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BALTIC *ē*- AND *ī/jā*-STEMS

Eighty years ago, Nicolaas van Wijk tried to identify Baltic *ē*- and *ī/jā*-stems in the Old Prussian catechisms (1918, 29–32). This resulted in the following classification of the evidence (acc. sg. forms unmarked).

(1) *ē*-stems:

I *semmin*, II *semmien*, E *semmien* (8x), *semien* (2x), *semman*, dat. I *semmey*, II *semmiey*, nom. E *semmē*, EV *same*, Lith. *žemė*, Latv. *zeme*.

I *muttin*, II *mutien*, E *mütien*, *mutien*, *mūtin*, nom. *mūti*, EV *mothe*, Lith. *motė*, Latv. *māte*.

I *geiwin*, II *geywien*, E *gijwin*, gen. *gijwis*, nom. *giwei*, Latv. *dzīve*.

E *perōnien* (3x), *perōnin* (2x), nom. *perōni*.

E *warrien*, *warrin* (2x), *warein* (2x), nom. Latv. *vara*, *vare*.

E *peisālin*, nom. *peisālei*.

E *teisin* (5x), *teischin*, gen. *teisis*, nom. *teisi*, Lith. *teisė*, *tiesa*.

(2) possible *ē*-stems:

E *sālin*, nom. EV *soalis*, Lith. *žolė*, Latv. *zāle*.

II *druwin*, E *drūwien* (3x), *druwien* (7x), *nidruwien*, nom. *druwi*, *druwis*, I *dröffs*.

E *dūsin*, *dusin*, *doūsin*, *daūsin* (2x), nom. EV *dusi* < Polish *dusza*.

E *tickrōmien* (2x).

(3) *i*-stems:

I *nactin*, II *naktin*, E *naktin*, *nacktin*, *nacktien* (2x), nom. Lith. *naktis*.

E *nautin* (2x), *nautien*, dat. *nautei*.

(4) *ī/jā*-stems:

E *mārtin*, *mārtan*, nom. Lith. *marti*.

E *waispattin* (2x), nom. Lith. *viešpati*.

E *maldūnin* (2x).

(5) *ja*-stems:

I *rekian*, II *reykyen*, E *rikijan* (31x), *rickijan*, gen. *rikijas* (6x), nom. I *rekis*, *rickis*, II *rykyes*, *reykeis*, E *rikijis* (24x), *rickijs*, *rikeis*.

I *tawischen*, II *tauwyschen*, E *tawischan* (4x), *tawischen*, *tawisen*, gen. I *tawischis* (2x), II *tauwyschis*, *tauwyschies*, E *tawischas* (3x).

(6) possible *ja*-stems:

I *naseilen* (2x), II *naseylien* (2x), E *noseilien* (7x), *noseilin* (5x), *nuseilin*, gen. I *naseilis*, II *naseylis*, E *noseilis* (2x), *noseilīs*, nom. *nosēilis*, *noseilis* (2x).

I *pekollin*, II *pykullien*, E *pickullien* (2x), gen. *pikullis*, nom. EV *pyculs*.

I *geittin* (2x), II *geytien*, E *geitien* (2x), *geitin* (3x), *geitan*, nom. *geits*, EV *geytye* (for *-ys*).

I *etwerpsannan*, *attwerpsannan*, II *etwerpsennian* (2x), E *etwerpsennian* (2x), *etwerpsennien* (7x), *etwerpsennin*, *etwerpsenninn*, nom. *etwerpsnā* (2x), *etwerpsna* (2x).

I *tirtin*, II *tirtien*, E *tīrtian*, *tīrtin*, *tīrtan*, dat. *tīrtsmu* (3x), nom. I *tirts*, II *tirtis*, E *tīrts* (2x).

E *busennien* (2x), *bousennien*, *bausennien* (5x), nom. *bousennis*.

E *aucktimmien*.

E *nertien* (3x), gen. *nierties*.

E *pogirrien*, nom. Lith. *pagyris*.

Most acc. sg. forms in *-in*, *-ien* cannot be identified as belonging to the *i*-, *ja*- or *ē*-stems (van Wijk, 1918, 37–39). If we eliminate the less reliable instances, the evidence for the acc. sg. endings can be summarized as follows:

*ē*-stems: I *-in* (3x), II *-ien* (3x), E *-ien* (12x), *-in* (2x).

*i*-stems: I *-in*, II *-in*, E *-in* (4x), *-ien* (3x).

*ī/jā*-stems: E *-in* (5x).

*ja*-stems: I *-ian*, *-en*, II *-yen*, *-en*, E *-ijan* (32x), *-an* (4x), *-en* (2x).

On the basis of the evidence I reconstruct for the *ē*-stems \*/-ien/, for the *i*- and *ī/jā*-stems \*/-in/, and for the *ja*-stems \*/-jæn/ (cf. Kortlandt, 1998a, 1998b). The ending \*/-ien/ was written *-in* in the First catechism, was corrected to *-ien* in the Second, and became mixed up with the ending \*/-in/ in the Enchiridion before the generalization of the ending \*/-an/ of the *a*-stems. Accordingly, the expected acc. sg. ending is for the *ē*-stems *-ien* (written *-in* in the First catechism), for the *i*- and *ī/jā*-stems *-in* (all sources), and for the *ja*-stems *-(i)an*, *-(i)en* (which may be written *-in* in I and E). This leads me to disagree with van Wijk's identification of the stem formation in the following instances:

E nom. *teisi*, acc. *-in* (6x) is probably an *ī/jā*-stem.

EV nom. *soalis*, E acc. *sālin* is probably a *ja*-stem.

I nom. *dröffs*, II acc. *druwin*, E nom. *druwis* suggests an *i*-stem, whereas E nom. *druwi*, acc. *-ien* (11x) points to an *ē*-stem. This word will be discussed below.

EV nom. *dusi*, E acc. *-in* (5x) is probably an *ī/jā*-stem.

I *naseilen* (2x), II *naseylien* (2x) is definitely a *ja*-stem.

I *etwerpsannan*, *attwerpsannan* may belong either with II *etwerpsennian* (2x), which is a *ja*-stem like E nom. *bousennis*, acc. *-ien* (8x), or with E nom. *etwerpsnā* (2x), *etwerpsna* (2x), which is an *ā*-stem.

We now turn to the Elbing Vocabulary. In an important but neglected article (1973), Jules Levin has identified 137 *ē*-stems (47 of which have an equivalent in Lithuanian)

and 25  $\bar{i}/j\bar{a}$ -stems. He makes clear that the difference cannot be attributed to phonological variation or dialect mixture but represents a genuine morphological distinction. While 35% of the  $\bar{e}$ -stems have East Baltic equivalents, the  $\bar{i}/j\bar{a}$ -stems have East Baltic cognates which are  $j\bar{a}$ -,  $ja$ - or  $i$ -stems. While almost a third of the  $\bar{e}$ -stems represent suffixal or prefixal derivations or compounds, derived  $\bar{i}/j\bar{a}$ -stems are few and semantically detached. Levin points out that over 60% of the  $\bar{i}/j\bar{a}$ -stems belong to three out of eleven semantic groups (landscape and natural phenomena, body parts and diseases, agriculture and related terms), whereas none is found in the group denoting wildlife, which contains 34  $\bar{e}$ -stems. He argues that among the loanwords from Slavic, the  $\bar{e}$ -stems *medinice*, *nadele*, *calene* represent an older stratum than the  $\bar{i}/j\bar{a}$ -stems *dusi*, *garkity*, *knapios*, evidently as a result of the rise of new  $*/j/$  in Proto-Lekhitic (cf. Kortlandt, 1979b, 271). The Prussian  $\bar{i}/j\bar{a}$ -stems have recently been discussed by Kaukiene (1996), who unfortunately disregards most of the scholarly literature.

The morphological distinction between  $\bar{e}$ - and  $\bar{i}/j\bar{a}$ -stems is found not only in Prussian, but also in Lithuanian, where the latter type is preserved in *marti*, gen. *marčios*, and *pati*, gen. *pačios*. We may therefore look for correspondences in Slavic and other Indo-European languages. The classic study on the subject is by Holger Pedersen (1926). In his discussion of the Lithuanian  $\bar{e}$ -stems, Pedersen distinguishes between the following types:

(1) *žvakė*, *mentė*, *girė*, Latin *facēs*, Vedic *mānthās*, *girīs*, Slavic *gora*. These are  $eH_1$ -stems.

(2) *arklidė*, *avidė*, *aludė*, *peludė*, also *žvaigždė*, Prussian EV *umnode*, Slavic *zvězda*, Vedic *-dhā*, Latin *-dēs*. These are compounds of the root  $*dheH_1$ - 'put'.

(3) *šlovė*, Slavic *slava*, Latin *cluēre*, which may also be an  $eH_1$ -stem.

(4) *gervė*, Latin *grūs*, which may be an  $uH_1$ -stem.

(5) *žemė*, Slavic *zemlja*, which is an extension of a root noun, like *upė*, *saulė*, *musė*, *pelė*.

Besides, there are two types which represent Proto-Indo-European  $iH$ -stems:

(6) *vilkė*, *neptė*, Vedic *vrkīs*, *napītīs*. This type is usually represented by Slavic *-ica* (cf. Lohmann, 1932, 21, 24).

(7) *deivė*, Vedic *devī*. This type can easily have replaced the flexion of *marti* and *pati* on the analogy of the preceding type.

It thus appears that the  $\bar{e}$ -stems represent original hysterodynamic  $eH_1$ - and  $iH$ -stems (with accentual mobility between the stem and the ending), whereas the  $\bar{i}/j\bar{a}$ -stems directly continue proterodynamic  $iH_2$ -stems (with accentual mobility between the root and the suffix), cf. Vedic *vrkīs*, gen. *vrkiās* <  $*-iHos$ , versus *devī*, gen. *devyās* <  $*-ieH_2s$ . The two types of  $iH$ -flexion are attested in Slavic, e. g. in *sōdi*, *sōdii*, gen. *sōdiję* 'judge' and *ml̃ni*, *ml̃nii*, gen. *ml̃niję* 'lightning' versus *bogynji*, gen. *bogynję* 'goddess' (cf. especially Lohmann, 1932, 60–62). It has long been recognized that as a rule the former type is found in derivations from  $o$ -stems and the latter type in derivations from consonant stems (e. g. Lohmann, 1932, 22, 67). This explains the ending of Prussian EV *sansy* as op-

posed to the 34  $\bar{e}$ -stems denoting wildlife, including 19 species of wild birds, which correspond to the regular type of Lith. *vilkė*, cf. *žąsis*, gen. pl. *žasu*, versus *vilkas*.

The distinction between hysterodynamic and proterodynamic  $iH$ -stems has a perfect analogue in the distinction between hysterodynamic and proterodynamic  $uH$ -stems. P e d e r s e n reconstructs a proterodynamic paradigm *\*plēdhū*, gen. *\*plēdhuēs* < *\*-ueH<sub>1</sub>s* for Latin *plēbēs* and Greek *plēthūs*, and similarly for Lith. *gervė* and Latin *grūs* (1926, 63, 71). There is no reason to reconstruct an original hysterodynamic paradigm on the basis of Greek gen. *plēthúos* (thus B e e k e s, 1985, 39 and S c h r i j v e r, 1991, 380f.) because the latter can easily be analogical. Note that Latin *-b-* represents intervocalic *\*-dhw-*, not intervocalic *\*-dh-* (as in *vidua* ‘widow’), and cannot therefore be derived from *\*-dhuH-*. Similarly, I reconstruct a proterodynamic paradigm for Avestan *hizū-*, *hizvā-*, Vedic *juhū-*, *jihvā-*, Prussian EV *insuwis*, in spite of Gāthic gen. *hizvō* < *\*-uHos*, which can easily have arisen on the basis of the original accusative *\*-uHm*, cf. Gāthic acc. *tanvām*, which is trisyllabic like gen. *tanvō* < *\*-uHos*. The motivation for the restoration of the laryngeal in the oblique cases of the Avestan word for ‘tongue’ was probably the phonetic development of *\*-zv-* to *\*-zb-* in Iranian, which gave rise to a paradigm *\*hizū*, *\*hizu’am*, *\*hizbā-*, with an oblique stem which is preserved in later Iranian languages. In the Rgveda we find acc. *juhuām* beside *jihvām*, inst. *juhuā* beside *jihvā* and *jihvāyā*, gen. and abl. *jihvāyās*, nom. pl. *juhuās* beside *jihvās*, inst. pl. *juhūbhis* beside *jihvābhis*, and the compound *juhu-āsyas* beside nom. sg. *jihvā*. This points to a paradigm *\*juhū*, *\*juhu’am*, obl. *jihvā-*, in accordance with the Iranian forms. Note that Vedic acc. *devīm* must be analogical in view of the root aorist 1st sg. *ābhuvam* < *\*-uHm*, with vocalization of the final nasal, as opposed to monosyllabic *-ām* < *\*-eHm*, with compensatory lengthening of the vowel.

The flexion of the hysterodynamic  $uH$ -stems is best preserved in Slavic *svekry*, gen. *svekrōve* ‘mother-in-law’. Jan R o z w a d o w s k i has shown that the original accusative is *svekrovь* < *\*-euHm*, not *-zvь* (1914, 14–18). This must be a highly archaic form because there is no model for an analogical origin. The elimination of the isolated full grade suffix in other Indo-European languages is a trivial development. The antiquity of the Slavic paradigm is corroborated by the regular loc. sg. and nom. acc. pl. endings *-i*, which are identical with the *i-stem endings and differ from the endings of both the  $\bar{a}$ -stems and the consonant stems. This is especially remarkable because we find the  $\bar{a}$ -stem endings in the dat., inst. and loc. pl. forms. I conclude that we have to reconstruct loc. sg. *\*-euHi*, nom. pl. *\*-euHes*, acc. pl. *\*-euHns*, which yielded the attested loc. sg. and acc. pl. endings. The nom. pl. form adopted the acc. pl. ending, as happened with all feminine nouns in Slavic. The early introduction of the  $\bar{a}$ -stem endings in the oblique plural cases suggests the previous existence of *\*-H<sub>2</sub>es* in the nom. pl. ending. Thus, everything seems to point to an original hysterodynamic paradigm *\*suekruH<sub>2</sub>s*, *\*-euH<sub>2</sub>m*, *\*-uH<sub>2</sub>os*, as opposed to proterodynamic *\*pleH<sub>1</sub>dhuH<sub>1</sub>*, *\*-ueH<sub>1</sub>s*, and comparable with e. g. the *nt*-participle *\*H<sub>1</sub>eints*, *\*H<sub>1</sub>ientm*, *\*H<sub>1</sub>intos* (cf. Beekes 1985, 70).*

The Latin material has been discussed in detail by Peter Schrijver (1991, 363–390). He argues that hysterodynamic  $\bar{e}$ -stems like *vātēs* joined the third declension whereas root nouns such as *spēs* became the core of the fifth declension. Furthermore, he tentatively distinguishes between four types of *iH*-stems:

(1) proterodynamic  $iH_2$ -stems, which are reflected in the formations of *genetrīx*, *rēgīna*, *avia*, and denominal abstracts like *mīlitia*.

(2) proterodynamic  $iH_1$ -stems, which are reflected in deverbal abstracts of the fifth declension such as *aciēs*.

(3) hysterodynamic  $iH_2$ -stems, which are reflected in denominal abstracts and collectives like *māteriēs*, gen. *māteriae*.

(4) hysterodynamic  $iH_1$ -stems, in particular *neptis*, which may be compared with *socrus*.

In order to explain the  $i\bar{e}/i\bar{a}$ -flexion of *māteriēs*, Schrijver assumes that original  $*-iH_2m$  yielded Latin *-iem* which then served as a basis for the creation of a nominative in *-iēs*. This is highly improbable in view of the subjunctive ending 1st sg. *-im* <  $*-\bar{i}m$  <  $*-iH_1m$ . It follows that the flexion of the types represented by *mīlitia* and *aciēs* is based entirely on the proterodynamic oblique cases. The  $i\bar{e}/i\bar{a}$ -flexion of *māteriēs*, gen. dat. *-iae* now offers independent evidence for the reconstruction of an accusative in  $*-eiH_2m$ , the phonetic reflex of which was  $*-\bar{e}m$ , cf. *trēs* <  $*treies$ , in agreement with the Slavic evidence for hysterodynamic  $*-euHm$ . Note that Slavic antevocalic  $*-ei-$  yielded  $*-ij-$ , e. g. in *trije* <  $*treies$ , so that the full grade suffix was lost phonetically in the hysterodynamic *iH*-flexion.

Schrijver's evidence for reconstructing  $*-H_1-$  instead of  $*-H_2-$  in *neptis* and *socrus* is delicate, as he points out himself (1991, 365). Moreover, it seems to be contradicted by the  $\bar{a}$ -stem endings in the Slavic oblique plural cases of *svekry*. If the suffix was  $*-uH_1-$ , we would expect *i*-stem endings here. However, it must be recalled that Baltic  $\bar{e}$ -stems are usually reflected as  $\bar{a}$ -stems in Slavic, e. g. *zvězda* 'star'. I therefore see no cogent objection to the view that the Slavic evidence for the color of the laryngeal can be disregarded. Note that we have  $*-H_2-$  in Old Polish *kry* 'blood', cf. Greek *kréas*. Besides, I find it very difficult to see how Latin *neptis* and *socrus* could avoid becoming  $\bar{a}$ -stems if they had an *a*-coloring laryngeal. I therefore subscribe to Schrijver's view that these two nouns represent hysterodynamic  $iH_1-$  and  $uH_1-$  stems.

The reconstruction of a hysterodynamic accusative in  $*-euHm$  provides an elegant solution for the coexistence of  $*vidhū-$  and  $*vidhevā-$  in the word for 'widow', Prussian *widdewū* (cf. Beekes, 1992, 184). This word evidently represents the hysterodynamic  $uH_2$ -stems and thereby supports the reconstruction of  $*-H_1-$  in the word for 'mother-in-law'. The preservation of the front vowel in the medial syllable of Prussian *widdewū*, as opposed to the regular development of heterosyllabic  $*-eu-$  in Slavic *vǔdova* (cf. Kortlandt, 1979a, 57), suggests that  $*-eu-$  spread to the nominative at an early stage and that we have to reconstruct a Balto-Slavic nom. sg. form  $*videuH$ .

Now we return to the Prussian material. The reconstruction of acc. sg. *\*-eiHm* for the hysterodynamic *iH*-flexion offers a straightforward explanation for the peculiar accusative *warein* (2x) and the nominatives *giwei* and *pisālei*. It appears that there was a paradigm with nom. *-ei* and acc. *-ein* beside the dominant paradigm with nom. *-ē* and acc. *-ien* and the proterodynamic *ī/jā*-flexion with nom. *-i* and acc. *-in*. The type in *-ei*, *-ein* evidently represents the original *iH<sub>1</sub>*-stems reflected in the Latin deverbal abstracts like *aciēs*. Interestingly, Slavic *neti*, *netii*, Old Polish *nieć*, Czech *net'*, gen. *neteře*, Slovak *neter* (but cf. Vaillant, 1958, 258) shows that the flexion of this hysterodynamic *iH<sub>1</sub>*-stem remained distinct from the flexion of the proterodynamic *iH<sub>1</sub>*-stems even if the latter adopted the acc. sg. ending *\*-eiHm* in Prussian. It follows that all of the reconstructed types must have existed side by side in Balto-Slavic. The proterodynamic *iH<sub>1</sub>*-stems can now be identified with the Slavic type *volja* 'will' (cf. Stang, 1957, 57). The corresponding type of proterodynamic *uH<sub>1</sub>*-stems is reflected in *klętva* 'oath'. It appears that the proterodynamic *iH<sub>1</sub>*-stems joined the proterodynamic *iH<sub>2</sub>*-stems in Lithuanian, e. g. *valia*, gen. *valios*, cf. also Latvian *vāra* beside *vare*. In Slavic, the hysterodynamic type *sōdi(i)* may include original *iH<sub>1</sub>*- as well as *iH<sub>2</sub>*-stems while denominal nouns like *koža* 'skin', which belong to the same type as *volja*, may represent earlier proterodynamic *iH<sub>2</sub>*-stems. Note that from a semantic point of view Vedic *rathīs* 'charioteer', like the Slavic word for 'judge', fits Latin *vātēs* better than *māteriēs* and may therefore contain *\*-iH<sub>1</sub>*- whereas *\*-iH<sub>2</sub>*- is probable for feminines such as Slavic *mlъni(i)*, Prussian EV *mealde*. This leads us to the following tentative classification of the Balto-Slavic material (Prussian unmarked):

- (1) hysterodynamic *eH<sub>1</sub>*-stems and original root nouns: *umnode*, Lith. *girė*, *žvaigždė*, Russ. *gora*, *zvezda*.
- (2) hysterodynamic *uH<sub>1</sub>*-stems and original root nouns: Lith. *šlovė*, Russ. *slava*, *svekrov'*.
- (3) hysterodynamic *uH<sub>2</sub>*-stems and original root nouns: *widdewū*, Russ. *vdova*, *krov'*.
- (4) proterodynamic *uH<sub>1</sub>*-stems: *gerwe*, Lith. *gervė*, Czech *žeráv*, Russ. *kljatva*.
- (5) proterodynamic *uH<sub>2</sub>*-stems: *insuwis*, Lith. *liežuvis*, Russ. *jazyk*.
- (6) hysterodynamic *iH<sub>1</sub>*-stems: Lith. *neptė*, Russ. *sud'ja*.
- (7) hysterodynamic *iH<sub>2</sub>*-stems: *mealde*, Lith. *vilké*, Russ. *molnija*, *volčica*.
- (8) proterodynamic *iH<sub>1</sub>*-stems: *giwei*, Lith. *valia*, Russ. *volja*.
- (9) proterodynamic *iH<sub>2</sub>*-stems: *sansy*, Lith. *pati*, Russ. *boginja*, *koža*.

Most important is that in Prussian, unlike East Baltic and Slavic, the proterodynamic *iH<sub>1</sub>*-stems adopted the flexion of the hysterodynamic *iH<sub>1</sub>*-stems and thereby remained distinct from the proterodynamic *iH<sub>2</sub>*-stems. This points to an early split. Also noteworthy is that in Slavic the *H<sub>1</sub>*-stems were evidently redistributed according to animacy and gender: Russian *gora*, *zvezda*, *slava*, *kljatva*, *volja* versus *sud'ja* versus *svekrov'*, Czech *net'*, *žeráv*, similarly in the Slavic proterodynamic *iH<sub>2</sub>*-stems *koža* versus *bogynji*. The *ā*-stem flexion of the type *sōdi(i)* is therefore remarkable and must probably be attributed to a compara-

tively recent phonetic development. This supports the reconstruction of *\*-iH<sub>1</sub>* in *sōdi(i)* versus *\*-iH<sub>2</sub>* in *ml̥ni(i)*.

Apart from the *iH<sub>1</sub>*-stems, which remained a distinct category in Prussian but joined the corresponding *iH<sub>2</sub>*-stems elsewhere, it appears that the West and East Baltic reflexes are usually in agreement. We often find a neuter in *-jan* beside a collective in *-ē* or *-jā*, e. g. EV *garian*, E *garrin* ‘tree’ beside Lith. *girė*, *giria* ‘forest’, further I *kraugen*, E *krawian* beside *krawia*, EV *crauyo* ‘blood’, also EV *soalis*, E *sālin* ‘herb’ beside Lith. *žolė* ‘grass’. This model can hardly account for I *stas drōffs*, corrected in II *stan druwin*, E (*stas*) *druwis* beside *sta druwi*, acc. *-ien* (11x), which points to an original neuter *i*-stem beside the feminine *ē*-stem. Similarly, we find a neuter nom. *gijwan*, *giwan*, gen. *gīwas* (2x), *geijwas*, acc. *-an* (9x), beside the feminine *giwei*, gen. *gijwis*, acc. *gijwin*, I *geiwin*, II *geywien*. As these deverbal abstracts fit the *iH<sub>1</sub>*-stems semantically, it seems probable to me that the neuter *i*-stem, which could either become masculine or adopt *a*-stem endings, was created on the basis of the oblique cases with zero grade suffix *\*-i-* of the feminine nouns in *-ei*, acc. *-ein*. This again confirms the paradigms of Latin *māteriēs* and Slavic *sveky* discussed above.

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