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The Thematic Conjugation Revisited

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Calvert Watkins' brilliant book on the PIE verbal system was partly devoted to an analysis of the thematic conjugation in *-e/o-*.[1] Although Professor Watkins was not the first scholar to recognize that the thematic 1 sg. present in *-o-h_2* ("*-ō*"; cf Gk. φέρω, Lat. *ferō*, OIr. *biru*, etc.) implied a historical relationship between the thematic conjugation and the PIE perfect and middle,[2] he was the first to appreciate the importance of this relationship for an understanding of the verbal system as a whole. In the nearly three decades since the "blue book" appeared, Watkins' theory of the thematic conjugation has stimulated extensive research into the "h_2-series" of endings and its original role in the parent language. Strangely, however, the thematic conjugation itself has been relatively neglected for most of this period.[3] Within the American Indo-European community, a vigorous defense of the "classical" thematic paradigm, *contra* Watkins, was mounted in the 1970's and early 1980's by the late Warren Cowgill (cf below). In the aftermath of the inconclusive debate that followed, the major issues in the field of IE verbal morphology shifted elsewhere; the thematic conjugation became, in effect, a topic "too hot to handle". One of the purposes of the present study is to show that the time has come for a reopening of the discussion. Thanks to recent progress in our understanding of the verbal system as a whole, the position of the thematic conjugation can be seen in a wholly new light.

Let us begin by reviewing the major differences between Watkins' theory and the standard post-Neogrammarian account:[4]

1) Watkins sees the 1 sg. in *-o-h_2* ("*-o-ǵo*")[5] as a revealing archaism, the relic of a period when the thematic "active" was characterized by endings akin to those of the perfect and middle. He concludes that the original inventory of thematic presents must have had middle-like meaning.

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[1] The work referred to, of course, is Watkins 1969—hereinafter simply "Watkins". Note that the term "thematic conjugation" is used in this study to denote the "root" or "simple" thematic conjugation—the full-grade, root-accented present class typified by *bhére/o-* 'carry' and *uéǵhe/o-* 'convey'. We will not be concerned here with oxytone thematic stems (e.g., *uidélό-* 'catch sight of') or with extended thematic suffixes of the type *-ie/o-*, *-ske/o-*, etc., which have a very different history.

[2] See especially Pedersen 1938:80-6.

[3] A major exception is Kortlandt 1979, which I hope to discuss elsewhere.

[4] Cf Watkins 66-9, 105-23 and *passim*.

[5] The "acute" long vowel of Germanic (cf Go. *baira*, OHG *biru*) and Baltic (cf Lith. *-ù* < *-úo*) rules out the possibility of a contracted ending of the type *-e/o-h_2e/o*. We must rather assume an inner-IE apocope of *-e/o-h_2e* to *-o-h_2*, comparable to the shortening of *-o-h_1e* to *-o-h_1* in the thematic dual (cf *uĺk^{u}o-h_1* 'two wolves' vs. *pód·h_1e* 'two feet').

2) Since the PIE 3 sg. ending corresponding to 1 sg. $*-h_2(e)$ was $*-e$ or $*-o$, and not $*-ti$, Watkins reconstructs the preform of Ved. *bhárati*, Gk. φέρει, Go. *bairiþ*, etc. as *bhére* rather than the usual *bhéreti*. He posits a partial re-modeling of *bhére* to *bhéreti* in the post-IE period, with $*-ti$ added to $*-e$ from the 3 sg. present of athematic verbs.

3) Going further, Watkins identifies the 3 sg. in $*-e$ as the source of the thematic vowel itself. He theorizes that a form like *bhére*, which consisted historically of a root (*bher-*) and a 3 sg. desinence ($*-e$), was reanalyzed synchronically as a sequence of root *bher-* + suffix $*-e-$ + desinence *zero*. The perceived synchronic stem *bher-e-* was then extended from the 3 sg. to the rest of the paradigm, leading to the replacement of forms like athematic 1 sg. *bhér-h₂(e)* by thematic *bhér-e-h₂(e)* > *bhér-o-h₂*.[6]

At the heart of Watkins' argument is 2)—the claim that the thematic 3 sg. was originally *bhére*, without the distinctive $*-ti$ of "normal" PIE 3 sg. actives. In support of this reconstruction Watkins cites evidence from five branches of the family: Greek (t-less 3 sg. φέρει for expected *φέρεσι/*φέρετι),[7] Celtic (OIr. 3 sg. conjunct ·*beir* beside absolute *berid*),[8] Anatolian (Hitt. 3 sg. *wašti* 'sins' ($< *-ei$ or $*-oi$) beside "thematic" 1 sg. *waštaḫḫi*, 2 sg. -*atti*, etc.),[9] Balto-Slavic (Lith. 3 p. *vēda* 'lead(s)' for expected *vēdati;[10] PSlav. 3 sg. *vede* beside *vedeti, *vedetŭ),[11] and Tocharian (Toch. A 3 sg. *āšāṣ*, B *āšäm* 'leads', with apparent particles -ṣ, -m added to t-less *aǵe*).[12] But the interpretation of these facts was soon contested. In 1973 a radical new theory of the Insular Celtic absolute : conjunct distinction was proposed by Cowgill;[13] central to this analysis was Cowgill's derivation of OIr. ·*beir* from a precociously apocopated preform *beret'* < *bereti* rather than from a t-less 3 sg. *bere*. Cowgill likewise rejected the evidence for $*-e$ in Anatolian, Balto-Slavic and Greek. The Hittite *ḫi*-conjugation type *waštaḫḫi*, -*atti*, -*i*, he claimed, was not of thematic origin: not only were there no word equations linking such verbs to thematic presents elsewhere, but the Hittite stem-vowel -*a*- was in many cases demonstrably secondary.[14] To account for the t-less forms of Balto-Slavic Cowgill envisaged a Celtic-like early apocope of $*-eti$ to *-et'* —an analysis independently favored for Baltic by the apparent apocope of $*-i$ in the Lithuanian *s*-future (cf *duõs* 'will give' < *dō-s-t(i)*),

and for Slavic by the appearance of shortened *vedǫ* (< *-ont'*) beside *vedǫtĭ*, *vedǫtŭ* in the 3 pl.[15] Only in Greek, where he sought to defend a purely phonological change of $*-eti$ to $*-ei$, was Cowgill unable to offer a genuinely attractive alternative to Watkins' theory.[16] In Tocharian, the evidence for a 3 sg. in $*-e$ disappeared with the discovery, due independently to Klingenschmitt and the present author, that A *āšāṣ* could be regularly traced to an ordinary thematic *aǵeti*.[17]

The effect of the *bhére* vs. *bhéreti* debate, for most students of the problem, was an uneasy settlement in favor of the traditional *bhéreti*. Yet even with the substitution of *bhéreti* for *bhére* as the late PIE preform, Watkins' argument retains its basic cogency. The cooccurrence of $*-eti$ (3 sg.) and $*-oh_2$ (1 sg.) in a single paradigm is an anomaly that needs to be explained. In principle, there are two ways that the paradigmatic association of these endings could have come about: either $*-oh_2$ replaced an earlier "regular" $*-omi$, or $*-eti$ replaced a dentalless ending such as $*-\bar{e}$ (i.e., thematic vowel $*-e-$ + desinence $*-e$) or Watkins' $*-e$. Other things being equal, there are strong reasons to favor a scenario of the latter kind; the synchronically isolated $*-oh_2$, unlike $*-eti$, bears all the typological marks of an archaism.[18] Despite the apparently secure status of $*-eti$ as the late PIE ending, therefore, it would be premature to reject Watkins' model completely. A more prudent course would be to consider the case for modifying Watkins' chronology. As we shall see, there is much to be gained, and little to be lost, by assuming that the original 3 sg. corresponding to 1 sg. *bhéroh₂* was indeed *bhére*, but that the replacement of *bhére* by *bhéreti* took place *in the parent language itself*.

Relieved of its dependence on inconclusive dentalless forms like Gk. φέρει, OIr. ·*beir* and Hitt. *wašti*, Watkins' hypothesis of an originally athematic (pre-) PIE *bhér-e* receives support from a number of other facts. It is a striking detail, for example, that the archaic PIE 3 sg. middle ("stative") corresponding to the active *bhére(ti)* was not **bhérōr* (i.e., *bhérelo-* + $*-or$) but *bhéror* (cf OIr. 3 sg. pass. ·*berar* 'is carried', ·*tíagar* 'is sent', etc.), with the dentalless middle desinence $*-o(r)$ added directly to the root *bher-*. *bhéror* is thus an unambiguously athematic form, the survival of which in late PIE must have been assisted by the surface homophony of the middle ending $*-o$ with the thematic

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[6] Watkins' account of this ending differs in detail (cf note 5). The *o*-timbre of the thematic vowel, which Watkins attributes to the laryngeal, is probably better explained by the PIE rule that changed $*-e$- to $*-o$- in post-tonic closed syllables.

[7] Watkins 123.

[8] *op. cit.*, 164-70.

[9] *op. cit.*, 77-82.

[10] *op. cit.*, 212-14.

[11] *op. cit.*, 218-21.

[12] *op. cit.*, 204-5.

[13] Published as Cowgill 1975.

[14] So already in a talk before the Harvard Linguistic Circle in March, 1972. Cowgill's consolidated views on the thematic endings were belatedly published as Cowgill 1985.

[15] Cowgill 1985:105-6; cf already Vaillant 1966:10.

[16] *op. cit.*, 100-3. No fully satisfactory solution to the problem of Gk. -ει has yet been found; the standard analogical explanation is badly compromised by the Mycenaean evidence (cf Rix 1976:251). My own, quite different, analogical account will be presented elsewhere.

[17] Cf Jasanoff 1987:110-11, Klingenschmitt 1987:188, n. 64.

[18] The place of $*-eti$ in this argument could, of course, equally well be taken by any of the other "regular" thematic endings, such as the 2 sg. in $*-esi$ or the 3 pl. in $*-onti$. The basic question is whether thematic presents were originally normal actives that acquired a peculiar 1 sg., or "abnormal" actives that were progressively regularized.

vowel.[19]   The importance of such forms for a proper understanding of the thematic conjugation will emerge directly.

Equally significant is the fact that Watkins' athematic paradigm $*bhér-h_2e$, $*-th_2e$, $*-e$, etc., widely dismissed as speculative and morphologically isolated when it was first proposed, can now be identified as one subtype of a much larger class of athematic presents. As I have argued elsewhere,[20] the core of the Hittite ḫi-conjugation consists precisely of functionally active presents, all historically athematic, which make their finite forms with the inherited "perfect" endings (1 sg. -ḫi < *-ḫai < *-h_2e + i, 3 sg. -i < *-ei < *-e + i, etc.).   According to the "h_2e-conjugation theory", the original stimulus for which came in part from the Watkins-Cowgill debate over the Hittite wašta-type, such verbs continue neither perfects nor middles in the strict sense, but go back directly to a hitherto unrecognized PIE category. The parent language evidently once had two sets of personal endings in the indicative—an unmarked "active" set (1 sg. $*-m(i)$, 2 sg. $*-s(i)$, 3 sg. $*-t(i)$, 3 pl. $*-(é)nt(i)$), and a marked or "protomiddle" set (1 sg. $*-h_2e$, 2 sg. $*-th_2e$, 3 sg. $*-e$, 3 pl. $*-(é)rs$).[21] The protomiddle endings expressed a range of functions (stative, processual, passive, self-benefactive, etc.) broadly similar to the functions of the classical perfect and middle. As the parent language evolved, however, the protomiddle endings divided into two potentially contrasting sets—the formally renewed "true" middle endings, characterized (inter alia) by o-timbre in the third person and the hic et nunc particle $*-r$ (1 sg. $*-h_2e(r)$, 2 sg. $*-th_2e(r)$, 3 sg. $*-o(r)$, 3 pl. $*-ro(r)$); and the misleadingly named "perfect" endings, which continued the old protomiddle set unchanged.   In late PIE the new middle endings were assigned to forms which had a strong synchronic middle ("internal") component; other protomiddles preserved their inherited inflection intact. Thus, by the time of the breakup of the parent language, the perfect endings were associated with two kinds of forms: a) true perfects, easily recognized by their distinctive meaning and stem formation; and b) "h_2e-conjugation" actives—etymological protomiddles which for one reason or another failed to be interpreted as "true" middles at the time of the protomiddle/middle split.   Representative of type b) were presents such as $*mólh_2-/*mélh_2-$ 'grind' (1 sg. $*mólh_2-h_2e$, 3 sg. $*mólh_2-e$; originally perhaps processual 'grind away at') and $*dhéh_1-i-/*dhh_1-i-\acute{\ }$ 'suck' (1 sg. $*dhéh_1-i-h_2e$, 3 sg. $*dhéh_1-i-e$). Such forms, which might be termed "neoactives",[22] yielded

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[19] The derivation of berar from $*bhéror$ is unconvincingly rejected by Cowgill (1983: 101-3).   As seen by Watkins (213), the Gothic passive in 3 sg. -ada (type bairada 'is carried') presupposes a dentalless 3 sg. in $*-oi$ (cf Ved. (prá) śóbhe 'shines forth', RV I 120. 5).   Note the contrast with the derived thematic types in $*-i̯elo-$, $*-skelo-$, $*-ei̯elo-$, etc., which had only $*-eto(r)$, never $*-o(r)$, in the 3 sg. mid.

[20] Most recently in Jasanoff 1994; a fuller treatment is forthcoming.

[21] On the relationship among the r-endings of the 3 pl. see Jasanoff (to appear). The endings of the 1-2 pl. and 1-3 dual no doubt differed from those of the active as well, but the details are less clear. Cf note 38.

[22] I have elsewhere described the Hittite ḫi-conjugation as a "middle déclassé".

ḫi-conjugation verbs in Hittite ($*mallaḫḫi$, $*-atti$, 3 sg. mall(a)i, etc.), but were usually thematized in the other IE languages (cf Lat. molō, OIr. melid, Go. malan, etc.; Ved. dháyati, -te 'suck(le)', Arm. diem, OHG tāen, etc.).

Seen in this perspective, Watkins' pre-PIE $*bhér-h_2e$, $*-th_2e$, $*-e$ is not isolated, but can be interpreted as a h_2e-conjugation present of the same basic type as $*mólh_2-/*mélh_2-$ and $*dhéh_1-i-/*dhh_1-i-\acute{\ }$. This, of course, is not equivalent to a proof that such a present actually existed.   But structural considerations make Watkins' hypothesis very attractive.   The root $*bher-$ seems to have had not one but two presents in the parent language: alongside the familiar thematic stem there also existed an active ("mi-conjugation") root present, reflexes of which appear in Latin (3 sg. fert, etc.), Greek (2 pl. impv. φέρτε) and Indo-Iranian (Ved. bhárti).   There are strong indications that this root present was of the acrostatic or "Narten" type, with $*-\bar{e}-$: $*-\breve{e}-$ ablaut.[23]   A Narten present would help explain the lengthened grade of nominal derivatives like Slav. $*bérmę$ (SC brème) 'burden' and OHG bāra 'bier' ($< *bhēr-$), the acrostatic vocalization pattern of MIr. birit 'sow' ($< *bher-ṇt-ī$), and—most important of all—the preserved $*-\bar{e}-$ of the irregular Tocharian A imperfect pārat ($< *bhēr-(a)to$).[24] Setting up a PIE $*bhér-ti$, however, would have far-reaching implications. Narten presents were not confined to the active in the parent language; the root $*steu-$ 'proclaim', e.g., had both a lengthened-grade active $*stéu-ti$ (cf Ved. stáuti 'praises') and a full-grade middle $*stéu-or$ (cf Ved. stáve 'is praised', Gk. στεῦται 'boasts').   Under the h_2e-conjugation theory, the middle $*stéu-or$ presupposes an earlier protomiddle 3 sg. $*stéu-e$ (1 sg. $*stéu-h_2e$, 2 sg. $*stéu-th_2e$). Precisely such an array of forms can be assumed for $*bher-$:

Narten active	Narten middle		pre-PIE protomiddle
$*stéu-ti$	$*stéu-or$	<	$*stéu-e$
$*bhér-ti$	$*bhér-or$	<	$*bhér-e$

A pre-PIE paradigm $*bhér-h_2e$, $*-th_2e$, $*-e$ is thus not merely a theoretical possibility; it is actually predicted by the known morphological peculiarities of the root $*bher-$.

A revised Watkins-based account of the thematic present $*bhérelo-$, then, might run as follows.   At the earliest recoverable stage of the parent language, $*bher-$ made a Narten present, with an active 3 sg. $*bhér-ti$ and a protomiddle 3 sg. $*bhér-e$.   The active $*bhér-ti$ meant simply 'carries'; the protomiddle $*bhér-e$ had a wider range of meanings, including a) 'is carried' (passive-intransitive), b) 'carries in his/her own interest' (self-benefactive), and c) 'carries along, carries onward' (progressive-processual).   With the subsequent split of the protomiddle into the middle proper and the h_2e-conjugation, senses a)

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[23] As originally described by J. Narten (1968).

[24] For the type cf Krause-Thomas 1960:221; the $\bar{e}$-vocalism was first correctly identified, though attributed to an aorist, by Adams (1988:87-8). The Toch. B causative preterite type cāla 'lifted' rests on an elaboration of the same category.

and b) were assigned to the emergent middle *bhér-or.[25] In sense c), however, *bhér-e survived as a h_2e-conjugation active, opposed both to the new middle *bhér-or and to the differently nuanced active *bhér-ti. The present paradigm *bhér-h₂e, *-th₂e, *-e 'carry along' would initially have been indistinguishable from other h_2e-conjugation presents, at least as far as its endings were concerned. But at some point prior to the breakup of the parent language, the h_2e-conjugation inflection of *bher- was thematized: the 3 sg. in *-e was remade to *-eti, prompting the spread of *-e- to the other persons and numbers.[26] Why this process affected only roots like *bher-—presents of the other h_2e-conjugation types were not thematized until the dialectal period—is not entirely clear. Perhaps the addition of *-ti to 3 sg. *bhére was triggered by the *-ti of the closely related, though not quite synonymous, Narten present *bhérti.[27]

The attractiveness of this explanation depends on the fact that Watkins' key assumption—the existence of an athematic present *bhér-h₂e, *-th₂e, *-e —follows almost mechanically from the decision to reconstruct an active paradigm *bhér-mi, *bhér-si, *bhér-ti. What remains to be seen is whether the history of this verb can be generalized: was the case of the root *bher- more or less isolated, or were Narten protomiddles the source of the "root" thematic conjugation as a whole?

A certain number of roots with inherited thematic presents seem in fact to have patterned like *bher-. One such is *leĝ- 'gather', the source of Gk. λέγω 'pick up, count, say', Lat. legō 'gather, read', and Alb. mb-leth 'gather'—all thematic—as well as of Toch. AB läk- 'see'. No Narten forms are directly attested from this root. Yet a Narten present seems as good as assured by the lengthened-grade preterites Lat. (perf.) lēgī, Alb. (aor.) mb-lodha, and Toch. A (impf.) lyāk (< *lēĝ-(a)t; cf părat < *bhēr-(a)to)—a remarkable three-way word equation that virtually requires the assumption of a PIE imperfect *léĝ-m̥,

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[25] The creation of the new 3 sg. mid. *bhéretor, with the concomitant restriction of the older form *bhéror to the functions characterized as "stative" by Oettinger (1976), was a later development (cf Jasanoff 1994:151-2).

[26] Logically, of course, thematization could have preceded the addition of *-ti, but the order here seems the more natural one.

[27] The problem appears to be bound up with one of the major uncertainties in the h_2e-conjugation theory—the status of the imperfect. If the PIE 3 sg. forms *bhére and *mólh₂e meant 'carries (along)' and 'grinds (away)', respectively, how did PIE speakers express the corresponding preterital meanings 'carried (along)' and 'ground (away)'? There is some reason to believe that the "secondary" ending employed for this purpose was *-et, i.e., *-e + facultative *-t (a 3 sg. imperfect in *-et may already have existed in the mi-conjugation ielo- and skelo-presents). Thus established in the h_2e-conjugation, the new ending would have provided an incentive for all h_2e-verbs to be thematized. The bher-type, however, would have been especially susceptible to such pressure, since the parallel Narten present would have suggested a proportion *bhér-t : *bhér-ti : : *bhére-t : X, where X could be solved as *bhére-ti.

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*-s, *-t.[28] The exclusion of the lengthened-grade root-form *lēĝ- from the present tense proper in Latin, Albanian and Tocharian is not necessarily accidental; it may well be that following the establishment of the pair *léĝ-ti 'gathers' : *léĝ-e[ti] 'gathers away (vel sim.)', the stem-form *lēĝ- was restricted to the imperfect within PIE itself.[29] Another well-known "thematic" root with an old Narten present is *h₂eĝ- 'drive' (cf Ved. ájati, Gk. ἄγω, Lat. agō, etc.), which, like *bher-, was confined to the present system in the parent language.[30] Here the only indication of lengthened grade—but a powerful one—is Lat. ēgī, a long-vowel perfect of the same type as lēgī. The traditional view takes ēgī to be the replacement of an older *āgī, itself supposedly the reflex of a reduplicated perfect *h₂e-h₂ĝ-. But no such perfect ever existed, and if it had, it is hard to see why the pattern agō : *āgī : āctus would have been remade to conform (imperfectly) to the pattern of the historically obscure and isolated frangō : frēgī : frāctus 'break'. A better solution, if lēgī is in fact an archaism, would be to take ēgī as the reflex of a genuine lengthened-grade *h₂ēĝ-, with *-ē- preserved by Eichner's Law.[31]

*bher-, *leĝ- and *h₂eĝ-, as we shall see, are not the only PIE roots which formed both a thematic present and a Narten present. Nevertheless, the pattern of these verbs is not typical. For most thematic presents the salient derivational link is not with a Narten present, but with a sigmatic aorist. The pattern is familiar: cf *u̯eĝh-elo- : *u̯eĝh-s- 'convey' (Ved. váhati : ávāṭ, Lat. uehō : uēxī, etc.), *pék̯-elo- : *pék̯-s- 'cook' (Ved. pácati : subj. pákṣat, Lat. coquō : coxī, etc.), *u̯edh-elo- : *u̯edh-s- 'lead' (OIr. fedid : subj. fess-, OCS vedǫ : věsŭ, *dhégʷh-elo- : *dhégʷh-s- 'burn' (Ved. dáhati [= Lith. dēga] : ádhāk [= Toch. B tseksa-]), and others. Traditionally, s-aorists like *u̯eĝh-s- have been regarded as formally "characterized", the *-s- serving to reverse the aspect of the root *u̯eĝh- and the uncharacterized present *u̯éĝhelo-.[32] This view of *u̯éĝhelo- is consistent, of course, with our interpretation of *bhérelo- as a kind of modified root present. But several facts speak against an immediate historical identification of the bhéreti- and u̯éĝheti-types. Unlike *bhéreti and its congeners, u̯éĝheti-type presents do not typically co-occur with "normal" (i.e., mi-conjugation) root

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[28] Cf Weiss 1996:674. The addition of Narten presents to the IE canon makes it urgently necessary to reopen the question of the Latin ē-perfect and its connections elsewhere.

[29] This is not the only place in the late PIE verbal system where it is tempting to reconstruct imperfects that differed in stem-formation from the presents with which they were functionally paired. Such forms, deprived of the support they would otherwise have received from the present proper, would have been natural candidates for dislocation to the aorist.

[30] Note that neither an aorist nor perfect is formed by the root aj- in Vedic, and that Toch. āk- is suppletive outside the present system. Gk. ἤγαγον (aor.) and ἦχα (perf.; post-Homeric) are obvious inner-Greek creations. ON ók 'drove', often cited in support of the alleged Lat. *āgī, is a regular strong preterite of no comparative value.

[31] As set forth in Eichner 1973.

[32] A recent exponent of this view is Sihler (1995:448).

presents, Narten or otherwise. In a few suggestive cases, thematic presents of the *uéĝheti*-type actually seem to have replaced characterized presents in *-įe/o-: cf HLuv. *wa-zi/a-* 'drive' (< **uéĝh-įe/o-* or **u̯ĝh-įe/o-*) beside **uéĝhe/o-*;[33] Ved. 3 sg. mid. *pácyate*, Gk. πέσσω beside **pékʷe/o-*; Ved. 2 pl. impv. *jasyata* 'be extinguished' beside ptcp. *jásamāna-* (root **gʷes-*; cf s-aor. Gk. σβέσ(σ)αι, Toch. B *kes(s)a-*); Gk. ἅζομαι 'reverence' beside Ved. *yájati, -te* (s-aor. *ayāṭ*) 'sacrifice to' (root **Hįaĝ-*). Such pairs tend to undermine the case for treating **uéĝhe/o-*, **pékʷe/o-*, etc. as thematized root presents like **bhéreti*, since *įe/o*-presents were typically associated with root *aorists*, not root presents in the parent language (cf Ved. *mányate* 'thinks', aor. *ámata*; Gk. ἅλλομαι 'leap', aor. ἅλτο, etc.). Pointing in the same direction, and likewise arguing against a "root present" interpretation of **uéĝheti*, is the recent finding that the PIE sigmatic aorist, far from being an ordinary characterized tense/aspect stem, was originally a variety of root aorist.

The observation that the **-s-* of the sigmatic aorist was primitively confined to the 3 sg. was first made by Ivanov and, characteristically, Watkins.[34] As these scholars saw, the situation reconstructible for late PIE is still preserved in Hittite, where a 3 sg. in **-š* (< **-s-t*) appears in the preterite of the *ḫi*-conjugation (cf *dāḫḫun* 'I took', 2 sg. *dātta*, 3 sg. *dāš*, 3 pl. *dāir*); and in Tocharian, where the the only sigmatic form in the paradigm of the active "s-preterite" is the 3 sg. in A *-(ā)s*, B *-sa* (< **-s(a)t*; cf B *prek-wa* 'I asked', 2 sg. *prek-a-sta*, 3 sg. *prek-s-a*, 3 pl. *prek-a-r*).[35] The fully sigmatic s-aorist of Indo-Iranian, Greek and the other "inner" IE languages must therefore be an innovation that postdates the separation of Anatolian and Tocharian from the rest of the family. A trace of the originally restricted role of **-s-* can be detected even in Indo-Iranian, where the optative of the root aorist, for no synchronically obvious reason, is substi-tuted for the optative of the s-aorist.[36]

The association of the Hittite 3 sg. pret. in *-š* with the *ḫi*-conjugation makes it natural to seek an explanation for these facts in the context of the *h₂e*-conjugation theory.[37] Pre-PIE, as we know for independent reasons, originally had protomiddle aorists as well as presents. These were subject to the usual twofold

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[33] I am indebted to Profs. Watkins and Melchert for calling this form to my attention. For the change **ĝ(h)į > Luvian z* Melchert compares CLuv. *zūwa-* 'food' < **ĝįóuh₁₁₃o-* (cf English 'chew' etc.). The derivation of the HLuv. verb directly from **uéĝh-* by Starke 1990:314 is based on an alleged sound change **ĝ(h) > Luv. z* which is entirely lacking in support.

[34] Ivanov 1959:29-31, Watkins 1962:61ff, 99ff.

[35] The situation in the middle is more complicated. While *prek-* (A *prak-*) and many other verbs have **-s(a)-* throughout the paradigm (cf., e.g., B 3 pl. *parksante*, A *pärksānt*), Toch. A preserves s-less forms of the type 3 sg. *nakät*, pl. *nakänt* 'perished', which are doubtless more archaic. See further below.

[36] As first pointed out by Karl Hoffmann (1967:32-3).

[37] So already Jasanoff 1988a, from which, however, the present account differs markedly.

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treatment within the parent language: some were renewed as "true" middles, while others were retained as *h₂e*-conjugation neoactives. Most important for our present purposes, however, are the protomiddle aorists that underwent *both* treatments, giving rise to a middle paradigm, typically intransitive, and an active paradigm, typically transitive. The aorist of the root **pekʷ-* was of this type, with a protomiddle that can be set up as follows:

sg. 1 **pókʷ-h₂e*   pl. **pékʷ-me*
     2 **pókʷ-th₂e*   **pékʷ-(t)e*[38]
     3 **pókʷ-e*   **pékʷ-r̥s*

These forms originally meant 'got cooked, got ripe' and perhaps also 'cooked for oneself'; there may once have been a contrasting active **pékʷ-m̥*, **-s*, **-t*, etc. 'cooked' as well, although no trace of such an aorist has survived in the daughter languages. At the time of the protomiddle/middle split, the inherited protomiddle paradigm divided into two daughter paradigms. The old protomiddle forms were reinterpreted as actives ('cooked'), while a "true" middle ('became cooked, cooked for oneself') was created by substituting the renewed middle endings for their protomiddle counterparts. In the plural this was straightforward: the new middle forms introduced the endings 1 pl. **-medhh₂*, 2 pl. **-dh(u)u̯e (vel sim.)* and 3 pl. **-ro* in place of **-me*, **-(t)e*, **-r̥s*. So too in the 3 sg.: **pókʷ-e qua* intransitive was remade to **pókʷ-o*, with the productive middle ending **-o*. In the 1 sg. and 2 sg., however, where the *h₂e*-conjugation and middle endings were identical, the active : middle contrast had to be implemented in a different way. The paradigm of the true middle in the emerging late PIE verbal system generally lacked ablaut; a regular 1 sg. of the type **u̯és-h₂e(r)* 'I wear/wore' had the same vocalism as the corresponding 1 pl. **u̯és-medhh₂(r)*. On the model of such forms, a new 1 sg. mid. **pékʷ-h₂e* and 2 sg. mid. **pékʷ-th₂e* were created, taking their vocalism from the plural middle forms **pékʷ-medhh₂*, **-dh(u)u̯e*, **-ro*. The result was an intransitive paradigm

sg. 1 **pékʷ-h₂e*   pl. **pékʷ-medhh₂*
     2 **pékʷ-th₂e*   **pékʷ-dh(u)u̯e*
     3 **pókʷ-o*   **pékʷ-ro*

The survival of *o*-grade in the 3 sg. (**pókʷ-o*) was a remarkable but not unparalleled archaism; compare the "passive" aorist of Indo-Iranian (type Ved. 3 sg. *ápādi* 'went', *ájoṣi* 'enjoyed', pl. *ápadran*, *ájuṣran*).[39]

The characteristic innovation of the PIE *s*-aorist was to replace the active/transitive 3 sg. **pókʷ-e* by the intrusive sigmatic form **pḗkʷ-s-t*. The reasons for this development are obscure. It may be that the minimal phonetic difference between the endings **-e* and **-o* was inadequate to express the

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[38] The representation of the 1 pl. and 2 pl. endings is purely schematic. The Indo-Iranian 2 pl. perf. in *-a* points to an originally dentalless ending in this position.

[39] That this category exhibits genuine paradigmatic ablaut was first seen by Insler (1968).

functionally important contrast between *pók^u-e 'cooked' and *pók^u-o 'got cooked'; this, however, would not explain why the specific form *pḗk^u-s-t—as opposed, e.g., to **pók^u-et (with facultative *-t) or a new 3 sg. middle **pḗk^u-o —was chosen as the repair mechanism. *pḗk^u-s-t itself must originally have been the imperfect of a "Narten" s-present *pḗk^u-s-ti, a morphological type known from the reconstructible present *ĝnḗh₃-s-ti 'recognizes' (= Hitt. ganešzi, Toch. A kñas-, etc.). The introduction of *-s- into the aorist system was perhaps mediated by the root *prek- 'ask', which formed a h₂e-conjugation aorist *prók-/ *prék- in the parent language (cf Toch. B prekwa, etc.) and may also have made a sigmatic present.[40] All that we know for sure, however, is that forms of the type *pók^u-e were eventually replaced by forms of the type *pḗk^u-s-t. The indicative of the nascent PIE s-aorist, which was still largely non-sigmatic, can be reconstructed as follows:

	active		middle	
	sg.	pl.	sg.	pl.
1	*pók^u-h₂e	*pḗk^u-me	*pḗk^u-h₂e	*pḗk^u-medhh₂
2	*pók^u-th₂e	*pḗk^u-(t)e	*pḗk^u-th₂e	*pḗk^u-dh(u)ue
3	*pḗk^u-s-t	*pḗk^u-ṛs	*pók^u-o	*pḗk^u-ro

The treatment of these forms in the "classical" IE languages is well-known. Dialectal IE generalized *pḗk^u-s-, the stem-form proper to the 3 sg. active, across the entire active paradigm, simultaneously extending the analogical weak stem *pḗk^u-s- through the middle.[41] Hittite and Tocharian, on the other hand, maintained the restriction of *-s- to the 3 sg. active.[42] The one clearly inherited case of an s-aorist in Hittite is the ḫi-conjugation preterite nēḫḫun, naitta, naiš, etc. 'turned, directed', which can be exactly equated with Ved. ánaiš[īt] 'led'.[43] In Tocharian there was an important innovation: both the active and middle paradigms split into two—a preterite indicative, marked by analogical generalization of the vocalism of the 3 sg., and a subjunctive, marked by analogical suppression of the vocalism of the 3 sg. Thus, an inherited "s-aorist" root like näk- (< *nek-) 'destroy/perish'[44] eventually gave rise to four aorist-based paradigms: 1) a transitive active preterite, based on the stem-form *nḗk-(s)- (cf A 3 sg. act. ñakäs, pl. ñakär); 2) a transitive active subjunctive, based on the stem-form *nók-/*nék- (cf A 2 sg. nakät, B 1 sg. neku, inf. naktsi); 3) an intransitive middle preterite, based on the stem-form *nók- (cf A 3 sg. mid. nakät, pl.

nakānt); and 4) an intransitive middle subjunctive, based on the stem-form *nḗk-(o)- (cf A nkatär, B nketär, presupposing 3 sg. *nḗk-o(r)).[45] Despite these rearrangements, Tocharian preserves the ablaut relationships of the PIE s-aorist system more faithfully than any other IE language.

These facts underscore the basic difference between the two types of thematic presents. Unlike *bhérelo-, *h₂éĝelo-, etc., which rest on h₂e-conjugation root presents, presents of the type *uéĝhelo-, *pḗk^{u}elo-, etc. are intimately connected with h₂e-conjugation root aorists and seem to have replaced characterized presents. Inevitably, the further question arises: what precisely was the nature of the relationship between the new presents *uéĝhelo- and *pḗk^{u}elo- and the aorists *uóĝh-/*uéĝh- and *pók^u-/*pḗk^u-? A plausible answer is suggested by a study of the corresponding modal forms.

The optative of the s-aorist, as noted above, is a virtually non-existent category in Indo-Iranian, where it is suppleted by the optative of the root aorist. The reason for this is that the optative of the aorists *uóĝh-/*uéĝh- and *pók^u-/ *pḗk^u- was never sigmatized—not in PIE proper, where the spread of *-s- had barely begun, nor in the post-IE dialect ancestral to Indo-Iranian, Greek and the other "classical" branches of the family, where the s-aorist as we know it had its real origin.[46] In the subjunctive, on the other hand, a fully sigmatic paradigm

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[40] The relationship of desiderative ske/o-presents of the type *pṛ(k̂)sk̂é/ó- 'ask' to older athematic s-presents is discussed in Jasanoff 1988b:234-7. The potential importance of the root *prek- for the early history of the s-aorist was first pointed out to me by Patrick Hollifield.

[41] PIE already had the stem-form *pḗk^{u}s- in the s-aorist subjunctive; cf below.

[42] With an important partial exception for the middle in Tocharian; cf note 35.

[43] The Hittite spelling <na-(i)-iš> shows that the immediate source of the 3 sg. naiš was *nóiH-s-t, with analogical o-grade from the other strong forms.

[44] The root näk-, parallel to päk-, is chosen because it preserves the distinction between the reflexes of lengthened-grade *nēk- (> A ñak-) and o-grade *nok- (> A nak-).

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[45] This explanation of the class III subjunctive type nkatär/nketär, pkatär/pketär, etc. differs from the standard view, which takes these forms directly from thematic presents (so, e.g., Jasanoff 1978:36-7 and elsewhere). The "thematic" interpretation, however, has serious problems. Class III subjunctives are exclusively middle and intransitive, while the Indo-Iranian thematic presents to which they are allegedly cognate are mostly transitive and active. Thus, there are no Vedic middles *pácate 'gets cooked', *dáhate 'burns (intr.)', or *jánate 'is born' comparable to Toch. B pketär, tsketär, knetär. The intransitive sense is normally expressed in Vedic by a ie/o-present (pácyate, jáyate); note also náśyati 'perishes', from a root that appears not to have formed a thematic present at all. That such intransitive ie/o-presents once also existed in Tocharian is suggested by B kantär 'comes about' (< *ĝnh₁-ie/o-; otherwise Hackstein 1995:232-3), and by the Toch. A intransitive presents in -näs- (päknäṣtär, tsäknäṣtär, näknäṣtär, etc.), which seem to have replaced ie/o-presents (P. Hollifield, p.c.). Only in two cases (B näm-, subj. nmetär 'bend (intr.)' : Ved. námate 'id.'; AB käs-, subj. A ksatär, B ksetär 'be extinguished' : Ved. jásamāna- 'exhausted') can a Tocharian class III subjunctive be unproblematically compared with an otherwise attested thematic middle present. A further disadvantage of the standard view is its lack of symmetry: why, if pketär, tsketär, etc. simply continue thematic middles, do the corresponding active subjunctives not go back to the better attested thematic actives of the same roots? The solution preferred here, which derives both the active and middle subjunctive from a single source, avoids this difficulty.

[46] As I have tried to show elsewhere (Jasanoff 1991:111-6), the specific root aorist forms that substitute for the missing optative of the s-aorist point to a distinctive acrostatic optative type with full grade of the root and invariant zero grade of the optative suffix. Note especially YAv. 3 sg. vainīt < *uén-ih₁- (: van- 'strive after'), Ved. 2 sg. jeḥ < *ĝéi-ih₁- (: ji- 'conquer'), and Ved. 1 sg. (precative) yéṣam

was apparently already present in the parent language. This is shown not only by the situation in Indo-Iranian, where subjunctives of the type 3 sg. *vákṣat*, *pákṣat* and *si*-imperatives of the type 2 sg. *vákṣi* (< 2 sg. subj. *-sesi*)[47] are actually more common than *s*-aorist indicatives; but also by the distribution of stem-forms in Tocharian, where the semi-productive presents in *-selo-* (type B 3 sg. *nakṣäṃ* 'destroys', *pakṣäṃ* 'cooks', etc.) are inextricably linked to *s*-preterites; and in Hittite, where the curious middle imperative *nēšḫut* (MH) is evidently a medialization of the *si*-imperative *nēši* (< *néiHsi* < subj. *néiHsesi*), comparable to Ved. *váṃsva*, *rásva* (: *rā-* 'give'), etc. beside *váṃsi* (subj. *váṃsa-*), *rási* (subj. *rása-*). It is reasonable to conclude that at some time within the history of the parent language, subjunctives of the type *pékʷ-s-elo-* were imported into the paradigm of aorists like *pókʷ-/*pékʷ-*, where they came to compete with "native" subjunctives of the type *pékʷ-elo-*. The new *s*-forms were probably taken from the same desiderative present category that furnished the 3 sg. aorist indicative *pékʷ-s-t*. In principle, the intrusive stem *pékʷ-s-elo-* may simply have been the historically regular subjunctive of the Narten *s*-present *pěkʷ-s-*, or it may have been a *h₂e*-conjugation *indicative*, standing in the same relation to 3 sg. act. *pěkʷ-s-ti* as thematic *bhér-elo-* to 3 sg. act. *bhér-ti*. Neither possibility, strictly speaking, excludes the other, since the ultimate origin of the PIE subjunctive remains unknown.

The competition between the old aorist subjunctive *pékʷelo-* and the intrusive subjunctive *pékʷselo-*, which presumably differed slightly in meaning (see below), led to different results in the emerging IE languages. In Tocharian, the tension between the stems *pékʷelo-* and *pékʷselo-* was resolved by converting the latter into a general-purpose transitive present (B *pakṣäṃ*), while the *s*-less stem *pékʷelo-* remained a subjunctive and eventually disappeared.[48] In the "inner" IE languages, on the other hand, the spread of *-s-* through the indicative reinforced the synchronic association of the sigmatic stem *pékʷselo-* with the aorist paradigm. In these languages it was *pékʷselo-* that prevailed in the

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< *(h₁)i̯éh₂-ih₁-* (: *yā-* 'go')—all precisely what would have been expected if the underlying aorist stems had been *u̯ón-/*u̯én-*, *gʷói-/*gʷéi-*, and *(h₁)i̯óh₂-/*(h₁)i̯éh₂-*.

[47] With the haplology identified by Szemerényi (1966). The category is not merely Indo-Iranian, but Indo-European.

[48] The PIE subjunctive was normally lost without a trace in Tocharian. The exceptional treatment of the *s*-aorist subjunctive as a present indicative probably points to a genuine semantic peculiarity of the *s*-aorist subjunctive in the parent language. Thus, e.g., late PIE forms of the type 3 sg. *pékʷset(i)* may have had both the standard subjunctive reading 'may cook' and an indicative reading 'wishes to cook' or 'sets about cooking'; whether this latter sense was original or secondary is immaterial for our present purposes. The fact that the *s*-presents that developed from subjunctives in Tocharian are overwhelmingly transitive and/or "causative" suggests that subjunctive stems of the type *pékʷselo-*, like the 3 sg. indicative *pékʷst* itself, were at first exclusively associated with the active, typically transitive *h₂e*-conjugation paradigm. It is notable that even in Vedic Sanskrit, the *s*-aorist subjunctive is far more common in the active than in the middle.

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aorist subjunctive, and *pékʷelo-* that was specialized in the role of a present indicative. This was the origin of the familiar *pékʷelo-* of the handbooks, historically a root aorist subjunctive, but synchronically a thematic present of the *u̯éǵheti*-type. We can extend this explanation to the *u̯éǵheti*-class as a whole: *all* thematic stems of the type *pékʷelo-*, *u̯éǵhelo-*, *dhéǵʰhelo-*, *u̯édhelo-*, etc., I suggest, were originally the subjunctives of their own aorists, forced out of the aorist system under pressure from the more recent *s*-aorist subjunctive in *-selo-*.[49]

bhéreti- and *u̯éǵheti*-type thematic presents thus appear to belong to different chronological strata. *bhéreti-* ("type I") presents were created within the parent language from earlier *h₂e*-conjugation root presents; *u̯éǵheti-* ("type II") presents were created from earlier *h₂e*-conjugation root aorists at a date following the separation of Tocharian, and *a fortiori* of Anatolian, from the rest of the family. To test this hypothesis we can make a prediction: if the above analysis is correct, it should be possible to find reflexes of thematic presents of type I, but not of type II, in Anatolian and Tocharian. In Anatolian, where the number of verbs with thematic cognates of either type I or type II is too small to be probative, the evidence is suggestive rather than conclusive. The clearest case of a "thematic" root in Hittite is *nāi-* 'turn, direct', which corresponds etymologically to the Vedic type II thematic present *náyati* 'leads', aor. *ánaiṣīt*.[50] Significantly, the Hittite verb is *not* a thematic stem *neya-* (< *néiHelo-*) with 3 sg. *nēzzi*; the attested present *nēḫḫi, naitti, nāi*, etc. is a back-formation from the preterite *nēḫḫun, naitta, naiš*, which in turn rests on the inherited *h₂e*-conjugation aorist *nóiH-h₂e, *nóiH-th₂e, *nóiH-s-t* (replacing *néiH-s-t*, for pre-PIE *nóiH-e*). Genuine examples of root thematic presents in Anatolian are notoriously hard to find. The best example is probably the Hieroglyphic Luvian *mi*-verb *tama-* 'build' (3 sg. AEDIFICARE+*MI-ri+i* = *tamari*), which can be compared with Gk. δέμω 'build' and (probably) Gmc. *teman* 'be fitting'.[51] If the stem *dém(h₂)-elo-* is really old, the lengthened grade of the Tocharian A present *śamatär* 'grows' (< *dēm-*) argues strongly for its assignment to type I.

The evidence from Tocharian is both more abundant and more decisive. We have already met AB *āk-* 'lead', which makes a type I thematic present of Krause and Thomas' simple thematic class (class II) and forms an exact word equation with Lat. *agō*, Gk. ἄγω, Ved. *ájati*, etc. Here too, unsurprisingly, belongs the present of AB *pär-* 'carry' (B 3 sg. *paräṃ*, ptcp. *preñca*), the Tocharian counterpart of Gk. φέρω, Ved. *bhárati*, etc. Remarkably, however

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[49] The later development of thematic presents from aorist subjunctives is well known from the history of the individual IE branches—notably Germanic, where many strong presents originated in this way (cf *bītan* 'bite' = Ved. root aor. subj. *bhédati*, *beudan* 'order' = Ved. root aor. subj. *bódhati*, etc.).

[50] Although Indo-Iranian is the only branch of the family to attest the thematic present *néiHelo-*, the parallelism with the semantically related stems *u̯éǵhelo-* and *u̯édhelo-* makes the reconstruction virtually certain.

[51] On HL *tamari/tamari* see Morpurgo Davies 1979:128. I am grateful to Profs. Morpurgo Davies and Melchert for helpful discussion of this form.

—and this fact seems never to have been noticed before—PIE *$h_2eĝ$- and *$bher$- are the *only* ancient "thematic" roots that actually form primary thematic presents in Tocharian. Krause and Thomas list about thirty class II presents,[52] many of which have no serviceable etymology. Of those that can be analyzed, virtually all are petrified *s*-presents (e.g., A *klyos-*, B *klyaus-* 'hear'; AB *kās-* 'extinguish'),[53] petrified *sk*-presents (e.g., B *ñāsk-* 'wish'; B *trāsk-* 'chew'), characterized presents of other kinds (e.g., A *śo-*, B *śau-* 'live' [< *$g^u ih_3$-ye/o-]; A *malyw-*, B *mely-* 'crush' [< *$molh_2$-u-$(i)ie/o$-]), or thematized root formations (e.g., B *tek-* 'touch' [3 sg. *ceṣäm*]; B *aik-* 'know').[54] Tocharian is perfectly well-supplied with roots with type II thematic cognates elsewhere, notably *päk-* (: Ved. *pácati*), *tsäk-* (: Ved. *dáhati*), *kās-* (: Ved. *jásamāna-*), *näm-* 'bend, incline' (: Ved. *námati, -te*), and *kän-* 'come about' (: Ved. *jánati* 'begets', Lat. *genō*). Most of these, however, pattern in the way described above for *päk-*, with aorist-based preterites and subjunctives, transitive *s*-presents, and (in Tocharian A) intransitive presents in *-nās-*, replacing older *-*ie/o*- (*päknäṣtär*, *tsäknäṣtär*).[55] None has a thematic present; indeed, *there are no thematic presents of type II in Tocharian at all.*

We thus find that the well-known rarity of inherited thematic presents in Anatolian is matched by an equally impressive, though hitherto unrecognized, dearth of old thematic presents in Tocharian. This agreement between the two branches has a simple explanation. Most of the thematic stems traditionally assigned to the parent language are in fact type II thematic presents which arose from h_2e-conjugation aorist subjunctives. The conversion of these forms into present indicatives was an innovation confined to the "inner" IE languages: the familiar PIE *$uéĝheti$*, *$pék^ueti$*, etc. were still subjunctives at the time of the separation of Anatolian and Tocharian from the rest of the family. This is why the aorist of the root *$neiH$-, but not the present *$néiHe/o$-, is found in Hittite, and why the roots *pek^u-, *$dheg^uh$-, *g^ues-, etc., though blessed with a wealth of stems in Tocharian, show no sign of the thematic presents for which they are best known in the linguistic literature. The only genuinely *Indo-European* thematic presents were those of type I, the *$bhéreti$*-type. For this class, a modified version of Watkins' theory remains the best explanation we have.

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[52] Krause-Thomas 1960:198-200.

[53] The class II present supposedly represented by B 3 sg. *keṣäm* and A 2 sg. *käst* is in fact an *s*-present (< *g^ues-se/o-; class VIII), the existence of which is predicted by the corresponding *s*-preterite and class III subjunctive. The vocalism of the B form is taken from the active preterite and subjunctive, exactly as in *prekṣäm* 'asks'.

[54] The closest approach to another genuine root thematic present in class II is B *lyäṣäm* 'lies', recalling Gk. λέχεται· κοιμᾶται and Go. *ligan* 'id.' But the Greek form, if real, is merely a back-formation from the aorist (λέκτο, ἐλέξατο) and perfect (ptcp. fem. λελοχυῖα), while Go. *ligan* is a replacement of *$ligjan$* (cf OE *licgan*), matching OIr. *laigid*. It is doubtful whether the root *$legh$- made a present at all in the protolanguage.

[55] Cf note 45. Tocharian B has extended the *s*-present inflection to the middle, replacing expected *$päknastär$*, *$tsäknastär$* by *pakṣtär, tsakṣtär*.

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How to be a Dragon in Indo-European: Hittite *illuyankaš* and its Linguistic and Cultural Congeners in Latin, Greek, and Germanic

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Illuyankaš—a snake, the Hittites' fabled adversary, the Indo-European dragon *par excellence*.[*] The very word stirs the breast of the Anatolianist much as it must once have stirred the Anatolian's, and no one bears more responsibility for the *illuyankaš*-monster's current success than Calvert Watkins, who in a series of articles (1987a, 1987b, and 1992a) and now a book, *How to Kill a Dragon: Aspects of Indo-European Poetics* (1995), has written breathtaking accounts of the inherited poetic formulas that have as their subject the fights between heroes and dragons. Nevertheless, although we know a great deal about how to kill this beast, we remain very much in the dark about its essential nature while alive. My contention in this paper is that the word for the Hittite monster is of good Indo-European provenance, with cognates in Latin, Greek, and Germanic, and that its etymology also sheds new light on certain features of the mythic battles against serpentine creatures fought by such heroes as Bellerophon and Beowulf.

The most notable phrase that Watkins has reconstructed is PIE $*(é)g^when t$ $[h_1]óg^whim$ '(he) slew the serpent', a formula continued most faithfully in Indo-Iranian, with Skt. *áhann áhim* '(Indra) slew the serpent' and Av. *janat ažīm* '(Θraētaona/Kərəsāspa) slew the serpent', but recoverable also in Greek, Germanic, and Hittite. In Greek too both the noun and the verb are part of the archaic vocabulary of dragon-slaying, and while the verbal form ἔπεφνεν is not morphologically identical to Skt. *áhan* and Av. *janat*, the object ὄφιν is exactly cognate with Skt. *áhim* and Av. *ažīm* (< PIE $*h_1óg^whi$-m);[1] in Germanic we find only the verbal root $*g^when$- (as in Eng. *bane*) since words like ON *ormr* (Eng. *worm*) supplant the noun $*h_1óg^whi$-.[2] As for Hittite, the verb *kuenta* in [MUS]*illuyankan kuenta* '(the Storm God, Tarhuntas) slew the *illuyankaš*' makes an exact equation with the Sanskrit and Avestan imperfects (*kuenta* = Skt. *(á)han* = Av. *jan[at]* <

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[1] Compare Pi. *P.* 10.46 ἔπεφνέν τε Γοργόνα '(Perseus) slew the Gorgon' (who is called ὀφι-ώδης* 'serpent-like' in *O.* 13.63). The collocation *ἔπεφνεν ὄφιν happens to be unattested, but note κτεῖνε...ὄφιν (*P.* 4.249) '(Jason) killed the serpent'.

[2] Compare an Old Norse kenning for Thor, *orms ein-bani* (*Hým.* 23) 'the serpent's single-bane'.