249), who remarks that "die faktitive Bedeutung des Aktivs [*scil.* von *lyuc-*] stammt wohl vom *s*-Aorist."

mally agreed in palatalization with the corresponding preterite; this was also true for *wik-* (B subj. *wiś-*, not **yiś-*; impv. 2 pl. *pwikso*), where palatalization was systematically suppressed through most of the extended paradigm.[35]   But *wik-*, along with the Proto-Tocharian ancestors of unpalatalizable *trik-* and *krämp-*, constituted the immediate morphological "peer group" of *luk-*, *pälk-*, and *pläṅk-*, with the same combination of a transitive, partly sigmatic, partly thematic antigrundverb and an intransitive class III present. When a hypothetical juvenile learner of Proto-Tocharian sought to form the transitive class II subjunctives of **luk-*, **pläk-*, and **pläṅk-*, therefore, (s)he would have had to take account of the following facts:

   1) the class II subjunctives of **wik-*, **trik-*, and **krämp-* showed the normal agreement in palatalization — in this case non-palatalization — with the corresponding class III (*s-*) preterites;

   2) the class III preterites of **luk-*, **pläk-*, and **pläṅk-* were not only palatalized, but palatalized in a particularly insistent and conspicuous way;

and perhaps also

   3) the distribution of **l-* vs. **ly-* in the root **luk-* was incipiently unstable.

Learning errors (*scil.* analogical changes) can never be predicted with certainty. But it would have been a trivial misanalysis for new speakers to substitute *lyuś-*, **plyäś-* (> *pälyś-*) and **plyäñś-* (> *plyäñc-*) for the phonologically regular *tudáti*-presents **luś-*, **pläś-*, and **pläñś-*. There is no need to invoke full-grade thematic presents or root aorist subjunctives to explain these forms; their apparent full grade is an illusion.

   The purpose of this excursus has been to show that Tocharian, in pairs of the type pres. B *wiketär* : subj. **wiśäṃ*, *lyuketär* : subj. *lyuśtär*, etc., preserves robust evidence for the pattern seen above in the Vedic pair

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35 An important reason for the near-absence of palatalization in *wik-* (it is found only in the productively formed class II pret. B *yaika*) was the fact that unpalatalized **w-* was phonologically regular before PIE/pre-Toch. **i*. Pre-Toch. **i* was backed to **ɨ* after **w*, blocking palatalization. The development of the zero grade (e.g., in the class III present) would thus have been **wik- > *wɨk- > *wɨk- > *wɨk- > *wɨk-* → **wɨyk- > AB *wik-*.

3 sg. pres. mid. *vidé* (← *-ó(r)*) : 3 sg. aor. act. *ávidat* (< *-ét*). According to our proposed scenario for the stem *$\underline{u}$id-é/ó-*, the pivotal PIE 3 sg. *$\underline{u}$idét* was properly a h_2e-conjugation imperfect/injunctive with the secondary ending *-et* (i.e., *-e* + "clarifying" *-t*); thematization was a consequence of the reanalysis of 3 sg. *$\underline{u}$id-é[t]* as root + thematic vowel + 3 sg. desinence. The *tudáti*-presents *wiś-*, *l(y)uś-*, *päl(y)ś-*, etc. continue precisely the same formation, the only difference being that in the case of *$\underline{u}$idét* the new thematic stem (or its not yet thematized h_2e-conjugation predecessor) was reassigned to the aorist. With Tocharian in the picture, the hypothetical pre-PIE split of the protomiddle **$\underline{u}$id-h_2é*, ***-th_2é*, ***-é* into a middle (3 sg. primary *-or*, secondary *-o*) and a h_2e-conjugation active (3 sg. primary *-e*, secondary *-et*), originally posited on purely theoretical grounds, finds solid comparative support.

Returning to the larger question, we must now ask whether the history of *$\underline{u}$id-é/ó-* can be generalized to the thematic aorist as a whole. At issue, mainly, is the origin of the stem *$h_1$ludh-é/ó-* (= Gk. ἤλυθον, etc.), the only thematic aorist other than *$\underline{u}$id-é/ó-* whose existence in the parent language can be regarded as certain. The PIE profile of the root *$h_1$leudh-*, unfortunately, is not nearly so well-documented as that of *$\underline{u}$eid-*. Setting aside Ved. *róhati* 'climbs', YAv. 3 pl. *raoδənti* 'grow', and Go. *liudan* 'grow' on semantic grounds, there are only two stems, as we have seen, that can be securely reconstructed for this root: 1) the thematic aorist *$h_1$ludh-é/ó-* itself, and 2) the perfect *h_1eh_1l(ó)udh-*, whence the synchronically isolated Greek perfect εἰλήλουθε. Even this limited formal inventory, however, is suggestive. The PIE perfect, as argued elsewhere (HIEV 168 f.), was probably originally a reduplicated derivative of the protomiddle (> h_2e-conjugation) stative-intransitive aorist:

stative-intrans. aorist	*$k^{(u)}$óit-e* 'appeared'	⇒	perf.	*$k^{(u)}$e$k^{(u)}$óit-e*
" " "	*lóuk-e* 'shone forth'	⇒	"	*lelóuk-e*
" " "	*bhóudh-e* 'awoke'	⇒	"	*bhebhóudh-e*
" " "	*$\underline{u}$óh_2ǵ-e* 'broke'	⇒	"	*$\underline{u}$e$\underline{u}$óh_2ǵ-e*

etc.

The perfect *h_1e$h_1$lóudh-e* thus implies the one-time existence of a protomiddle/h_2e-conjugation aorist *(*)$h_1$lóudh-e* 'went out'. But aorists of this type, as discussed above, also gave rise to zero-grade protomiddle presents: cf. ***$\underline{u}$óid-e* ⇒ ***$\underline{u}$id-é*, ***ḱlóu̯-e* ⇒ ***ḱlu̯-é*, ***lóuk-e* ⇒

**luk-é*, etc. It would have been perfectly natural, therefore, for the pre-PIE aorist **$h_1$lóudh-e* to trigger the creation of a protomiddle present **$h_1$ludh-h_2e*, **-th_2e*, **-e*, etc., in exactly the same way that the aorist **u̯óid-e* engendered the protomiddle present **u̯id-h_2e*, **-th_2e*, **-e*, etc. Such a derived present, in the wake of the differentiation of the middle and the h_2e-conjugation into separate categories, could in principle have surfaced either as a present middle 3 sg. *$h_1$ludh-ór* (secondary *-ó*), a h_2e-conjugation active *$h_1$ludh-é* (secondary *-ét*), or both. What survives in the comparative record is the h_2e-conjugation 3 sg. imperfect/injunctive *$h_1$ludhét*, displaced from the present and reinterpreted, like *u̯idét*, as a thematic aorist.[36]

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36 Most of the other old-looking thematic aorists, including *sed-e/o-* 'sit (down)' and *sk^u-é/ó-* 'say' (cf. above), can easily be accommodated within this framework. The root *sed-* formed a stative-intransitive aorist *sod-/ *sed-* (Ved. *ásādi*) and a root stative-intransitive present *sed-or* (Lith. *sě́di*), both reliable predictors of a h_2e-conjugation active (*sed-e[t]*). In the case of *sek^u-*, the root stative-intransitive present corresponding to the thematic aorist *sk^u-é[t]*, i.e., 3 sg. *sk^u-ór*, is perhaps to be seen in Gmc. *sagai[þ]* (cf. OHG *sagēt*, etc.), a blend of the inherited iterative-causative *sagjiþ* (< *sok^u-éi̯e/o-*; cf. Lith. *sakýti*) and a root stative-intransitive present in *-ai[þ] (*skwai[þ]?).

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