pęrdu) "pedere" or bégti, béga (OLith. begmi) "run" were not pared with a second stem in \*-ēin earlier stages of the language (cf. Slavic purděti, pordi- and běžati, bězi-). Second, J. is doubtless right in emphasizing that the oldest layer of tekéti-type verbs lies in "root verbs". An original athematic present is still traceable for OCS mošti in the irregular 2 sg. \*mošī (cf. Vaillant 1966, 165), it is assured on comparative grounds for tekéti/tešti or pósėti/pasti (cf. Ved. tak-ti, Hitt. pahhs-mi), and it is possible in other cases. One could speculate on the tekéti-type as a whole as an offshoot of the gradual thematization of a class of Balto-Slavic athematic presents pared with a second stem in \*-ē- (a type still directly attested in Old and dialectal Lithuanian), but that would not account for all examples, including potentially ancient verbs. There is still much to do in this area of the Baltic and Slavic verb, but it is clear that the second stem in \*- $\bar{e}$ - (as well as that in \*- $\bar{a}$ -) played a major role in it.

I will not comment extensively on the chapter on Indo-European. It aims to establish the nucleus of Indo-European roots from which tekéti-type verbs are built, their morphological structure and their semantics (a list of forms supporting the reconstruction of every root is given in an appendix, pp. 225-245). Such an approach, however, is not likely to give any serious results: the Indo-European verbal system didn't merely consist of roots, but had a rather complex morphology. A list of forms exemplifying the derivatives of a root will not yield per se the correct prehistory of a given verb. In addition, J. has obviously not exerted any independent control on the data he quotes, which apparently have been copied down from Pokorny's and a few other etymological dictionaries. Errors and dubious assessments are very frequent. In a word, this section is an unreliable collection of data that have simply not been studied in any meaningful way.

The serious shortcomings of the historical side of this investigation renders it practically useless. Nevertheless, the first part remains a valuable contribution to the study of the Lithuanian and (partially) Baltic verb, that no doubt will serve as a solid basis for future research in this area.

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Jay H. Jasanoff, **Hittite and the Indo-European verb**, Oxford, Oxford University Press, 2003, XIV + 270.

In 1979 Jasanoff (J.) advanced a new theory on one of the most vexing problems of Indo-European linguistics: the Hittite (Anatolian) *hhi*-conjugation. This book incorporates J's findings during the next two decades. Starting from the Hittite *hhi*-conjugation, it encompasses under a single coherent framework a large number of apparently independent formations in most Indo-European languages.

The first two chapters are of a preliminary character. Chapter 1 (pp. 1–29) introduces the basic facts and the problem of the *hhi*-conjugation: how do we account for a class of active verbs fully equivalent in function to those of the *mi*-conjugation, but displaying root ablaut and endings that essentially match those of the perfect? J. reviews critically most of the theories proposed to solve this riddle and rejects any possible direct derivation from the perfect or any other familiar

Indo-European category, as well as attempts to posit an undifferentiated Proto-Indo-European diathetic category that would give rise, at the dialectal level, to the perfect, the *hhi*-conjugation, and/or the middle voice.

Chapter 2 (pp. 30-63) sketches a reconstruction of the Indo-European perfect and the middle voice. J. emphasizes that the perfect had a full paradigm in late Indo-European (with all four moods and a pluperfect that took the regular active endings \*-m, \*-s, \*-t, as well as an incipient perfect middle), and finds some evidence pointing to an original ablaut pattern \*o: \*e, later replaced by the familiar \*o: zero. The section on the middle endings (1 sg. \*- $h_2e$ , 2 sg. \*- $th_2e$ , 3 sg. \*-o/\*-to, 1 pl. \*- $med^hh_2$ , 2 pl. \*- $d^hue$ , 3 pl. \*- $(\bar{e})ro/$ \*-nto, primary endings being marked with \*-r) includes special discussion of controversial matters such as the distribution of the allomorphs of the 3<sup>rd</sup> person, the middle endings in Italic and Celtic, or the origin of the vocalism of the 3 sg. middle \*-o vis-à-vis perfect \*-e.

Chapters 3 to 7 form the core of the book. Chapter 3 (pp. 64–90) studies hhi-conjugation root verbs that appear to correspond to present roots elsewhere in Indo-European (that is, verbal roots that have a root present as their primary verbal formation). Cognates outside of Anatolian usually surface as simple thematic presents (or as \*-ie/oor \*-eie/o- presents) and frequently show variation in the root vocalism between \*o, \*e, and zero. The cognates of mall(a)-hhi "grind" exemplify the pattern: Lith. malù, málti and Goth. malan, -ib show \*o-grade, OIr. melid and OCS meljo, mlěti show \*e-grade, MW malu or Umbr. kumaltu have zero grade. J. criticizes previous attempts to trace the \*o-grade forms back to reduplicated presents or intensives (\*mé-molh<sub>2</sub>-ti or \*mélh<sub>2</sub>-molh<sub>2</sub>-ti), and posits an Indo-European ablauting paradigm \*mólh<sub>2</sub>-/\*mélh<sub>2</sub>-, with endings of the perfect series (\*- $h_2e$ , \*- $th_2e$ , \*-e). The remainder of this chapter sets up other possible candidates for having followed this conjugation in the parent language, discusses the ablaut of these verbs in Hittite, and their endings in Indo-European (tentatively reconstructed as primary \*-h2ei, \*-th2ei, \*-e, \*-nti: secondary \*- $h_2e$ , \*- $th_2e$ , \*-et, \*-rs).

Once the assumption of an Indo-European  $*h_2e$ -conjugation has been established for presents like mall(a)- $^{hhi}$  and its cognates, J. takes the next step and assumes that virtually every individual class of hhi-conjugation verbs is the direct descent of an Indo-European  $*h_2e$ -conjugation formation. Outside of Anatolian,  $*h_2e$ -conjugation formations would be expected to be generally thematic, but would show differences in root or suffixal vocalism pointing to an original ablauting paradigm in formations that otherwise would not be expected to ablaut. Chapters 4 (pp. 91–127, \*-i-presents) and 5 (pp. 128–143, other characterized presents) establish the following types of derived  $*h_2e$ -conjugation presents:

- 1) \*-i-presents with "normal" ablaut: \* $d^h eh_1$ -i-l\* $d^h h_1$ -i- "suck" > Latv.  $d\hat{e}ju$ , OHG  $t\bar{a}en$  (\* $d^h eh_1$ -i-), MHG  $t\bar{i}en$  (\* $d^h h_1$ -i-). Indo-Iranian and Greek appear to continue forms with short vocalism (Ved.  $dh\dot{a}yati$ ,  $ks\dot{a}yati$  "rules over" = Gk. (Ion.)  $\varkappa\tau\dot{\epsilon}o\mu\alpha\iota$  "obtain"), that J. explains as abstracted from the 1 sg. \* $d^h\dot{e}ih_2e < *d^h\dot{e}h_1$ -i- $h_2e$  (with a dissimilatory rule "-AHIHA- > -AIHA-" found also in the instr. sg. of  $\bar{a}$ -stems: Ved. - $ay\bar{a}$ , OCS - $oj\varrho < *-aih_2eh_1 < *-eh_2$ - $ih_2$ - $eh_1$ ). An internal derivative of this type with zero grade is found in Indo-Iranian (Ved.  $dy\dot{a}ti$  "binds"  $<*dh_2(i)i\dot{e}/\delta$ -) and perhaps in Hittite (tiia- $^{mi}$  "step").
- 2) \*-*i*-presents with "Narten" ablaut: \* $sp\acute{e}h_2$ -*i*-/ \* $sp\acute{e}h_2$ -*i* "be sated" > Lith.  $sp\acute{e}ju$ , OCS  $sp\acute{e}j\varrho$  (<\* $sp\acute{e}h_2$ -*i*-), OE  $sp\acute{o}wan$  (< \* $sp\acute{e}h_2$ -*i*-), Ved.  $sph\~ayate$  (<\* $sp\acute{e}h_2$ -*i* or 1 sg. \* $sp\acute{e}ih_2$ e).
- 3) \*-*i*-presents built to \*- $n(e)h_2$ -presents (\* $grb^h$ - $\eta h_2$ -*i*- $\gamma$ ), continued in the Hittite "duratives" in -anna/i-<sup>hhi</sup> (iyanna/i-<sup>hhi</sup>, from iya- "go, march"), in the Indo-Iranian type Ved.  $grbh\bar{a}y\acute{a}ti$ , and in some scattered examples elsewhere in the family (e.g. Gk.  $\dot{\nu}\varphi\alpha\dot{\nu}\nu\omega$  "weave").
- 4) Reduplicated presents with accented \**i*-reduplication and zero grade of the root: \*mi-mn-> Hitt. mimma- $^{hhi}$  "refuse", Gk.  $\mu i \mu \nu \omega$  "stand fast". These would have formed the starting point of the familiar reduplicated thematic presents of the type Gk.  $\gamma i \gamma \nu o \mu \alpha t$  "become",  $i \zeta \omega$  "sit down", etc.
- 5) Reduplicated desideratives in \*-( $h_1$ )s- (\* $k^w t$ - $k^w it$ -s-), continued in the small group of Hittite iteratives in -ss(a)- $^{hhi}$  ( $\bar{t}ss(a)$ - $^{hhi}$  "perform", from ie- $^{l}$

*iya-<sup>mi</sup>* "make, do"), the Indo-Iranian desiderative (Ved. *cíkitsa-* "desire to know"), and the Old Irish reduplicated future (*celaid* "will conceal" < \**kiklās-* < \**ki-kl-h*<sub>1</sub>*s-*).

6) Denominative factitives in \*- $eh_2$ -, usually replaced by \*- $eh_2$ -ielo-, but still attested in Hittite (OHitt. newahh- $^{hhi}$  "make new"  $\rightarrow$  NHitt. newahh- $^{mi}$ ), and in the Baltic type Lith.  $stat \acute{y}ti$ ,  $st \~ato <$  \*- $ah_2$ -e(-ti) "build".

7) (Perhaps) the poorly represented \*-u-presents (e.g. Hitt. lǎhu-hhi "pour"), but the evidence for \*h<sub>2</sub>e-conjugation in Indo-European is inconclusive.

The Hittite hhi-conjugation also encompasses primary verbs to a oristic roots (e.g.  $d\tilde{a}^{-hhi}$  "take",  $\tilde{a}r^{-hhi}$  "arrive",  $l\tilde{a}k^{-hhi}$  "knock out, bend", cf. Ved.  $ad\bar{a}t$  "gave",  $\bar{a}rta$  "moved", Gk.  $\lambda \acute{\epsilon} \varkappa \tau \sigma$  "laid down"). Within the  $*h_2e$ -conjugation theory it seems straightforward to simply project them back into Indo-European and this is the position taken by J. Chapters 6 (pp. 144–173) and 7 (pp. 174–214) study two type of  $*h_2e$ -conjugation aorists, both of considerable importance for the Indo-European verbal system as a whole:

1) Intransitive  $h_2e$ -conjugation agrists involved in "stative-intransitive systems", a recurrent set of derivatives centered around an aorist denoting the entrance into a state and characterized, in addition, by a stative perfect and two middle presents (a \*-ie/o-present and a deponent root athematic present with zero grade of the root). So, from the root \*bheudh- "awake": aor. \*bhoudh-el\*bheudh-rs (Ved. ábodhi, ábudhran), perf. \*bhebhóudh-el \* $b^h e b^h u d^h - \dot{e} r$  (Ved. bubudhāná-, Gk. πέπυσται), pres. \*bhudh-ié-tor (Ved. búdhyamāna-), \*bhudh-ór (Lith. bùdi, OCS bъditъ). A handful of presents of the type  $*b^h u d^h$ - $\delta r$  are still directly attested in Hittite and Indo-Iranian (e.g. Hitt. lagāri "bends (intr.)"  $< *l_e g^h - \delta r$ , Ved.  $vid\acute{e}$  "is known"  $< *uid - \delta r$ ), but they are better represented in a more disguised form in Tocharian presents of Class III and IV (B *lipetär* "is left over"  $< *lip-o-tor \leftarrow *lip-ór)$ , Balto-Slavic \*-t-presents (OCS pri-lbpitb, -lbpěti < 3 pl. \*lip-i-nt° ← \*lip-ntór/i), and Germanic weak verbs of Class III (OHG lebēt < \*lib-ai-b < \* $lip-\delta i[-ti]$ ). \* $h_2e$ -conjugation agrists of this type are typically continued in the Indo-Iranian passive aorist (Ved. 3 sg. ápādi, 3 pl. ápadran "fell" <

\*pod-/\*p<sub>e</sub>d-) and the Tocharian Class V subjunctives (A 3 sg. wekaş "disappeared", verbal noun wikālune < \*uoik-/\*uik-). Despite their patently middle functional value and paradigmatic associates, J. considers them to be active \*h<sub>2</sub>e-conjugation aorists because they belong to the hhi-conjugation in Hittite and subjunctives of Class V are frequently active in Tocharian (although in both branches they are frequently medialized, a process carried to completion in all other branches of the family).

2) "Pre-sigmatic  $*h_2e$ -conjugation aorists". J. accepts the traditional view that relates the 3 sg. preterit -s of the hhi-conjugation to the sigmatic aorist, but observes that this is difficult to understand within the current reconstruction of this category. The hhi-conjugation preterit paradigm finds a close parallel in Tocharian: Class III preterits (< sigmatic aorist) also show s-less endings typical of the "\*h<sub>2</sub>e-series" outside of the 3<sup>rd</sup> singular. The close agreement between Hittite and Tocharian is an archaism: the sigmatic aorist was a \*h<sub>2</sub>e-conjugation root aorists (\*noiH-/ \*neiH-) with a suppletive 3 sg. \*nēiH-s-t imported from the imperfect of an \*-s-desiderative with "Narten" ablaut. It had a fully sigmatic subjunctive and a 2 sg. imperative \*-si (haplologized 2 sg. subjunctive \*-se-si), but the optative was asigmatic as it still is in Indo-Iranian. The middle was only partially sigmatized: a subtype of intransitive middles preserved athematic structure and ablaut (\*nóiH-o/\*néiH-ro). J. further elaborates a (rather complex) scenario of how this curious state of affairs could have come into being and of its evolution into the daughter languages. In Hittite, where only nai-hhi "lead" can be regarded with certainty as an old "pre-sigmatic" aorist, \*-s-t spread as the general 3 sg. preterit ending of the hhiconjugation. In Tocharian both the active and the middle split into two paradigms: active preterits of Class III (A  $\tilde{n}ak\ddot{a}s < *n\tilde{e}k'(-s)$ -) and subjunctives of Class I (B 1 sg. neku, inf.  $naktsi < *nok-/*n_ek-$ ), middle asigmatic preterits (A nakät < \*nok'-to) and subjunctives of Class III (A nkatär, B nketär < \*nek' -o-). Leveling of \*-s- in the indicative would be a common innovation of all other branches of the family, a major argument for viewing Anatolian and Tocharian as the first two branches to depart from the Indo-European *continuum*.

I find J.'s treatment of the aorist less convincing than that of the present. There is surely enough evidence for "\*h2e-conjugation"-like aorists, but this doesn't necessarily entail that they patterned as  $h_2e$ -conjugation agrists paradigmatically. As far as the present is concerned, the  $*h_2e$ -conjugation theory has the virtue of simplicity. Every Indo-European verb belonged to one of two possible conjugations: the "normal" \*mi-conjugation or the \*h<sub>2</sub>e-conjugation. Both were unmarked actives that could derive a middle of the "normal", nonapophonic type. The  $*h_2e$ -conjugation is directly continued in Anatolian and can be recognized elsewhere in Indo-European by their apophonic behavior. In the aorist matters get suspiciously more complicated. Aorists belonging to "stativeintransitive systems" pattern like middles in all other respects. In addition, these, as well as other "individual non-stative-intransitive" examples such as \* $d\acute{o}h_3$ -e "gave for himself" > Hitt.  $d\breve{a}$ - $^{hhi}$  "take", are frequently found beside active root aorists in a diathetic opposition that is simply that of an active and a middle (e.g.  $*d\acute{e}h_3$ -t "gave",  $*k\acute{l}\acute{e}u$ -t "heard", \*génh<sub>1</sub>-t "gave birth" > Ved. ádāt, ásrot, Lat. genuit, beside \*dóh3-e, \*klóu-e "was heard", \*gónh1-e "was born" > Hitt.  $d\tilde{a}^{-hhi}$ , Ved.  $\acute{s}r\acute{a}vi$ ,  $\acute{a}jani$ ). No such pattern is found among  $h_2e$ -conjugation presents: there is no \*\*mélh2-ti or \*\*kénk-ti beside \* $m\acute{o}lh_2$ -e and \* $k\acute{o}nk$ -e. On the other hand, J. posits an ablauting paradigm as the middle counterpart of the pre-sigmatic aorist, but the apophonic invariance of the middle is generally stressed through this book and this seems to be the only ablauting middle paradigm he posits for the parent language. As an alternative that I hope to argue at length elsewhere I would tentatively suggest viewing paradigms like  $b^{h} + b^{h} + b^{h$ of middle root agrist, perhaps the only type of middle root agrist of the protolanguage. Following the loss of the present : aorist opposition in Anatolian, middle root aorists would have been generally reinterpreted as hhi-conjugation verbs.

Chapter 8 (pp. 214–223, "Retrospective") reviews the major findings of this book and sets up new problems and possibilities of analysis raised

by the \* $h_2e$ -conjugation theory. J. observes that the novelty of this "new look" of the Indo-European verb is entirely at the formal level. As far as grammatical categories are concerned, it remains very conservative. The book is closed with two Appendices. Appendix 1 (pp. 224–227) sketches a prehistory of the thematic conjugation. Appendix 2 (pp. 228–233) explains the apparently unreduplicated perfect \* $u\acute{o}id$ -e "knows" as a back formation from the deponent zero grade present \*uid- $\acute{o}r$  "is/becomes visible/recognizable"  $\rightarrow$  "is known".

J. is always very careful in presenting the  $*h_2e$ conjugation as a theory aiming only to explain the morphological properties of a series of clear cognates, irrespective of whatever prehistory they might have had, but it is clear that an active \*h2econjugation, with its gross perfect and middle-like formal features, strongly demands some type of explanation. J. (pp. 58ff., 145ff., 217f. and passim) starts from an undifferentiated "protomiddle", with broadly typical "middle" functions. The  $h_2e$ -conjugation (like the perfect and the thematic conjugation, which had an evolution of their own) is viewed as a group of "déclassé" deponents, neoactives that were not affected by a series of formal renewals in the middle voice (creation of new 1st and 2<sup>nd</sup> plural endings, apophonic invariance, use of \*-r as a primary marker, \*o-vocalism in the 3<sup>rd</sup> person). Once reinterpreted as actives, they were prone to be transitivized and to experience formal changes of an "activizing" type.

There is hardly any need to remark that we are dealing with a major event in the investigation of the Indo-European verb. A short review, it must be observed, cannot give an appropriate idea of its richness of facts and new ideas and of its superb quality. On the other hand, J. has ventured into terra incognita and there is no dearth at points of detail where I, and surely many other scholars, would disagree. My most important objection, concerning the position of the aorist in the new system, has already been mentioned. It is only to be desired that J.'s views (which I believe to be essentially correct) will trigger a fresh discussion of many old problems of the Indo-European verb. The Baltic languages, as could be expected, do

not figure prominently in the pages of this book, but it is symptomatic of its scope that it includes a number of interesting hypothesis on several controversial problems of the Baltic verb. I will end my review commenting briefly on some of them.

p. 678: J. accepts Kortland's explanation (Baltistica, XIII, 1977, 323) of Balto-Slavic \*dodmi "give" (OLith. dúomi, OCS damь) and \*ded-mi "put" (OLith. demì, OCS deždo < \*ded-jo) as due to the effects of Winter's Law in the weak stem of an earlier paradigm  $*dod\bar{o}-/*dod-, *d^hed^h\bar{e}-/$  $*d^hed^h$ -, where the vocalism of the reduplication has copied that of the strong stem. The putative pre-Balto-Slavic  $*d^he-d^heh_I-/*d^he-d^hh_I$ - would entail a counter-argument against the current reconstruction of Indo-European reduplicated presents with accented \*e-reduplication and \*ograde of the root (\* $d^h \acute{e} - d^h o h_l - l^* d^h \acute{e} - d^h h_l - l^*$ ), a view supported precisely by the West Germanic cognate of OLith. demì,  $*d\bar{o}n$  "do"  $\leftarrow$   $*ded\bar{o}$ - (OE  $d\bar{o}n$ , OHG tuon). It is probably not without some interest to observe that Lith. stóviu, stovéti "stand" and dėviù, dėvėti "wear (clothes)" look very much like old perfects (= Ved. tastháu, dadháu) but do not show the expected \*o-grade of the root. The simplest solution I can see is that they adopted the vocalism of the aorists \* $st\bar{a}$ -t, \* $d^h\bar{e}$ -t, and it seems reasonable to assume a similar process for the presents of "give" and "put" in the prehistory of Baltic and Slavic.

p. 7520: J. explains the Common Baltic athematic 1 sg. \*-mai (OPruss. asmai "I am", OLith. -mì, reflex. -míes) as a compromise between the 1 sg. \*-mi of "normal" athematic presents and \*-ai (< \*- $h_2e$ -i) of the \* $h_2e$ -conjugation. Gk. - $\mu\alpha\iota$ would provide a typological parallel. But old \*h<sub>2</sub>e-conjugation presents like barmi "I scold" (= OCS borjo, brati "fight", Lat. feriō, -īre "strike") or žengmi "I stride" (= Goth. gaggan "go") are not particularly well represented among Old Lithuanian athematic presents. If OPruss. asmai is taken at face value as pointing to a Baltic 1 sg. \*-mai (I am not certain that this is the only possible interpretation), I see no special reason to prefer a  $h_2e$ -conjugation origin over a perfect or a middle origin. Advocating for the later, I would argue that the creation of endings of a structure like that of Gk. -μαι (made up of an active marker of person and number + a voice marker) is typical of the middle voice, not of the perfect, the \* $h_2e$ -conjugation, or the thematic conjugation. To judge from its general elimination outside of Anatolian, the fate of the  $h_2e$ -conjugation endings must have been like that of the perfect or, better, that of the thematic conjugation: the endings of the "\*mi-series" were either added to them (e.g. Hitt. 1 sg. preterit -hhun, HLuv. 2 sg. present -tis), or simply replaced them.

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