A. AUFSÄTZE

"Stative" *-ē- revisited

§1. In my 1978 monograph Stative and Middle in Indo-European (Jasanoff 1978; henceforth SMIE) I discussed the problem of "*-ē-verbs" or "*-ē-statives" around the IE family. "*-ē-verbs" are static, inchoative, or passive verb forms whose salient morphological characteristic is a suffix reconstructible as "*-ē-<-*-eh-">. Uncontroversial reflexes of this morpheme are found in seven branches of the family:

Italic. In Latin, static presents in -ē- may be deverbal, as in habeō, -ēre ‘have’ (cf. Umb. habeta ‘habeto’), maneo, -ēre ‘remain’, facērō, -ēre ‘be silent’, or denominate, as in rubērō, -ēre ‘be red, blush’, arēcō, -ēre ‘be dry’, seneō, -ēre ‘be old’! Denominative statics in -ēs- occur: (cf. rubēscō ‘turn red’, arēscō ‘grow dry’, seneōcitō ‘grow old’). Stripped of their verbal inflection, the stems of such verbs may combine with facērō ‘do’ to form a periphrastic factitive (cf., e.g., arē-facētiō ‘make dry’, with tmesis in 3 sg. facētā ēre) or serve as the basis for the creation of nominal forms (e.g., ērea ‘threshing space’, acētum ‘vinegar’; acētō ‘be sharp’, rubēta ‘kind of (reddish) toad’).

Anatolian. Hittite has a residual class of denominative statics in -ē-<-*-ē-*> (e.g., 3 sg. marṣezzi ‘is false’ (marṣa-), tannatetzezi ‘becomes desolate’ (tannatet-)), related to these are the productive and very common inchoatives or "fientives" in -ē- (e.g., marṣezzi ‘becomes false’, tannatetzezi ‘becomes desolate’, ṣallezzi ‘grows great’ (ṣalli-), etc.).

Greek. Greek presents two quite separate groups of forms: 1) denominative contract verbs with presents in -ēo (for *-ēo) and futures and aorists in -ēo, -ēscō, -ēscōs ‘be in bloom’ (ēsco ‘flower’), ἐρότω (-σ-) ‘have courage’ (erōtō ‘courage’, erōtōs ‘bold’), ἔφθεξα;

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1 The clarity with which this distinction is now made, not only in Latin and Italian but in PIE itself, is due to Watkins (1971).
2 The Hittite type marṣezzi, tannatetzezi, etc. was discovered by Watkins (1971: 72 ff.).

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Slavic. Old Church Slavonic has both denominate and deverbal ɛ-verbs. Denominative, more often inchoative than stative, have presents in -eji, infinitives in -eti, and aorists in -ėx (e.g., staro, -eti, staro 'grow old' (< starn 'old'), bogatja 'get rich' (< bogat 'rich'), cēkja 'become healthy' (< cēq 'healthy')). Deverbal verbs likewise have infinitives in -eti and aorists in -ėx, but form their presents with an etymologically unclear suffix -i < *-t (e.g., brsdo (3 sg. brsdtb), -eti 'be awake; mano, -eti ‘think’, pri-lspio, -eti ‘adhere’).

Baltic. The situation in Lithuanian is similar to that in Slavic. Denominative inchoatives and statives have present in -eji, infinitives in -eti, preterites in -eju (< *-ėj), and futures in -ėsiu (e.g., senėti, -eti, -ėsiau, -ėsiu 'grow old' (< sēnas 'old'), jaunesi, -eti 'get younger' (< jaunas 'young'), storniu, -eti 'get fat' (< stonas 'fat'). Deverbal statives inflict like denominatives in the infinitive, present, and future, but have presents in -i < *-t (e.g., būstis (3 p. būstis), -eti 'be awake', muni, -eti 'mention', turši, -eti 'hate'). Infinitives in -eti are also found beside derives of other types (e.g., svitā (3 p. svitā), -eti 'flicker', O.Lith., mérēti, -eti 'be on the point of dying', etc.).

Celtic. ɛ-verbs are not a synchronic category in Celtic, but have left a clear reflex in OIr. ruidid, ruid 'blushes', forming a word equation with Lat. rubetrum, Lith. rūdėti 'rust', OCS rūdēti 'squish', and OHG rotēn 'turn red'.

Germanic. Both deverbal and denominative statives and inchoatives in Germanic are characterized by an etymologically problematic suffix *-ai/*-a- (e.g., deverbal Go. 3 sg. hābaip 'has' (= OHG hābēs, cf. hābaip 'has' (= OHG hābēs, Go. hābaip 'is silent' (= OHG hāgēs, Go. munaip 'has in mind' (= OHG mōnē 'desires'), denominative Go. fāstaip 'fasts' (= OHG fāstēs, cf. fāstaip 'firm, fast'), Go. arnaip 'has pity' (= OHG arnēs, cf. armaip 'miserable'). The only unambiguous reflexes of *-a- are in nominal forms like Go. arnaip 'mercy' (< *-ā and fahepō 'joy' (< *-āpō).}

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§2. A great deal has been written about ɛ-verbs over the past century, most of it long since rendered obsolete by the advent of the laryngeal theory and other refinements in our knowledge of PIE phonology and morphology. At the time SMIE was written in the 1970s, the theory of *-e- that seemed most in need of critical attention was a view held by the late Warren Cowgill (see Cowgill 1965: 265 ff., based in part on Bennett 1962, and subsequently elaborated by his students Hans Hock (1973: 332 ff.) and Donald Ringe (1988-90: 87 ff.; 1996: 56 ff., 119 ff.). According to the “Cowgill school,” PIE *eh₂, with zero grade *h₂-, was an aorist suffix which retained its original value in Greek (cf. ējων) and, extended by further material, in Slavic (cf. mērētō < *-ē- and Baltic (cf. minētāu < *-ē-). Such retained *-e- aorists were said to have given rise to two kinds of derived presents: the later and more transparent type, *-ē/0- was added to the full-grade aorist suffix *-eh₂- producing the suffix complex *-eh₂-ē/0- (= *-ē/0-) seen, e.g., in the Latin statives of the second conjugation and the Balto-Slavic denominatives of the starērō, senētē type. In the other, more archaic class of derived stative presents, *-ē/0- was added to the zero grade of the aorist suffix, yielding stems in *-ē/0-ē/0- (= *-ē/0-). The distinctive claim of the Cowgill school was that the suffix complex *-h₂-ē/0- was the source of the Slavic deverbal presents in *-ē. (OCS mērētō, mērētē), the Baltic deverbal presents in *-ē (Lith. mūni, mūni), and the Germanic presents in *ai/*-a- (Go. munaip). The Tocharian class III and IV presents were added here by Ringe (cf. above).

Much of the argumentation in SMIE was devoted to exposing the inadequacies of this model, and, in particular, to showing why the sequence *-h₂-ē/0- could not have yielded the Balto-Slavic, Germanic, and Tocharian forms it was intended to explain. But SMIE also had two positive goals — to argue for an alternative explanation for the forms which Cowgill and his followers had tried to derive from presents in *-h₂-ē/0- and to offer a new view of the original function and distribution of the *-e- suffix. The resulting synthesis was, I believe, correct in all essential respects. In the quarter century that has elapsed since SMIE appeared, however, a veritable
“knowledge explosion” has affected almost all areas of IE comparative grammar, and some of the insights gained over this period shed light on problems that were impossible to resolve in the 1970’s. This is itself sufficient reason to revisit the issues that animated the discussions and disagreements of twenty-five years ago. There is also a more specific reason why a re-examination of the ε-verbs is particularly apposite now. In 1998 the Cowgill analysis was revived in an extended presentation by Jón Axel Harðarson (Harðarson, 1998), whose views were almost immediately taken up in the influential Lexicon der indogermanischen Verben (henceforth LIV) published in the same year. As a result, the putative aorist in *-eh₂ and present in *-h₂-t/é-ó now find inclusion, as the “finitive” and “essive”, respectively, in a major IE reference work.

§3. Our return to the problem of the ε-verbs can begin with a brief review of Harðarson’s major claims. The cornerstone of the case for a PIE “ε-aorist,” for Harðarson as for everyone else, is the Greek aorist in η- (εὐμένιν, εκρήγην, etc.), which he characterizes as “finitive” or “patitive” depending on the valence of the underlying root (327). Cognates for this supposedly inherited formation are hard to find. Harðarson adduces the fact (324) that in Balto-Slavic, the infinitive stem in *-e- of deverbal stative forms the basis of the aorist or preterite (OCS inf. brēdětī, minětī → aor. brēdět, minět, Lith. inf. budėt, minėt → pret. budėjau, minėjau). But it cannot be emphasized too strongly here that such aorists or preterites do not constitute evidence for an ε-aorist of the Greek type. A yawning semantic gap separates OCS brēdět, minět and Lith. budėjau, minėjau, on the one hand, from Gk. εὐμένιν, εκρήγην, etc. on the other. The Baltic and Slavic forms are not finitve or patitive (i.e., passive), they are simply the Balto-Slavic counterparts corresponding to the stative presents “budět,” *minět- and the stative infinitives *buděti, *miněti. A form like 1 sg. *budēsau, which must have been the Proto-Balto-Slav antecedent of OCS brēdět and Lith. budėjau, meant ‘I was awake’, like a PIE imperfect or pluperfect, not ‘I awoke’ like an aorist in the Indo-European sense. To express the non-stative meaning ‘awoke’, Slavic and Lithuanian both employ transformations or replacements of the PIE middle root aorist— in Slavic the secondarily signitized aorist 1 sg. brēdět (for earlier *brēdě), 2, 3 sg. brēde, etc. (pres. brēči/jno, and in Lithuanian the 1st-pseudo 1 sg. budět, 3 p. budē, etc. (pres. bundū)).

Harðarson’s further evidence for an ε-aorist adds nothing important to the picture. The Armenian aorist type tak’ez a hid’ (< tak’ez, pres. tak’ezm < *tak’ez-sk-), which, following Klingenschmitt (1982: 282), he attributes to a PIE aorist in *-e- (324), can phonologically just as easily go back to an aorist in *-e-o-. From the point of view of overall patterning, the sequence *-e-o- is clearly the better choice; the pair tak’ezm : tak’ez looks very much like a present in *-eško/-o- (cf. the type Lat. rubéscō, sēntesō, etc.) coupled with a derived s-aorist of the type OCS *stērēs or Gk. στήσωνον. The Old Albanian aorist stems pār ‘see’ and pār- ‘fall’, which Harðarson (325), again citing Klingenschmitt (1982: 150 f.), tentatively refers to ε-aorists *pas-o- and *tas-o-, are not probable either, since there is no evidence that the lost stem-vowel was *-e-.

In short, once the Balto-Slavic stative “aorists” in *-e-o- (> OCS -ō, Lith. -ēau) are removed from the picture, Harðarson’s case for a PIE thematic aorist in *-eh₂— is based entirely on the category that gave rise to the hypothesis in the first place — the Greek aorist in η-.

§4. Harðarson finds evidence for PIE “essive” presents in *-h₂-t/é-ó in five present formations in the daughter languages: the Greek type ἤτοι, the Armenian stative type mnam ‘I remain’, the Germanic class III weak verbs in *-au/-e-(1)ág-, the Tocharian class III and IV presents, and the Indo-Iranian passive in -yā-. All of these can be, and have been, better explained in other ways.

3 The oral version of Harðarson’s paper was given in 1996, at the Tenth Fachtagung of the Indogermanische Gesellschaft in Innsbruck. References to LIV in this paper are to the 2001 (second) edition.

4 I follow the traditional practice of labeling the Balto-Slavic category ancestral to the Slavic aorist and Baltic preterite the “aorist” — an acceptable usage so long as we remember that the Balto-Slavic aorist, unlike its Greek counterpart of the same name, was a purely temporal category. Verbs with “second stems” in *-V₂-(*-e-, etc.) generally have aorists in *-V₂-s/f-/ (< *-V₂-e-) in Slavic and preterites in *-V₂-f-/ in Lithuanian. The Slavic situation is the more original; Baltic *-f-/ is the replacement of earlier *-e-.
The Greek θαρος-type and Arm. mmam need not detain us for long. As shown by Watkins (see note 4), presents of the type θαρος, θεός, etc. are unproblematically derivable from preforms in *θριείσα(/θριεοις)/, which at some point prior to the quasi-regular Greek shortening of *θριείσα/- to *θριει-/ were mechanically provided with aorists in *θριεις- (cf. τυμέα for *τυμιά < *τυμμείο/τυμείο/; aor. τυμέο/τυμίο). Hardarson opts for a more complicated account, substituting (328 f.) *θριείσα/ for Watkins’ *θριεις/ and *θριεις/ for Watkins’ *θριεις/. To justify the phonological development of *θριείσα/-Gk. ἑαυτοι/-, he is obliged to reject ‘Pinault’s Rule’ — the widely accepted inner-FIE loss of postconsonantal laryngeals before ἧ/- in medial syllables (cf. Pinault 1962). He makes no effort to explain the apparently exceptionless replacement of his aorists θαρος, θεός, etc. by sigmatic θαρος, θεός, etc., despite the robust survival of ε-aeors elsewhere in Greek (θαρός, θεϊον, etc.).

The proposed derivation of Arm. mmam from *μμ-θριείσα/-, an idea advanced by Barton (1990-91), is vitiated by the etymological ambiguity of stem-final -α/- in Armenian, which can in principle go back to any or all of *θριεις-, *θριείσα/-, and *θριεις-. Hardarson’s choice of *θριείσα/- (< *θριεις-) for the forms he calls ‘a-statives’ (329), besides again flying in the face of Pinault’s Rule, is completely arbitrary. mmam itself, as he admits, could equally well come from a lengthened-grade iterative *μμ-θριείσα/-, a form indirectly attested in Greek (Argolidic ἐπιμέρουςκοτις: ἐπτιμόνικοτις). And since it is in fact quite common for PIE presents in *θριεις/-, both iterative and denominative, to acquire attested value in the IE daughter languages (cf. Gk. ἕπαιν ‘see’, Lat. spīrō, ‘are hope’, Gr. μιτόν ‘think’), etc., there is no need to look any further for the source of ‘static’ -α.-

5. Unlike the Greek and Armenian forms just discussed, which are quite unproblematic within their respective traditions, the Germanic class III weak verbs in 3 sg. pres. *-aip constitute one of the most difficult problems of Germanic comparative grammar. My own suggested solution, an earlier version of which appeared in SMI (1932 ff.), will be given in §21. The detailed discussion that follows deals only with the quality of the evidence for *θριείσα/-.

Following the Cowgill school and some earlier authorities, Hardarson (329 ff.) assumes that the Proto-Germanic class III paradigm was characterized by an alternation between *-a-, in the 2 sg., 3 sg., and 2 pl., and *-a-, in the 1 sg., 1 pl., and 3 pl. This view, though widely and carelessly repeated, is not in fact what the evidence shows. In Old Norse, which provides the best starting point for a survey of the data, there are actually three class III paradigms: 1) that of the great majority of class III verbs, with *-ai- in alternation with *-a- (e.g., 1 sg. vák ‘I am awake’, 2 sg. vakaz (< *wakaz/), pl. vökum, vakið, vaka/), 2) that of sega ‘say’ and (by analogy) sega ‘be silent’, with *-ai- in alternation with *-ja- (1 sg. sæg and (rare) seg, 2 sg. sægir and (rare) segr, pl. sægum, sægði, sægða); and 3) that of hafa ‘have’, with apparent contamination of forms in *-a-, *-a-, and *i- (1 sg. hefi and hef, 2 sg. hefir and hefr, pl. hófum, hafið, hafa/).

No such variety is found in Gothic, where all class III verbs, including ‘have’ (‘say’ does not occur), have *-ai- alternating with *-a- (sg. haba, -ais, -aip, hâ, hâbâm, -aip, and, pret. habaid). Old High German shows a different situation again. Here -ei- (< *-ai-) is generalized throughout the paradigm, both in ‘normal’ class III verbs (e.g. dagaz ‘be silent’, pres. dagaz-it, -es, -et, -emz, -et, -ar) and in ‘have’ and ‘say’ (habòm/sægðm, -es, -et, -et, etc.). ‘Have’ and ‘say’, however, also show significant variant forms. Among these are 1) 1 sg. habu, sagu, recalling Gr. 1 sg. hâba/;

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2 One could, of course, argue that there was a principle behind the addition of -α/- to *θαρος, θεός, but not *τυμέα, *τυμείο/- specifically, that the former corresponded to presents in -εις, while the latter did not (cf. μαυμάτη, γραμμάτη). The important point, however, is that since the pattern -εις- was completely regular and productive, the aorists θαρος, θεός could have been created at any time, with or without a mediating stage *θαρος, *θεός.

8 As another example of his type Hardarson cites (again following Barton) inmanam, aor. inmægiv ‘understand’, with a base inmæ supposedly going back to *inm-θριείσα/-, inmanam, however, has exactly the same structure as logonam, loganc ‘wash’, which looks very much like the indirect reflex of an iterative *θριεις, *θριεις/ (= *θριείσα/). Other probable iteratives are, e.g. píngam ‘sneezze’ and kardam ‘call’.

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9 In making sense of these forms, it is important to bear in mind that the 1 sg. present in Old Norse is always synchronically derivable from the 2, 3 sg. by deleting the final -r. In the paradigm of sega, the (purely West Norse) absence of gemination before the -r is due to contamination with segr < *sægða and segr < *sægða, while iumlaut has been generalized from sega, segr, etc. The most striking feature of hafa vis-à-vis sega is the complete absence of unambiguous ja-forms; the ‘short’ paradigm hefð(-), hófum, etc. is indistinguishable from that of a strong verb.

10 In Tatian scribe γ, to be sure, and hence uncertain as to dialect. See most recently Klein (2001).
ly no accident that “say” also has an unexpected o-grade of the first syllable, and that the PIE root *sek-
underlies an o-grade iterative-causative *sek-o in Balto-Slavic (cf. Lith. sakyti ‘say’, Serbian Ch. Sl.
socići ‘indicate’). A plausible inference to be drawn from these facts would be that “say” originally formed both an o-grade iterative-causative *sak(w)i, *sak (w)ij, *sak (w)ib and a zero-grade class III weak verb (e.g., *skwō, *skwai, *skwaih, vel sim.), from which a Proto-Germanic combined paradigm was created by generalizing the “heavier” variant of the root (*sak(w)i-) and the “lighter” variant of each ending (*sak, *sak-w, *sak-ih, etc.).
Such a scenario would account for most of the special morphological features of “say” in Old Norse and West Germanic, although it would not by itself explain the deviant profile of “have.”

To see the problem of “have” in context, we must first turn to two other verbs with class III affinities. The first is *hugōn ‘think, consider’, revealed by its reflexes across Germanic (cf. Go. hugan, ON hyggja, OHG hugen (huggen), OS hugan) to belong properly not to class III but to class I. In Old High German, hugen shows occasional class III transfer forms, notably the preterite hōgēta. Such forms are also found in Old English, where hygcan is actually assigned to class III in many traditional grammars (e.g., 1 sg. hygg, 2 sg. hyget and hogast, 3 sg. hygp and hogap, etc.). How is the late and partial shift of *hugan to class III in some West Germanic dialects to be explained? The reason was clearly not the quasi-stative meaning “think” or the stem-final -ja, since the nearly synonymous weak verbs *pākjan (OHG dchen, OE pencan) and *pākjan (OHG dchenan, OE pencan) showed no comparable disposition to leave class I. The decisive point of contact with class III, rather, was that *hugan had the anomalous preterite and past participle *hōgōd- (Wmc. ‘hōgod-), with the same voiced cluster and lack of union vowel as in *hūbd-

\[13\] Old Friian adds nothing to our understanding of the problem and will be
omitted in what follows.

\[14\] Mention should also be made of the special class III treatment in Anglian.
Here the 3 sg. in *e- in *heugst gives rise to a secondary stem in *heugst, mimicking the
secondary stem in *u- in *huugst (beside 3 sg. *u- in class II (hillian, *u- in *hōgjan, copying
seallian < *suīljan). The remade class III forms can be distinguished metrically and in other ways from their near-lookalikes in class II; details are given by

\[12\] What are we to make of this proliferation of data? The natural point
of departure is “say,” the only class III verb with ja-forms in both North and West Germanic. In the case of this word Harðarson’s reconstruction
of a paradigm *sakō, *ais, *aip, etc. is obviously attractive. But it is sure-

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In early Old High German the coexistence of "normal" habèta and sagèta beside archaic hapa.ta and sacta led to the creation of "normal" hogèta beside archaic hoca.ta, despite the absence of a supporting present *hògen, *-es, etc. Similarly, hogo.de in dialectal Old English was renewed as hogode, which probably played a role in the creation of 2 sg. hogast, hogap.

The other verb which bears importantly on "have" is "live." In Gothic and Old Norse, "live" is an ordinary class III verb (Go. lìba, liba; ON líi, líi(t), etc.), without any of the peculiarities that set apart "have" and "say." In West Germanic, however, the familiar idiosyncrasies reappear, including a stem *lib(ō)b- in Old Saxon and Old English (OS 1 sg. libbiu, 3 pl. libbiad, -ied, OE libbe, libbæ, etc.), class I forms in Old High German (2, 3 sg. liis, -it alongside regular lebès, -e), a 1 sg. form libi(o)f in dialectal Old English, and a preterite — the only other such "short" form in Germanic — with -d added directly to the root-final voiced obstruent (OS libda, OE lifde). Since there is no sign of a stem *liba- in Old Norse, the ja-forms of "live" are best regarded as an inner-West Germanic creation. It is easy to see how these could have come about: the West Germanic preterites *sagdisaid and *hogdis-thought (OS sagda, hogda, OE saged, hoged) corresponded to 1 sg. presents *saggiu and *huggiu (OS seggiu, huggiu, OE sege, hyccge), so the preterite *libi-lived was provided with a 1 sg. present *libiju. The preterite in *bd-, which had no etymological connection with the class III suffix (cf. note 15), thus became the vehicle for accommodating the inflection of "live" to that of its two more salient class III congener, "have" and "say."

16 It must be emphasized that the voiced clusters in these forms and in *liba- (cf. below) have nothing to do with class III inflection as such. *habda- was formed within Germanic by combining the synchronic root *hab- (< *k̂ap-s) with the productive suffix form *-da- (< *t̩a-); the result was a participle with the meaning "had," contrasting with *hata- < *k̂ap-s- "taken." Similarly, *hug-da-z and the parallel *hug-dz-a- "mind" (Go. ga-hugda, OE Hygd) were made by combining synchronic "hug" with archaic "-dz-"-a-; the "unformed" stems -a- may survive in OE hyph "hope, trust, joy." The voicing in *sagda- and *libda- is likewise secondary. What is genuinely old in these forms (and in the dialectal preterites later built to them) is the absence of a union vowel — *ai- in class III, *i- in class I — between the root-final consonant and the dental.

No creole can be placed in the proposed derivation of *habda-from *kappto- (i.e., *kap-h₂₃-s; Cowgill added Bannesberger 1969: 594 f.). Not only was *a- lost in precisely this position in the Germanic word for "daughter" (Go. daohtar-hte, *dagard-hte, but *h₂₃- was probably lost between obstructions in PIE itself (cf. Jasanoff 2003: 77). The alleged participial type *-hto- is in any case a fiction; see below.

§7. We can now return to "have" itself. The unambiguous ja-forms of this verb are confined to the Ingvaenonic languages, where, like the ja-forms of "live," they can easily be explained analogically (*sagd-, *hugd-: *sagdi2, *hugdi2: *habd-, X = *hakt₂). Yet the ja-umlaut and optional syncope in ON 2, 3 sg. heifᵜir show that "have," though lacking ja-forms in North Germanic, must already have differed from "normal" class III verbs at the Northwest Germanic stage. ON hafa presupposes two partly overlapping presents, one with the standard class III alternation of *ai- and *a- ("habò, *ais, *aip, etc., whence the full ending -i), and the other an ordinary thematic present in *i-/*a- ("habò, *ais, *ip, etc., whence the uumlaut and "short" ending -i). It is not clear how this situation — which is not predicted under any theory of class III — arose. One possibility is that early Germanic originally had only a "normal" class III paradigm *habò, *ais, *aip, etc., but that at some time prior to the breakup of Northwest Germanic the non-stative use of *haban in the sense "take, obtain, bring" — a common meaning of hafa in Old Norse — brought about a secondary distinction between "habò, *ais, *aip 'have' and a new, specifically non-stative *habò, *ais, *ip 'take'. If the difference in meaning between the stative and non-stative forms was later lost, the doubles 2 sg. *habais *habais and 3 sg. (= 2 pl.) *habip could have survived as free variants. In West Germanic, the synchronically marked paradigm *habò, *ais (var. *iis), *aip (var. *iip), pret. *habid was eventually confused with that of "say" (*saggi2, *ais, *aip, pret. *sagi2). "Live" (*libò, *ais, *aip, pret. *libi2), and (dialectally) "think" (*huggi2, *ais, *ip, pret. *hugdi2), resulting in the quasi-attested Ingvaenonic *habij, *ais, *aip.

Whatever the merits of this scenario — and it is certainly not the only one imaginable — the inescapable larger conclusion is that the agreement

17 Two possible variants:

1) Early Germanic originally had only a thematic ("strong") present *habò, *ais, *ip, etc., meaning "obtain." In the course of a gradual semantic shift from "obtain" to "have," the forms in *iis and *ip were replaced, to the extent they had stative value, by *habais and *hapi with the endings of "normal" class III verbs. The two sets of forms, though eventually falling together semantically, survived into North and West Germanic, and events proceeded as above.

2) Early Germanic inherited two paradigms, one of the class II type (*habò, *ais, *aip, etc.) and the other thematic (*habò, *ais, *ip, etc.) and meaning "have", and the other thematic (*habò, *ais, *ip, etc.) and meaning "obtain". The overlap of the two in the 1 sg., 1 pl., 3 pl., etc. led to their merger into a single lexical item with both meanings; the doubles 2 sg. *habais / *habais and 3 sg. (= 2 pl.) *habip / *hapi survived as interchangeable free variants into Northwest Germanic.
of “have” with the other “special” class III verbs in West Germanic is a late and unoriginal feature.

§8. The Germanic facts can now be summarized. Even under the most superficial reading of the evidence, the only conceivable candidates for an inherited class III paradigm in *ai/-ja- are the four verbs with preterites in *bed- or *gd—“have” (*hab), “say” (*sag), “think” (*hug), and “live” (*lib). Of these, only *sagai/-sagja-, which probably had its origin in the fusion of two originally distinct presents, is securely reconstructible with a stem in *ai/-ja- for Proto-Germanic or Proto-Northwest Germanic. *habjan, despite its irregular preterite, was basically a weak verb of class I; its partial transfer to class III was a sporadic development within West Germanic. Neither “live” nor “have” originally had ja-forms. “Live” was a normal class III verb in *ai/-ja- which acquired the stem-form *libja- in Ingvaeric under the influence of “say” and “think”; “have” was basically like “live,” though with variants *habis and *habip in the 2, 3 sg. In non-Ingvaeric West Germanic (i.e., Old High German) the patterns of convergence were different. Here the -ut of OHG 1 sg. habu (= OE habu), sugu (= OE sagu), and libu (cf. OE sa(lega) was extended to “say” and “live,” the -i of OHG 3 sg. hebit (= OS habid), segit (= OS segid), jubit was imported into “say” and “live” from “have”; the -i of OHG pret. hebita, segita, libita was ultimately taken from the ja-forms of “say.”

It is important to note that although Ingvaeric *ai/-ja- can easily be explained as the replacement of Germanic *ai/-ja-, the converse is not true. If Gothic had inherited, e.g., a 1 sg. *munja corresponding to 3 sg. munajb ‘intends’, it would be virtually impossible to understand the remodeling of *munja to the attested muna. Hardarson claims, most implausibly (330, n. 18), that in the Germanic dialects ancestral to Gothic and Old Norse, diphthongal forms like munajub were analyzed into an invariant part muna- and a thematic ending -ja-, thus triggering the rise of analogical thematic forms in 1 sg. *a-o, 1 pl. *a-amja(2), and 3 pl. *a-anja/d.

These forms, he says, were then further transformed: the 1 sg. in trinomic *-a was analogically shortened to bimoric *-a, the 3 pl. in *-and was phonologically shortened to *-and, and the 1 pl. in *-an was ana-logically shortened to -an. But this account, grossly ad hoc in any case, is undercut by the fact that there were no comparable developments in the weak verbs of class II, where the 1 sg. ends in *-o < *-a, the 3 pl. ends in *-end < *-enja/d, and the 1 pl. ends in *-an < *-anja(2). Nor does Hardarson make any attempt to explain why “say,” the one class III verb with genuinely old, independently motivated ja-forms, was also the only verb which, under his account, escaped the supposed analogical change from *ai/-ja- to *ai/-ja- in Old Norse.

§9. The view that the class III suffix was *ai/-ja-, in short, is fundamentally untenable. But even if the Proto-Germanic paradigm could be reconstructed *habj, *ais, *ajib, etc., as claimed by Hardarson, Cowgill, et al., it is inconceivable that these forms could have come from PIE *kap-h-jod (or *khap-h-ja-). The putative development of *kap-h-ja-hod to habjod and *kap-h-ja-ti to habi requires us to assume that *h- first developed to vocative *a-in medial syllables in Germanic, even (despite Pinault’s Rule) before *-i; 2) that the e-variant of the thematic vowel then became *i, either exclusively before endings containing a high vowel or by a general raising of *-e- to *-i- in medial syllables; 3) that intervocalic *-i- was then lost before *-i-, but 4) not before other vowels; 5) that medial *a- was lost between consonants (1 sg. *kapjod < *kap(y)od, but 6) not before *i- (3 sg. *kap(i)od), 7) that the diphthong *ai- then yielded *ai-; and 6) that only after the change of 1 sg. *ajod to *jod did a second j-loss rule eliminate intervocalic *-j- (*-i-) before vowels other than *-i- (cf., e.g., 1 sg. salbo < *sal(0)). Among the grotesquely stipulative features of this explanation, particular note should be taken of the otherwise unmotivated “special” loss of intervocalic *-j- before *-i- (assumption 3) and the retention of *a- as a distinct vowel in Germanic until after the late raising of *-e- in medial syllables (assumptions 5-7). As far as pronouns of overall economy, it is an observable fact that the Germanic reflex of PIE *Hie-ow was *je/-ja- and not *ai/-ja-. The PIE present *ja-erh-ja-o- “plow,” a stem found in no fewer than four other branches of the family (cf. Ofr. airiu, Lith. ariu, OCS orj, Gk. ἄριος), appears in Ger-

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25 As shown by Thorhallsdóttir (1993), there was only one rule of intervocalic j-loss in Germanic, which deleted *-j- after both stressed and unstressed vowels except when it was “protected” by a preceding *-i-

26 The loss of intervocalantal laryngeals in medial syllables, whether or not passing through a “schwa” phase, is an isogloss that Germanic shares with Balto-Slavic; it must have been a very early rule. See note 16.
manic as a normal present in *-jan (Go. arjan, 3 sg. *-jih; cf. OHG erien, -i(t), etc.), with no hint of the expected diphthongal forms in *-ai. To suggest, as Harðarson does, that "bei den Stativverben der interkonsonantischen Laryngel — als funktionstragendes Element — durch den konservierenden Einfluß der Morphologie länger erhalten blieb als der funktionslose Laryngel im Auslaut einer Wurzel" (331) leaves one wondering whether the principle of Auswahlunslosigkeit is simply being overridden because it fails to support a favorite theory.

§10. Harðarson’s remaining evidence for “essive” presents in *-h₁jé/-ó- comes from Tocharian and Indo-Iranian. The Tocharian class III presents, represented by A wakaktar and B wokaktar ‘disappears’, are an exclusively deponent class characterized by the invariant stem vowel A -a, B e. The a : e correspondence points to Common Tocharian non-palatalizing *-e-, which ordinarily goes back to PIE *-o-. The standard view, therefore, takes the class III paradigm from a pre-Tocharian middle in 3 sg. *-otar, pl. *-ontor, with the same non-alternating o-timbre of the thematic vowel as in the Gothic passive (cf. 1. 3 sg. bairada (< *-otad) ‘am/is carried’, 2 sg. bairada (< *-osad), 3 pl. bairanda (< *-ontad)). Harðarson rejects this analysis, preferring the more complicated account given by Ringe (cf. above). The distinctive claim of Ringe’s approach is that the class III theme vowel goes back not to Tochar. *-e- < pre-Tochar. *-o-, but to an otherwise unknown Common Tocharian vowel *-é-, supposedly the contraction product of pre-Tochar. *-je/o- < *-h₁jé/-ó-.

The al-important forms for Ringe’s theory are the presents of class IV — the descriptively class that takes the place of class III when the underlying root contains an a-vowel. Class IV presents, though etymologically identical with those of class III, show an unexpected phonetic rounding in both syllables of the stem. Thus, e.g., the root AB wák- ‘break open’ (< PIE *wáák- or *w(e)(h)ék-) forms a present A waktart, B wokaktar (< Tochar. *wokatra, class IV) rather than A *waktart, B *wakaktar (< Tochar. *wakat, class III). The source of the class IV rounding was clearly the theme vowel. If this was PIE/pre-Tochar. *-o-, as generally assumed, the rounding in *wokatara would have come about via the phonologically natural change of pre-Tochar. *wag-o- to Tochar. *wok-o-. Ringe, however, denies the possibility of such a development in Tocharian, citing nouns like A ák, B áke ‘end’ < *ák-os (s-stem) and B ántse ‘shoulder’ < *ómos-o- (o-stem) to argue that Tochar. *a was not subject to rounding by a following *o. His preferred alternative is to set up a new rounded vowel *-ó- which he attributes to *-že/o-. But this is somewhat of an overreaction; the absence of rounding in ák/áke, ántse, etc. could also be due to analogy with the large number of inherited s- and o-stems where the root did not contain an a-vowel. Without a decisive argument against “o-umlaut,” the case for Ringe’s ad hoc *-e- < *o- disappears, and with it the evidence for pre-Tochar. *-je/o- < *-h₁jé/-ó-.

§11. The Indo-Iranian passive in -yé, Harðarson’s final supposed reflex of the “essive” is not at first blush a problematic category. Passives of the type Ved. vídyāte ‘is found’, ubhyate ‘is conveyed’, dhīyate ‘is put’, etc. are standardly assumed to have been specialized from je/o-presents of the type mānyate ‘thinks’, bādhyaate ‘is awake, wakes up’, nṛtyate ‘dies’, etc., which are usually — and sometimes contrastively — intransitive (cf., e.g., jñate ‘is born’ vs. jānati, jānayati ‘begs’, pācayate ‘ripen’ vs. pācati ‘cooks’). Typological parallels are plentiful; a semantic development from intransitive to passive is also observable in the Greek aorist passive in -θν- (see §§24 ff.) and the Indo-Iranian passive aorist in 3 sg. -d. Yet despite the simplicity of this picture, Harðarson follows Rasmussen (1993: 481) in separating the two functions of -ya, taking mānyate, etc. from PIE *je/o-, and vídyāte, etc. from PIE *-h₁jé/-é-. The identification of the passive with the supposed “essive” creates more problems than it solves. The suffixes -ya- and *-h₁ya- are indistinguishable in most environments in Indo-Iranian, where sequences of the type *-CH ṣ- uncontroversially yielded *-Cṛ- by Finault’s Rule;22 and root-final *-i- and *-i- were leng-

22 The suggestion, in other words, is that the late PIE/early pre-Tochar. sequence *a... o would have given Tochar. *a... o with two instances of the Tocharian open o-vowel; the subsequent development to A a... a and B o... o would then have been perfectly regular.

23 Nor should it be forgotten that the inherited s- and o-stem paradigms contained many forms in which the root vowel was not followed by PIE short *-o-, such as the s-stem oblique cases in *-es- and the o-stem case forms in *-t- and *-r-.

24 Evidently accepted by Harðarson as well, who thus claims exactly opposite “schwa” treatments in Indic and Germanic: in Indic, loss before *-i- and vocalization before other consonants; in Germanic, vocalization before *-i- and loss everywhere else.
thene in all *-suffixes, regardless of etymology. In the few cases where the difference between *ja- and *Hja- can in principle be detected — i.e., after anit roots ending in a liquid or nasal — it is clear that the mark of the passive was *ja- and not *Hja-. Thus, the passive of ky-‘do’ is kryáte, not *kryáte; the passive of han-‘sly’ is haryáte, not *haryáte; the passive of gam-‘go’ is gymyáte, not *gamyáte. The passive týáte ‘is extended, is completed’ (tán-‘stretch’), which Rasmussen (864) takes from PIE *ºpH2H2jéH2/0, is better seen as an analogical set form based on the partial morphological overlap of tan- (pres. tanóti) with the semantically related set root satr- ‘strive for, achieve’ (pres. sanóti).

Before leaving Indo-Iranian, it is worth reflecting on the fact that attempts to connect ya-present like mánáte (= Gk. vàvýáno) and/or vídáte with the é-verbs of other IE languages are over a century old.25 From a naíve point of view it is indeed tempting to compare the historically obscure paradigms of the Germanic third weak class and the Balto-Slavic F-presents, both of which superficially offer evidence for a suffix-form *ja-, with the more transparent jeH0/0- formations of Vedic and Greek. But in the wake of endless failed attempts, it is by now safe to say that any hope of combining the Germanic, Balto-Slavic, Indo-Iranian, and Greek forms under a common formula — *H2jéH2/0, *éiH2/*éiH2, or the like — is a will-o’-the-wisp. The dilectical Germanic class III forms in *ja- are secondary, and the resemblance of the Balto-Slavic presents in *f-to presents of the mányáte/ jatváqan-type is, as we shall see below (§§18 ff.), illusionary as well.26 Neither Germanic nor Balto-Slavic, nor still less Toch-arian, offers any basis for tampering with one of the clearest formations in IE comparative grammar — the unitary class of stative and processual presents in *jéH0.

§12. It is time to stock the serious evidence for a PIE “infinitive,” or aorist in *déH2/*H2, comes down to a single formation — the Greek aorist in Í en (émuvmy, etc.). The evidence for a PIE “essive,” or stative present type in *H2jéH2/0, is weaker still — so weak, in fact, that there is no reason to believe that such a category existed at all. The conception that underlies Cowgill’s and Hardarson’s theory of é-verbs — that éH2-aorists were fundamentally like root aorists, and that just as root aorists gave rise to derived presents in *jéH2/0 (cf., e.g., aor. *gémH2/*gémH2-‘go’ ‘go’ — pres. *gémjéH2/0, *véríH2/*véríH2—‘work, effect’ — pres. *véríjéH2/0), so aorists of the type X-ésH2/*H2jéH2- could give rise to presents of the type XH2jéH2/0 — is simply incorrect. The stative presents in the IE daughter languages continue a variety of formations, some of them containing clear reflexes of the é-suffix (e.g., the Latin type taceó, *tác- and some of them not (e.g., the Germanic class III type *págon, *páip). But none of them go back to *H2jéH2/0.

There is actually nothing too surprising about any of this. The morpheme *éH2- is quite unlike any other PIE tense-aspect-marker. Its exceptional properties include the following:

1. It may be extended by further suffixes, both verbal (e.g., *-jeH0/0- in Lith. senéju, OCS staréjé, *-s- in Hitt. marštésjí, *-skeH2/0/0-in Lat. rubéseko) and nominal (e.g., *-lo in Lat. acértam, *-li in Go. faéha).28

2. It is capable of standing in word-final position without any verbal inflection, as in the Latin aéfásocii/facti are construction (cf. §1) and its intransitive counterpart with fós ‘become’. Here too belong the older but etymologically formed b-future and b-imperfect (árebdó, árebnam, etc.) and the structurally comparable Slavic imperfect (e.g., 1 sg. staréxda, smnéax, etc.).27

3. It alternates with nominal suffixes in “Cálad systems.” Thus, e.g., the common é-verb *HrúdH2éH2- ‘be (come) red’ (Lat. rubère, Ofr. rúld, Lith. rúddé, OCS rođéti, se, etc.) forms part of a derivational family that includes an adjectival *HráudH2- ‘red’ (Gk. ἱεράπτω, Lat. ruber, Toch. B rátr), an é-stem abstract *HráudH2- ‘redness’ (Ved. rúddí-krátd- ‘scattering blood’, Lat. rúbd-us ‘red’), and an a-stem abstract *HráudH2- ‘redness’ (Gk. ἱεράπτω, Lat. rubor), another such family is *HráéH2- ‘be sharp’ (Lat. acute); *HráéH2- ‘sharp’ (Gk. ἵππος, O’Lith. ástras, OCS ośtra); *HráéH2- ‘sharpness’ (Gk. ἵππος ‘sting’): *HráéH2- ‘sharpness’ (Lat. acús, -ésis ‘scaffold’). Cálad alternations are further reflected in language-particular “mini-systems” like the productive Latin pattern caléba ‘be warm’: calidus: calor, pallé ‘be pale’ pallidus: pallor, etc., and the Greek pattern ántheta: ἀνθέος, ἀνθράκα: ἀνθρώπος, etc.

25 Hardarson himself gives a good survey of such attempts in his footnote 33.26 Hardarson, for his part, avoids the trap of the Balto-Slavic comparison; see §19.

The famously mysterious second element in the Slavic imperfect was probably originally *ésjm, *es, *es, *pl. *es(om), *es, *esem, *est, *estem, the augmented imperfect of the copula; the same paradigm also gave the “imperfective” aorist [H]xó, [H]é, etc. The use of *-s as a “union vowel” between the root and the auxiliaries in both Latin and Slavic (Lat. dict-ém-bam = OCS ved-ás-bam) virtually assures the etymological identity the two formations.

27 As pointed out by Watkins (1971: 64) and developed by Nusbaum (1975: 50 ff.; 1999: 384 ff.).
These facts are so familiar that they run the risk of being taken for granted. It is altogether extraordinary, however, that a characterized PIE tense stem — and especially an aorist or “fientive” stem — should have combined freely with auxiliaries, served as the basis for the creation of verbal abstracts, and participated in Caland alternations. To appreciate just how peculiar the suffix *-eh₁- was in these respects, we need only imagine how Proto-Indo-European would have looked if, say, the s-aorist stem *gwegʰ-eh₁- (< *wegʰ- ‘convey’) had formed a verbal abstract *wegʰ-es-ti-, figured in a periphrastic construction *wegʰ-es buXt ‘be conveyed’, or spawned a Caland adjective *wegʰ-es-ro- ‘conveying’. That we find such derivational families organized around stems in *-eh₁-, but not around s-aorists or root aorists or nasal presents or perfects,29 is a fact that needs to be explained at least as urgently as the forms that have occupied us thus far.

§13. Since 1978 (SMIE 122 ff.) I have taken the position that PIE “stative *-es-” was not properly a verbal suffix at all, but originated in forms like the Vedic adverb gāhā ‘hidden, in concealment’. Historically, gāhā (< *gwegʰ-eh₁, with ‘adverbial’ dislocation of the accent) is the instrumental singular of the root noun gah- ‘concealment, hiding place’ (< gihati ‘hides’). It occurs in three relevant syntagmas, exemplified in the passages below:

a) padám na tayur gāhā dādhana
mako rāye cāyavan dātrim aspaḥRV 5. 15. 5
 ‘Der du wie ein Dieb deine Spur verbirgst, du hast jetzt zu großem Reichum dich offenbarend dem Atri (aus der Not) heraus geholfen’

b) gāhā cāranum sakhbihībhi śivēbhīr
divi yahvāhēr nā gāhā habhīvā RV 3. 1. 9
 ‘Ihn, der vor seinen guten Freunden sich verborgen hielt — vor den jüngsten Töchtern des Himmels war er nicht verborgen’

c) vidnā te nāna paramān gāhā yād
vidnā tām tāsam yāta ṣajāhāṁtha RV 10. 45. 2
 ‘Wir kennen deinen höchsten Namen, der geheim ist; wir kennen den Quell, von wem du gekommen bist’

29 The occasional instances in which a characterized present stem has been reinterpreted as a root in the daughter languages (e.g., Skt. prachati ‘ask’, perf. paprawcha, germ. prachya; OHG pregman ‘ask’, perf. frarini) offer at best a very feeble parallel to the derivational productivity of *-eh₁-.

30 Translations from Geldner (1951).

Passage a) illustrates the use of gāhā with the roots dha- and kph- ‘make’ to mean *‘make (to be) with concealment’ > ‘make hidden’ — the same syntactic combination, if we accept the equation of stative *-e- with the instrumental in *-eh₁-, as in Lat. aerēcīō. Passage b) illustrates the use of gāhā with bhu- and as- ‘become’ to mean ‘become (to be) with concealment’ > ‘be (to become) hidden’ — the construction found, mutatis mutandis, in Lat. areto, arebo, areban, and the Slavic imperfect. Passage c) shows gāhā in the role of a predicative instrumental without an overt copula. Here there is no formal match with any familiar syntagma in the other IE languages. Functionally, however, the phrase gāhā yād conveys exactly the same meaning that elsewhere is expressed by a relative clause with an s-stative (e.g., Lat. quod lateb). Interestingly, an s-stative from the root *geugʰ- is actually found in Lithuanian, where gštšt ‘pres. 3 p. gštšt nestle’ (with secondary -u- for -u-, as in rūde) contrasts with non-stative gštšt ‘pres. gštšt protect, brood over’. Similarly, Ved. mgs ‘in vain’, properly the instrumental of the root noun corresponding to the verb mpśvar ‘forgets, neglects’, is etymologically related to the Hittite s-stative maršesz ‘is false’ and its inchoative doublet maršesz.

Besides instantly explaining the periphrastic constructions with verbs of making and becoming, the “instrumental” interpretation of stative *-e- accounts directly for its Caland behavior. Caland systems, as we now know (cf. Nussbaum 1999: 404, Schindler 1980: 392), are based on root nouns: the suffixed stems *hrudʰ-ro- ‘hrudʰ-resh’, *hrudʰ-er, etc. represent parallel derivatives of an underlying *hrudʰ- ‘redness’, a direct reflex of which survives in OIr. rūd (stem rod-) ‘red color’. But root nouns were declined in Proto-Indo-European, and one of their case forms was the instrumental singular in *-eh₁-. If *hrudʰ-eh₁ (instr. sg.) ‘with redness’ was in fact the source of the stative stem *hrudʰ-eh₁ ‘red’ (Lat. rubēre, Lith. rūde, etc.), then the Caland properties of stative *-e- are not only explained, but predicted.

§14. How, then, are we to understand the conversion of instrumental forms of the type gāhā/*geugʰ-eh₁ into actual verbs? In SMIE (124 f.) I suggested that clauses of the type ‘X... gugʰ-eh₁ X is/has been hidden’ were reanalyzed: *geugʰ-eh₁ was reinterpreted as a true verb and provided with verbal endings. The result, I said, was an athematic paradigm in *-eh₁- (< *eh₁-rm, *-eh₁-er, etc.), which in some IE dialects was extended to *-eh₁-er-o-. Under this analysis, the most archaic real *-er-verbs were the Greek ἑδων-type and the Hittite maršezzi-type, which I took to be athematic.

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This account was not altogether satisfactory. To begin with, the proposed direct verbalization of *X...gūkā₂-ēh₂ (predicate instrumental) to *X...gūkā₂-ēh₂-t(ī) (stative verb) would have been far from trivial. While cases are certainly known of predicative nominative forms — especially participles — acquiring verbal inflection, the fact remains that IE languages employ all kinds of adverbial elements as predicatives without converting them into verbs. Second, there is a chronological difficulty. The creation of ε-verbs from instrumentals must have been an inner-PIE development; one of the ε-verbs assignable to the parent language was *gūkā₂-ēh₂-itself, the ancestor of Lith. gūkūt. Yet if the mechanism for the creation of ε-verbs was the misparsing of nominal *-ēh₂ and its consequent remodeling to *-ēh₂-tf, it is hard to see how or why the “unverbalized” predicative instrumental *gūkā₂-ēh₂ would at the same time have maintained its existence as a free-standing form, surfacing millennia later as Ved. gūkāt. So too with Ved. mṛṣa beside Hitt. maresši: if PIE *mṛṣ-ēh₂ ‘false, neglectful’ (< ‘with neglectfulness’) was reinterpreted as a verb and replaced by *mṛṣ-ēh₂-t(ī), why are both forms still found in the daughter languages? Clearly, it would desirable to find some mechanism other than direct verbalization to bridge the gap between instrumentals and ε-verbs. Thanks to a small but important discovery in the realm of Hittite phonology, such a mechanism is now available.

§15. Let us begin by considering just those stative and inchoative verbs in the daughter languages where a clear reflex of *-ēh₂, unextended by *-s- or *-s(es)/o- figures as a constituent of the present stem. This description embraces the Latin maneō and rubēō-types, the Hittite marázeši-type, the Greek ἑπατος-type, the Slavic starjǎ-type, and Celtic (*OIr.) ruidid, *ruidi; it does not include Gk. ἐμπνεύω, which is an aorist, nor the supposed Germanic, Balto-Slavic, and Tocharian reflexes of the “esitive,” where the presence of *kas(ā)h₂-is, as we have seen, a fiction. Of the six branches of the family with clear “ε-present,” three point specifically to *ēh₂-je/ō- (“*-ēj(es)/o-”): Baltic and Slavic, where the *-je/ō/-is still palpably present, and Greek, where *-i- was lost and *-i(es)/o- was morphologically shortened to -ēō. Latin is ambiguous: the 1 sg. in *-eō

implies earlier *-ēj(es)/o-, while the 3 pl. in *-ēt suggests rather athematic *-ōt. OIr. ruidi-, ruidiis similarly compatible with either thematic *-ēj(es) or athematic *-ēt.21 The crucial language is Hittite. In SMIEH assumed, in pari following Watkins, that the marázeši-type presupposed an athematic paradigm in *-ēh₂- mi, *-ēh₂- si, etc. It is now clear, however, that intervocalic *-i- was lost in Hittite, and that *-ēh₂-je and *-ēh₂-ī, along with *-ōj(es) and *-ēt, would all have fallen together under the accent as *ōzzi (-ezzi).22 There is thus no certain evidence for a PIE athematic preterite in *-ēh₂- mi, *-ēh₂- si, etc. at all. The “ε-presents” of the IE daughter languages can all be derived from a single PIE type in *-ēh₂-je/ō-, reflexes of which can probably also be recognized in the isolated Vedic participle sanjāyā’odh (Lat. serviō, Lith. serėžia; cf. adverbial sanjā from long ago) and the Armenian passive in -i- (cf. berin ‘I am brought,’ stirin ‘I am loved,’ etc.).

This result greatly simplifies the problem of relating ε-verbs to gāhā-type instrumentals. Rather than posit a process of direct verbalization, we can now assume a derivational schema

predicate instrumental *X-ēh₂ → present *X-ēh₂-je/ō-
‘with/characterized by X-ness’
be(com)en characterized by X-ness,
be(com) X,

where the input was a nominal form — specifically, a predicate instrumental functioning as an adjective — and the output was a normal denominate present of the familiar type in *-je/ō-. There is nothing strange about indeclinables serving as the derivational basis for denominate verbs; cf., e.g., Lat. intrāre ‘enter’ < *become internal’ (in trā within), OE innan ‘go in’ (: inne ‘within’), Serbo-Croatian napredovati ‘advance, go forward’ (: naprijed ‘forward’). One of the implications of this analysis is that the traditional distinction between “denominative” and “deverbative” ε-verbs is illusory, or at least epiphenomenal. A verb like Lat. rubēō is conveniently classified as denominative because it is synchronically associated with the nominal forms ruber, rubor, rubidus, etc; a verb like Lat. maneō, which lacks nominal connections, can more appropriately be

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21 Or in Greek, if ἱππος ‘there is needed, necesse est’ is the reflex of an instrumental *kākōh₂ (cf. Baltes 2000: 51 f.), how did it escape conversion to an ε-present *kēōh₂-ō-.?
22 I take this for granted that the “Atelic” inflection of contract verbs (1 sg. -τιμι, -τιμι, etc.) is secondary.

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thought of as deverbal or deradical. But both are underlyingly denomi-
native in the sense that they rest on predicate instruments - in the one case *h₁ruđ₁- thermo*red (< 'with redness'), in the other *mq(n)-θo, 'steadfast' (< 'with steadfastness').

§16. Other *e*-formations find a ready explanation within this framework. The Latin inchoatives in *-escō (rubescō, senescō, etc.) are based on the stative in *-eō (< *-ēō), made by substituting *-skē/o- for *-e/o- on the model of inherited pairs like *-skē/o-: *gōn(ā)-λo, 'go, come' (cf. Ved. gātchati 'goes', Gr. ἀπεκο 'come!' vs. Lat. venire 'come', Gr. ποιε 'go') and *-skē/o-: *Hud- skē/o-: *Hud-ō- 'be active' (cf. Toch. A yukt- (< *-c-sk-θ- 'be agitated' vs. Ved. vādhya 'fight'). The functionally equivalent Hittite inchoatives in *-es- < *-eh₁- (maršēkā 'becomes false', etc.) reflect a parallel replacement of *-e/o- by athematic *-a-. Particularly interesting are the cases in which instrumental of the *gāhā*-type were taken as the derivational basis for declinable nouns and adjectives. Here belong, e.g., forms like Lat. acē-tum — not the "to-participle" of accē, ares (pace Hardin 1993; see Nussbaum 1999: 406 f., note 44), but a substantivization of the adjective *a-k-e-tō- 'being sharp', built directly to the instrumental *a-k-e-θ 'sharp', with sharpness. Following the normal PIE pattern, such adjectives in *-e-to- gave rise to abstractions in *-t- (*-eh₁-ti-), exemplified by nouns like Go. fahēpe 'joy' and Hitt. ḫaššēzzi (nt.) 'kingship' (*-hēse-bē 'become king'). Inevitably, the new nominal forms tended to be linked synchronically to the corresponding e-verbs. The "verbalization" of *-e-to- and *-e-ti- was especially pronounced in Balto-Slavic, where all e-verbs, both "denominative" and "deverbal," have participles (*-adjectives) in *-e-to- (Lith. -etas, OCS -ēto) and infinitives (*-abstractions) in *-e-ti- (Lith. -ēt, OCS -ēt).

The PIE range of "stative *-e-\(\)" thus included three groups of forms: 1) predictables of the type *X-eð, 'with Xness, having X', with approximately the same range of values as Ved. gāhā (§13); 2) inchoative denominative presents of the type *-eh₁, jē-̄-θ- 'become with Xness'; 3) instrumental-based nominal derivatives, including (inter alia) the types *X-eh₁-to- 'having Xness', *X-eh₁-ti- 'condition of being with Xness'. The individual III branches exploited the inherited material in different ways. Latin, e.g., extended the periphrastic use of the bare instrumental (cf. fēr-e-o, facit ares, aet-bum, etc.) and retained a large class of presents in *-e-θo- and *-skē/o-, to which an analogical perfect system was built onto the model of the iterative-causatives in *-e/o- (e.g., tacē: tacēt: tacēs, following monē (< *-e-θo) 'warn': monēt (< *-e-θo), monētis (< *-e-θo)). Analogical tense stems were also created to supplement the paradigms of e-verbs elsewhere in the family, as in Greek (pres. thōnēta- < fut. thōnēt, aor. thōnēt, perf. thōnēt, ἔχειν, ἔχει, ἔχω, ÓCOS pres. mēnēja, mēnētis, inf. mēnēt, aor. mēnētis) and Slavic (pres. stārēja, inf. stārēti < aor. stārēt). Examples can be multiplied.

A complete theory of e-verbs, of course, must do more than merely explain the relationship of presents in *-eh₁/jē-θ- to nominal forms in *-eh₁-to-/ *-eh₁-ti- and instrumental in *-eh₁. It must also account for what has been perceived as the "aoristic" behavior of the suffix *-eh₁- — its partial exclusion from the present system in Baltic and Slavic (Lith. pres. mēni, mēni, inf. mēnēti, pret. mēnēja, OCS pres. mēnēja, mēnētis, inf. mēnēti, aor. mēnētis) and its role as the marker of the aorist passive in Greek (ἦλθην, etc.). This is the problem to which we now turn.

§17. As already discussed (cf. §3), the traditional identification of the Greek aorist in -γ - with the Balto-Slavic infinitive in -ē-ti and preterite ("aorist") in *-e-o- (β *ẹ-ja-) is a Scheingleichung. The Greek forms are true aorists, derivationally unrelated to any other e-formation and clearly in need of special treatment — which they will receive in §524 ff. The Balto-Slavic forms, by contrast, are entirely unproblematic. To clarify the often misunderstood position of e-verbs in Balto-Slavic, our discussion below will focus on three specific lexical items — the denominative *sen-θ- "be(comes) old' and the deverbatives *min-θ- 'think' and *bud-θ- 'be awake'.

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25 For a typological parallel compare Ved. puratāma- "old" beside purat "formerly" (Alan Nussbaum, p.c.), and note sahasrāma- "strong", savasrāma- "powerful", etc., built to the instrumentals sāhasrā, sūvasrā, etc. We will meet a further attributive-forming suffix in §25.

26 It here reproduces the theory of the relationship of ti- to stems taught by Jochem Schindler at Harvard in the 1970s; pre-Hitt. *daugās- "length" (o-stem) → *daugāšas- "possessing length, long" (t-stem) → daugās-ti- "condition of being long, length" (t-stem).

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§19. The origin of the present type in *-f, like that of the corresponding Germanic type in *-ai/*-a, is a classic problem with no universally accepted solution.60 Cowgill (1963: 265 f.), true to his general position, sets up pre-Balto-Slavic preforms of the type *mp<r(r)-h-jë-o/, *br<mp>r-h-jë-o/, etc., despite the fact that such an analysis is effectively ruled out by the phonology of the verb “to plow” (pres. *her<mp>r-je-o/ > Lith. 3 p. *ar<mp>r, not *ar<mp>r; OCS 3 sg. *orje<mp>r, not *orje<mp>r). Even Hardarson, who readily admits “essives” for Greek, Armenian, Germanic, Tocharian, and Indo-Iranian, hesitates to do so for Balto-Slavic. He prefers the compromise view of Rasmussen (1993: 483 f.), who locates the primary source of the Balto-Slavic *-inflection in the PIE perfect. According to Rasmussen, the PIE 3 pl. perfect ending had the form *-inti in Balto-Slavic (< *-pti, replacing earlier *-y), from which *-i- was analogically extended to the rest of the paradigm. Later, the nucleus of perfect-based i-presents was enlarged by the morphological adherence of the “essives” proper, which contributed their 1 sg. in *-jë (< *-jë-<je-o) to the inflection of the newly expanded stative type. The result, for Rasmussen, was a paradigm *min<i-<jë, *min<i-<i, *min<i-<ë, etc., which survived with only minor changes in Baltic. In Slavic, where the statives in *-<je-o formed a single class with the iterativ- causatives in *-<je-o (type no<sv, nos<i<, etc. ‘carry’), the long vowel of the latter forms was generalized to the statives as well.

This account bears a strong family resemblance to the theory of i-presents set forth in SMIE, ch. 4. There, like Rasmussen, I took the 3 pl. to be the key form, citing both the originally athematic East Baltic future (e.g., Lith. 1 pl. di<sv<me ‘we will give’, 2 pl. di<sv<me) and the lone reflex of the perfect in Old Prussian (1 pl. wai<sv< ‘we know’, 2 pl. wai<sv<) to illustrate the extraction of *-jë from a lost *-inti < *-pti. As I also pointed out, however, neither the regular athematic (Narten) paradigm of the future nor the paradigm of the perfect could actually have been the source of the normal i-present inflection, since the future and the perfect never extended the -i- of the plural forms to the 3 sg. (cf. Lith. 3 p. du<sv< < *-s-ti,

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60 The problem has been bedeviled for most of the past century by the specter of a PIE ‘semantic’ conjugation — a supposed present type with a thematic 1 sg., 1 pl., and 3 pl. in *-<je-o in alternation with an athematic 2 sg., 3 sg., and 2 pl. in *-f. Sustained by Meillet’s influential Le slave commun (Meillet 1924) and other writings, the semantic conjugation has lived down into present-day handbooks of Baltic and Slavic, despite the fact that the Italic, Celtic, and Germanic evidence that once supported it has long since been better explained in other ways.

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61 Or indeed any of the singular forms: cf. 1 sg. OPfr. wa<sv<mi ‘I know’? (= OCS ve<sv<mi), 2 sg. OPfr. wai<sv< (= OCS ve<sv<mi), fut. post<sv< (< *sta<sv<si ‘you will become’. Note also OLith. raud<sv< ‘weep’ beside Latv. p. raud<sv<, <- apparently an Old Narten present.

62 Some arbitrary assumptions have of course been made: the primary middle endings are set up with *-<je-o in Germanic, Indo-Iranian, and Greek, and not *-<je-o in Anatolian, Tocharian, Italic and Celtic; the 3 pl. is given as *-pti rather than *-oi, the 3 sg. in *-<je-o is assumed to have been replaced by *-pti in time for the spread of *-je-o to the singular. The same picture, with differences of detail, is given in SMIE (109 f.).

63 Note that pace Rasmussen (ibid.), the assumption of a heterogeneous “essive” in *-jë-je-o/ is not needed to explain the 1 sg. *min<i-<jë."

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§20. It is not enough, of course, to show that a middle *mŋ(=)i, *mŋ-
soi, *mŋ(-)poi, etc. could have yielded an i-present in Balto-Slavic; we must
also ask whether there is any independent reason to believe that such a
paradigm ever actually existed. In SMIE I tried to show that the class III
weak verbs of Germanic and the class III/IV presents of Tocharian — the
supposed reflexes of ∗-verb presents in these languages — were likewise
based on athematic middles. Depending on their semantics, I assigned the
middles that I posited for the ∗-verbs of Balto-Slavic, Germanic, and
Tocharian to two distinct PIE categories. In cases where a Balto-Slavic
i-present, Germanic class III verb, or Tocharian class III/IV present was
strictly static, I assumed a reduplicated perfect middle; this interpretation
seemed attractive, e.g., for Balto-Slavic ∗mini- and ∗budj-, which I com-
pared directly with the Vedic perfect middles māmme and budbhdh (cf.
above). On the other hand, when a Balto-Slavic, Germanic, or Tocharian
form showed processual rather than static meaning, I set up a present
middle of the type Ved. duhd ‘gives milk’; this was my analysis, e.g., of
the Slavic verb ‘to piss’ (*sččo, *sččiti, *sččit etc.), cognate with Toch. A
sikatār ‘is flooded’ (class III). With the loss of perfect duplication in
Balto-Slavic and Germanic, of course, the perfect middle and the “duhē-
type” would have fallen together.

This account can now be consolidated and simplified. As discussed in
Jasanoff 2003, ch. 6, many of the roots that denoted entry into a state in
PIE were associated with *static-intransitive systems, derivational
complexes consisting of 1) a middle root aorist (e.g., 3 sg. *mēn-‘to bring
in mind’ (cf. Grn. manātā); 2) a static perfect (e.g., 3 sg. *memon-e ‘has
in mind, remembers’ (cf. Lat. meminīt, Gr. μνημονέω etc.)); 3) a je(o)-present
(e.g., 3 sg. *mŋ-jē-tor ‘thinks’ (cf. Ved. māyate, Gr. μνημεύομαι etc.), and 4)
a *static-intransitive root present’ (e.g., *mŋ(n)-ar ‘thinks’ (cf. Gr. μνάσεω
see below), Lith. mini, OCS mνaʃ)i). The last of these was the duhē-
type, the “schwandtschiger Wurzelstütt” of LIV (15). The term “static,”
as applied to these forms, is a label rather than a description, for it has
become clear since 1978 that duhē-presents covered almost exactly the same
range of processual and staticive values as je(o)-presents of the type
*mŋ-jē-o, *budj-jē-o, etc. We can therefore explain the i-presents of Balto-
Slavic, the class III verbs of Germanic, and the class III/IV presents of
Tocharian without reference to the perfect middle. The forms attributed
to athematic middles of two distinct types in SMIE can now be referred
exclusively to static-intransitive root (duhē) presents.

The relevant part of the history of the “deverbative” ∗-verbs ∗mini,-
mini- and *budj-/budj in Balto-Slavic can accordingly be summarized as
follows. “Stative stems” ( < instrumentals) of the type *mŋ(=)i, *budj- gave rise to a full set of derivatives in dialectal IE, including the
dominative presents *mŋ(n)-jē-o ‘be mindful, think’ and *budj-je-o ‘be
be attentive, be awake’. Competing with these were other forms of similar
meaning — perfects (3 sg. *memon-e, *bubj-budj-e), je(o)-presents (3 sg.
*mŋ-jē-tor, *budj-jē-tor), and staticive-intransitive root presents (3 sg.
*mŋ(n)-or, *budj-or). The individual IE daughter languages selected
from among these forms in different ways: Latin favored *sētä-e/o; Indo-
Iranian expanded the role of ∗jē-o; Greek made its own, less systematic,
choices. The Balto-Slavic strategy was to generalize the type *mŋ(n)-or,
*budj-or, thereby eliminating the forms which might otherwise have
surfaced as *mini, *budj in Lithuanian and *mini, *budj in Slavic.
The subsequent treatment of the “statives” *mŋ(n)-or, *budj-or was as
illustrated in §19, with ∗-j- spreading from the remade 3 pl. in ∗intai
( < ∗intai-/pojai) and persisting as a stem vowel long after the dis-
appearance of the middle as such.

§21. The more uniform data of Germanic and Tocharian can easily be
fit into this picture. In Germanic there is precious little evidence for static
*-ē- at all; the only clear cases are the already cited Gothic nominal forms
fahts ‘joy’ and arma ‘mercy’. fahts (OHG fahts ‘rejoice’) is an abstract in
*-ē-ti, the formal counterpart of a Balto-Slavic stative infinitive; the root recurs in the Caland ro-stem adjective fags ‘suitable’, standing in
the same relationship to the stative stem *fag-ē- as, e.g., Lat. ruber to
rubere, or mager ‘thinner’ to macere ‘be thin’. arma (armja, OHG armst
‘has pity’) is an abstract in ∗-ēta, structurally comparable to Lat. area and,

44 With an infinitive *sctati < -t-ti that underscores the independence of
the present stem in -t-i from the infinitive stem in -t-e. The exceptional pattern recurs in OCS sapti, inf. sapti ‘sleep’.
45 Such aorists, as I have further tried to show (ibid.), were normally of the
formal type I have labeled “static-intransitive,” with o-grade in the singular, e-
or zero grade in the plural, and — at least originally — the “he-conjugation”
endings. Aorists of this type yielded thematic aorists in Slavic and a-preterites
in Baltic; cf. note 5.
46 See the synchronic study by Kümml (1996).
47 Not all roots, of course, were as supple as ∗men- and ∗budj-; many made a
perfect, a je(o)-present, or a duhē-present, but none made all three.

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like the Latin form, built directly to a present stem in *-eje/o-.40 Taken together, faheps and armiso make it clear that Germanic inherited the same "package" of presents in *-eje/o- and nominal forms in *-eto-, *-etti-, etc. as Balto-Slavic. What sets Germanic apart from Balto-Slavic is the fact that the present type in *-eje/o-, which would have yielded a Germanic paradigm in *-e- (cf. class II salboh 'snonion' < *-sje/o/), was eliminated, not partially as in Balto-Slavic, but completely. Its replacement was the class III inflector in *-ai/-a-

As argued in SMIE (73 ff.), the Germanic presents in *-ai/*a- are in fact cognate with the Balto-Slavic presents in *e-. Like the Balto-Slavic forms, they originated in presents of the stative-intransitive (dubh) type, the pre-Germanic paradigm of which would have looked approximately as follows:49

1sg. *mun-ai pl. *mun-medai
2 *mun-sai *mun-dwai
3 *mun-ai *mun-unpai

In contrast to the situation in Balto-Slavic, the PIE middle did not simply disappear in Germanic. Qua passive, it is still a productive category in Gothic, where a present passive in 3 sg. -ada < *-otoi can be formed to any transitive strong or weak verb (cf. baltip 'brings': baisra 'is brought', nasip 'saves', nysada 'is saved', etc.).50 In its non-passive functions, however, the middle was abandoned.51 Its loss was accompanied by the mechanical "activization" of thematic deponents, so that, e.g., the Germanic cognate of Ved. vartate, aste `turn' and Lat. vortituri, asturi `id.' is Go. wairhiph, and become (= OHG wiriw, werdant), with the normal active endings. Almost inevitably, the athematic deponents of the dubh-type were activized as well. The process was relatively straightforward in forms

like the 1 sg. and 3 pl., where the endings *a and *unpai were replaced by active *-a and *-unp(i), respectively; the fact that the new forms were "thematic" was simply a consequence of the near-total eclipse of athematic *-m(i) and *-unp(i); *-unp(i) in Proto-Germanic. But the 3 sg. *mun-ai was treated differently. Here there was no replacement of the "stative" middle ending; instead, the no longer transparent final diphthong was reanalyzed as part of the stem, and the synchronically endingless 3 sg. *munai was extended and clarified by the addition of the productive ending *-p(i).52 The result was a new 3 sg. *munap(i), the source of Go. munap and OHG -monei. The distribution of the stem-forms *munai- and *mun-a- was later rationalized, with *munai- spreading to the 2 sg. and 2 pl. (Go. munais, munaij).

The paradigm of Gmc. *munap thus points, like that of Balto-Slavic *min-, to a PIE dubh-present with 3 sg. *mnpa(-ar). For obvious functional reasons, the roots that made presents of this type in the parent language also often had a robust system of s-forms, including a nearly synonymous present in *-eje/o-. The "Northern" dialects of late PIE converted the associational tendency into a rule: any properly verbal root with a stative stem in *-e- was provided with a dubh-present, which eventually took the place of the theoretically expected *eje/o-present. This is still, in effect, the situation in Balto-Slavic, where the pattern *min- : *mnu,ti, uniform in verbal roots, contrasts with *sentje/o- : *sent in non-verbal roots. It is not unlikely that Germanic passed through such a stage as well — a stage in which "deverbative" and "derivational" statives had different presents (*munalp vs. *armaj) but shared s-forms elsewhere in their extended paradigm. Ultimately, however, Germanic went much further than its

40 The lowering of *e- to *ai- [c] in hiatus is regular; cf. saian 'sow' < *seja < *syan.
49 As in our pre-Balto-Slavic paradigm, arbitrary assumptions have been made about the phonology and the form of some of the endings. Not arbitrary, of course, is the reconstruction of dentalless *ai < *oi in the 3 sg., which was the single greatest factor in determining the subsequent history of the paradigm in Germanic.
50 For the phenomenon of "persistent" *-o- in the Gothic passive see §22.
51 A conspicuous but isolated exception is Go. 1, 3 sg. hatti 'I am called, (s)he is called', matching OE hatte 'id.'
eastern neighbor, replacing *e- by *-ai/-*-a- in the present and virtually eliminating it everywhere else.  

§22. Tocharian, strictly speaking, tells us nothing about e-verbs at all, since no reflex of stative *e- has yet come to light in this branch of the family. But Tocharian does preserve a substantial inventory of modified dūhē-presents, many of them formed to roots associated with e-verbs elsewhere. These, of course, are the class III deponent presents in A *-a-, B *-e- (* CToch *-e-) and class IV deponent presents in A *-a-, B *-e- (* CToch *-a-). The phonology of which has already been discussed in §10. The class III/IV stem vowel was PIE *-o-, clearly comparable to the non-alternating *-o-of the thematic middle in Gothic (cf. passive bairada, nasāda < *-e-taī for expected *bairada, nasāda < *-e-toi). In SMIE (47 ff.) I considered whether non-alternating or "persistent" *-o- in thematic middles might have been a PIE feature. I now think this unlikely. What Germanic and Tocharian inherited from PIE was a common tendency for thematic middle paradigms to generalize *-o- as the thematic vowel when the 3 sg. ended in *-er/*-oi rather than *-er/*-oi. How this tendency played itself out in Tocharian can be seen from the development of the class III paradigm of l(y)uk- 'shine':  

<table>
<thead>
<tr>
<th>I</th>
<th>II</th>
<th>III</th>
<th>IV</th>
</tr>
</thead>
<tbody>
<tr>
<td>sg. 1</td>
<td>*luk- (mo)ar</td>
<td>*luk-o-mar</td>
<td>*luk-o-mar</td>
</tr>
<tr>
<td>2</td>
<td>*luk-tar</td>
<td>*luk-e-tar</td>
<td>*luk-o-tar</td>
</tr>
<tr>
<td>3</td>
<td>*luk-or</td>
<td>*luk-er</td>
<td>*luk-er</td>
</tr>
<tr>
<td>pl. 1</td>
<td>*luk-med'ar</td>
<td>*luk-o-motor</td>
<td>*luk-o-motor</td>
</tr>
<tr>
<td>2</td>
<td>*luk-d'yor</td>
<td>*luk-e-tor</td>
<td>*luk-o-tor</td>
</tr>
<tr>
<td>3</td>
<td>*luk-dier</td>
<td>*luk-o-nor</td>
<td>*luk-o-nor</td>
</tr>
</tbody>
</table>

The forms in column I are those of a dialectal IE dūhē-present. Column II shows the same forms after thematization and essential other changes; column III shows an intermediate stage with *-o- generalized from the first and third persons to the second; and column IV shows the effect of replacing 3 sg. *-er by *-tor in the context of an already thematized non-alternating paradigm. The forms in column IV were the direct source of the attested class III present B lyukatār.  

It is no accident that the closest equivalent of Toch. B lyukatār in Latin is the e-verb lūcēre. Other class III/IV presents with links to e-verbs and/or dūhē-presents outside Tocharian include A asatār, B osatār 'dries out' (root *as-; cf. Lat. aserēre), B mūrsetār 'forgets' (root mār; cf. Hist. māretōjī 'is/ becomes false', Ved. māt 'in vain'), B pilketār 'burns' (root pīk-; cf. Lat. fulgēre 'shine'); A pāktār 'arises' (root pāk-; cf. Hist. pārkēsī 'grows high'); A sīkatār 'is flooded' (root sīk-; cf. Slav. *skećta); B wakatār 'breaks open (intr.)' (root wāk-; cf. Gk. (p)arkō 'break (intr.)'). B lipetār 'is left over' (root lip-) forms a three-way equation with OCS prihīpit 'sticks (to)' (inf. -lēpēt) and Gmc. *lībaip 'lives' — all pointing,pace Harder (334) and LIV (408), to a dūhē-present with 3 sg. *lip-ār.

§23. Stative-intransitive root presents thus yield an Internally consistent explanation for the Balto-Slavic i-presents, the Germanic class III weak verbs, and the Tocharian class III/IV presents — the three categories that make up the heart of the case for the supposed PIE "esseves" or stative presents in *h₁-e/-o. It remains only to emphasize that unlike the alleged suffix-complex *h₁-e/-o, which has no independent basis in the comparative data from outside Balto-Slavic, Germanic, and Tocharian, the dūhē-type is a well-established PIE category. Uncontroversial reflexes of dūhē-presents are found in Anatolian and Indo-Iranian. Of these, a surprising number enter into word equations with Balto-Slavic and Germanic "e-verbs":

Ved. dūbe = ON dugir (< *dugaip) 'helps, is strong'. Gmc. *dugaip (class III) is confined to Old Norse; the other Germanic languages have the preterito-present *dauj (Go. daug, OE dāg, etc.). Both are old; for

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Section 32

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developed as a subsidiary meaning within the parent language.\textsuperscript{39} Insofar as it retained its original value ‘appears’, ‘yid-ör came to be paired with an active present ‘*yeid- ’see, which gave it the additional middle sense ‘see with respect to oneself’, i.e., ‘observe’, ‘envy’, etc.

§24. One and only one e-formation remains to be accounted for — the unique Greek intransitive (“passive”) aorist in *-e and its productive later variant in -ην. There can be no doubt that the *e- of the aorist passive is the “same” as that of other verbal e-forms, and hence ultimately traceable to the *e- of the instrumental singular. But it is not easy to find a plausible mechanism by which an instrumental of the type γαθαί/γε — could have been transmuted into an aorist. Two theoretically possible scenarios can be dismissed as unlikely:

1. Direct verbalization. A predicate instrumental of the type *mg(n)e- ‘is minded’ could in principle have been reinterpreted as a finite form meaning ‘came into the condition of being minded/mindful’, leading to the creation of an aorist paradigm *mg(n)e-m, *mg(n)e-e, *mg(n)e-t, etc. (\textsc{Gk.} ημβάνομ, -ην, -η, \textsc{etc.}) This was the explanation favored in SMIE (cf. §14). But apart from the non-trivial character of the assumed morphological remodeling (see above), the semantics are wrong: the predicate instrumental would not have had the punctual, change-of-state meaning of an aorist.

2. Analogy. Alternatively, an analogical aorist *mg(n)e-t could have been created to serve alongside the present *mg(n)e-jo-ti with a form being provided by roots in *eH- with presents in *eH-jo-ti and aorists in *eH-jo-t. It is doubtful, however, that such a model ever existed. Present in *eH-jo-ti (-ης, -ης) invariably have aorists in *eH-jo- in Greek (cf. 600τοκ: 600τοκια, ἄνθέκια: ἄνθέκια, \textsc{etc.}) and not a single Greek aorist in *eH-jo-t corresponds to a present in -io (-ο)\textsuperscript{39} in *eH-jo-ti. Even at the PIE level, the status of the supposed pattern *eH-jo-ti (pres.): *eH-jo-ti (aor.) is questionable.\textsuperscript{40}

\textsuperscript{39} In the latter case with heavy restructuring: *kunaih is historically a nasal present *gghn- or *g̣h- and kunain and *g̣h- has been built to it. Also interesting is the pair OHG mag: maget ‘is able’, attributed by LIV (422) to the same root (*mag-) as Ved. ṣ māhe ‘obtains’.

\textsuperscript{40} See LIV (933) and the references there cited. Ved. gāvē ‘is famed’ is explained by Kürner (1996: 138) as an alteration of *gāvē, the expected Indo-European counterpart of GAV. sruieit.

\textsuperscript{41} From an earlier “stative intransitive” aorist *log-/*log- (\textsc{cf. note} 45), with a direct reflex in the Italic hit-conjugation verb *mik- ‘make crooked’.

\textsuperscript{42} I see little to recommend the LIV identification (600) of ištwaari with Ved. stāve, the middle corresponding to the Narten present stāuti.
We must therefore look for a different kind of explanation, proceeding on the basis of what we already know. We know that PIE had stative presents of the form "*X-eh₂-je/o", and that their status as presents was marked by the present-forming suffix "-je/o". We further know that PIE (or some early IE dialects) had inchoative presents of the form "*X-eh₂-s(ke/o)", which took their inchoative present value from the inchoative-forming suffixes "-s" and "-ake/e/o". Finally, we have seen that PIE had verbal abstracts of the form "*X-eh₂-ti-i", which owed their function as verbal abstracts to the abstract-forming suffix "-ti-i". The generalization is self-evident, but important enough to be stated explicitly: the morphological role of a given *-formation was determined by the derivational material that followed the *-e-, not by the *-e- itself. It may not be obvious how any of this relates to the problem of the Greek aorist in "π", which conspicuously lacks any added derivational suffix. Yet strictly speaking, it is only the *finite forms of the η-past tense that are "suffixed" in this sense. The aorist passive also has nominal forms — an infinitive in "-ινατα" and a participle in "-εντα-, εντατας" — which show the familiar Root + *-e- + DERIVATIONAL SUFFIX + DESINENCE structure of "normal" *-e-formations. "-ινατα" < *-e-h₂-sen-ti-i, "εντατας" < *-e-h₂-(e)ont-i-i. It is this property of the infinitive and participle of the η-past tense — their conformity to the normal structural template for derived forms in "-e-i" — that makes them the natural point of departure for an account of the η-past tense as a whole.

§25. The aorist passive infinitive, represented by forms like μονινατα, (φ)αγενατα, φοινατα, etc., is transparently the case-form in "-ατα" ("directive") of a neuter abstract in "-ατα/η", the same derivational suffix whose endless locative underlies the normal thematic infinitive in "-α- < *-α-h₂-κατα. Greek clearly inherited or created a nucleus of nouns of the type "νπατα"/μοννατα "condition of being minded/ mindful"; "μαγενατα"/μαγενατα "condition of being broken", etc., parallel in formation and meaning to the better-known abstract type in "-ε-τι-ατα. It is perhaps more than a curiosity that the well-developed Hittite "bakery" vocabulary includes an item "wakṣar, "bake-bread"), which phonologically also seems to go back to "μαγενατα".

The participles μονενατα, εντατα, (φ)αγενατα, εντατα, etc. are likewise independent nominal forms that were subsequently grammaticalized. The suffix "-ατα", with functions generally paralleling those of "-ατα", made adjectives as well as participles in PIE, cf., e.g., "b'γάτα-λεγεντα- having height, high (Ved. ḫaṅā-, Av. ahrzant-, etc.), "κρουχ-λεγεντα- having heart, loving (Av. r̥uxa-), Hitt. ḫi̯i-paça- having riches, rich, etc. Since PIE is known to have had participles in "*e-τα/ *e-h₂-τα (cf. Lat. acērum, etc.), with "εντα" extended by "-τα", there is every reason to believe that there were also adjectives of the type "ραδεντα- (i.e., "ραδεντα-εντατα- or "ραδεντα-εντατα-ent") "red", "ματαντα-ent- 'minded/ mindful', and "μαγενατα-ent- 'broken', with "εντα" extended by "-ατα. The function of these forms would have been to supply declinable attributive adjectives to uninflated predicate instrumentals — a usage that may have contributed, e.g., to the vigor of the participial adjective type rubēns, tacent, etc. in Latin. In Greek, "ραδεντα- was suppressed, perhaps simply because there were enough ways to say "red" already. But "ματαντα-ent- and "μαγενατα-ent- survived to yield the participles μονενατα, (φ)αγενατα < pre-Osthoff's Law "μονενατα, (φ)αγενατα. What needs to be explained — and what, as we shall see, may hold the key to the whole problem of the aorist in "η- — is how and why these forms were specifically incorporated into the Greek verbal system as aorist participles.

§26. The oldest η-past aorists in Greek seem to have been the replacements of middle root aorists. Thus, e.g., "μενατα" corresponds to the root aorist ματα in Gothic Avestan and (with analogical zero grade) distra in Vedich Sanskrit; "ιφρανατα- 'dry up' (for "ιφρανατα") corresponds to the Vedich root aorist participle "tFran- 'thirsty'; "ιφρανατα-mixed (intr.)" competes with a root aorist εμικατα in Greek itself; "εφρατα- and many other η-past participles belong to roots whose overall atever points to a middle root aorist even though..."
none is directly attested. In concrete terms, it follows that at some point in the history of Greek, forms like 3 sg. "γεγ-έτο ὅρκον (intr.) were superseded by forms like "γεγ-έτο ("γεγ-έτο ὅρκον) and forms like the middle participles "γεγ-έτο ("γεγ-έτο ὅρκον) - having been broken' were superseded by forms like "γεγ-έτο ("γεγ-έτο ὅρκον). Our knowledge of linguistic change in progress makes it likely that this process would have been gradual, beginning in certain verbs and in certain parts of the paradigm and eventually spreading to others. The specific proposal I will make here is that the locus of the initial penetration of "ε- into the aorist in Greek was the participle. The first step in the creation of the η-aorist, I submit, was the replacement of middle aorist participles of the type "μέν-μενο- "έτο- "έτο- "έτο- etc. by the etymological participles "μέν-μενο- "έτο- "έτο- "έτο- etc. Semantically, the two formations were very close, and the participle 'feel' of stem-final "έτο- naturally encouraged the confusion between them. The reinterpretation of "μέν- μενε- "έτο- "έτο- "έτο- etc. as specifically aorist participles was conditioned by the punctual, aorist meaning of the roots "μεν-, "έτο-, etc. and the fact that present participles with stative "ε- ended in the contrasting sequence "σεμ-, with present "σεμ- "σεμ- etc. for "μέν-μενο- "έτο- "έτο- "έτο- etc. would have had the effect of producing a synchronic situation in which some intransitive root aorists had normal middle finite forms (3 sg. "μέν-μενο- "έτο- "έτο- "έτο- etc. but participles in "έτο- "έτο- "έτο- "έτο-). It may seem surprising that a routine morphological renewal of the participle would have led to so dramatically 'irregular' an outcome; from a naive point of view, one might rather have expected this.

The de facto substitution of "μέν-μενο- "έτο- "έτο- "έτο- etc. for "μέν-μενο- "έτο- "έτο- "έτο- etc. would have had the effect of producing a synchronic situation in which some intransitive root aorists had normal middle finite forms (3 sg. "μέν-μενο- "έτο- "έτο- "έτο- etc. but participles in "έτο- "έτο- "έτο- "έτο-). It may seem surprising that a routine morphological renewal of the participle would have led to so dramatically 'irregular' an outcome; from a naive point of view, one might rather have expected this.

§27. The subsequent history of the η-aorist in Greek saw further functional and formal changes. Functionally, the intransitive value of the η-aorist in pairs of the type ε λέγω 'broken' (intr.) ε λέγω 'broken' (tr.), ε λέγω 'appeared' ε λέγω 'showed', etc. led to its gradual evolution into a true passive. Formally associated with this development was the spread of the longer suffix-form -ον- (cf. ε λέγω 'was said', ε λέγω 'was loved', ε λέγω 'loosed', etc.), a sequence whose somewhat murky history can now be better understood.

67 In the case of "γεγ- in particular, the original stative-intransitive aorist (cf. note 61) is preserved in Hitt. wldk - 'bite' (ἐκ-κον) and Toch. B wasaŋ - 'will break (intr.). Since stative-intransitive aorists are normally represented by middle root aorists in Greek (cf. λάνεξ beside Hitt. λάνεξ - 'bend'), we should have expected to find a middle root aorist (*ε λέγω- as the Greek cognate of Hitt. wldk. This is the form whose place was taken by ε λέγω. See further Jasanoff 2000: 168 ff., 209).

68 Indeed, it is even possible that the present stems "μένειο- "έτο- "όμενο- "Ωμενο- "Ωμενο- were in use at the time of these developments - just as the present stems "μενείο- "ομενο- "ομενο- were probably once in use in Balto-Slavic (cf. §§17-18).

69 It is important to stress the word "some." In cases where the root lacked Caland connectives and had no ε-forms (e.g., in the case of εσερ- 'pour'), there would have been no adjective in ε- to compete with the old middle participle and hence no interference with the inherited state of affairs. The intransitive aorist of ἔχει to 'pour' is thus ἔχει, with participle ἔχειν, ἔχον.

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that the replacement of "μέν-μενο- by "μέν-μενο- would be attended by a simultaneous change of "μέν-μενο- to "μέν-μενο- (and 1 sg. "μέν-μενο- to "μέν-μενο- etc.) in the indicative. But the participle and the finite forms were fundamentally different. The establishment of "μέν-μενο- as an aorist participle consisted in the reinterpretation of an existing nominal stem — the adjective "μέν-μενο- 'broken' — as a proper verbal form. No comparable substitution of an aorist 3 sg. "μέν-μενο- for "μέν-μενο- was possible at this stage, because, as the comparative evidence makes clear, no such form existed. There was no η-aorist in PIE, and no "finitive" in "ε- ("ερ-) that could be pressed into service as a surrogate for the root aorist.

Where, then, did the finite aorist paradigm "μέν-μενο- ("κρε-κρο- "κε-κε- etc. come from? The only answer that fully comports with the testimony of the other IE languages is that the aorist "passive" in -η- "ιθ- -η- etc. was a back-formation from the participle in "νύ- "νύ-; created at some time prior to the Osthoff shortening of "νύ- to "νύ-, and possibly much earlier. Far from representing a pristine PIE category, the η-aorist, with no close cognates outside Greek, emerges as one of the most highly transformed, least original "νύ- formations in the family.
Two old ideas regarding the origin of the aorist in -ης — periphrasis with *dheh₂ — 'put, do' and analogical generalization from a supposed PIE 2 sg. middle in *-thēs (≈ Ved. -thās) — can be swiftly discarded. *-ης is clearly a special case of -ης, with -θ abstracted from roots or stems ending in -ης. Yet it is difficult to find a model for the resegmentation. Nothing can be built on the fact that both an aorist ἔγκλημα 'heild' (έγκλημα) and an aorist ἐγείρομαι 'stand fast' (τούσι) happen to be among the Greek reflexes of the PIE root *segh₂ — 'hold, prevail'; the two forms belong to different presents and have nothing synchronically to do with each other.²⁹ More promisingly, Fisch (1974: 253 f.) adds the extended root 'putthesis' of Gk. πυθών 'cause to rot', with middle πυθόμαι 'rot (intr.)'; he suggests that in the aorist the contrast between transitive ἔγκλημα (< *-dθ-eς-aorist) and intransitive ἐγείρομαι (< *-segh₂-αorist) led to the reinterpretation of the -θ as part of the suffix. But here too there is a fatal problem: the intransitive sense of the verb πυθώ is confined to the present system. There is no intransitive aorist πυθή and no evidence that there ever was.

A better candidate for an explanation along the same lines is *pleh₂ — 'fill', which makes for a transitive active present πυμπλήμι and a transitive s-aorist ἐπιλήμα. The intransitive present corresponding to πυμπλήμι is the dh-present πυπλήθος, with an enlarged root *pleh₂-dh₂ that became independent early enough to spawn a small Caland system of its own (cf. s-stem πυπλήθος ≧ Lat. pellēth — 'croud', extended u-stem πυθήθος — 'id.'). We should thus not be surprised to find a Caland 8-stative πυμπλήθος as well; and as it happens, just such a form, thinly disguised, can be seen in the Homerice aorist passive ἔπιλημα (with the substitution of -ο for -θ in ἔγκλημα for ἔγκλημα (γνώρισα: know; ἔμνησα: remember)), and other examples. The prehistoric system would have been the following:

<table>
<thead>
<tr>
<th>present</th>
<th>aorist</th>
</tr>
</thead>
<tbody>
<tr>
<td>'fill'</td>
<td>πυμπλήμι</td>
</tr>
<tr>
<td>'become full'</td>
<td>πυπλήθος</td>
</tr>
</tbody>
</table>

²⁸ Pace Rit (1976: 219 f.). Although Wackernagel's comparison of Gk. 2 sg. -ης with Ved. -thās (1890: 313) is still eye-catching, the reconstruction *-thēs is no longer defendable. Schwizer (1939: 762) gives a survey of the older literature.
²⁹ The late form ἕγεθος (4th c.) is a normal case of -θ added to the quasi-root εγείρομαι; though synchronically an aorist, is historically the imperfect of a no longer extant present *εγείραμα.

The pattern observable in these forms would have suggested a natural way to form passives to the transitive s-aorists of contract verbs (ἐφίλημι, ἐπιθύμησα, etc. — a function not easily filled by bare -ης (ἐφιλήθη 'I was loved', ἐπιθύμησα 'I was honored')). Speakers were inevitably led to set up a proportion ἐπιλήθιον : ἐπιλήμα : ἐφίλημι : ἐπιθύμησα : X, where X was solved as ἐφιλήθη, ἐπιθύμησα.

§28. Our survey is now complete. As outlined in §16, the original PIE inventory of -e-formations consisted of forms of three types — 1) predicate instrumental in *-eh₂; 2) derived presents in *-eh₂-jējē/o-; and 3) nouns and adjectives in *-eh₂- followed by a nominal suffix. We have seen above how this inherited nucleus, variously exploited and elaborated around the family, gave rise to new formal categories of tense-aspect and voice in the different IE languages. It is significant that these "second-generation" -e-formations — forms like the Hitite inchoative presents in *-e-jē, the Latin future and imperfect in *-e-bjē, the Slavic stative preterites ("aorists") in *-e-s, the Greek "passive" aorists in -(0)ης, and others — are all marked by a high degree of formal transparency, even when the details of their derivational history are uncertain or contested. Lying behind this transparency is the important fact that the suffix *-e/*-eh₂ was apophonically invariant. After the loss of laryngeals, the stative morpheme was a clear and segmentable -ε/η, there were no ablaut variants *-e<*-eh₂-or — pace Cowgill, Harbarth, et al. — *-e<*-h₂.

If PIE *-e/*-eh₂ had been an ordinary verbal suffix, its failure to participate in ablaut alternations would be surprising. Within our framework, however, the apophonemic stability of stative *-e is self-explanatory. Historically, the ending of Ved. ġath and its PIE forebear *gēto-dh₂, 'with/in concealment, hidden' was the full-grade, accented form of the PIE instrumental singular in *-dh₂ — *-h₂. By late PIE, such forms had become indeclinable modifiers, convenient to use but inconveniently restricted to predicative position. It is this that explains their predilection for further suffixation of a low-level, structure-preserving type. The purpose of creating nominal and verbal derivatives in *-eh₂-β, *-eh₂-jējē/o-, *-eh₂-jējē/o-, etc. was to extend the functionality of *-eh₂- while maintaining its synchronic transparency.

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LIV: Lexikon der indogermanischen Verben. Die Wurzeln und ihre Primär-

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