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## ON THE ORTHOGRAPHY OF THE OLD PRUSSIAN TEXTS

According to Schmalstieg (1970, 127), “it may well be madness which would lead anybody to believe that he could make anything out of Old Prussian orthography”. This view is based on two methodological errors. Firstly, the Old Prussian texts must be examined separately because they exhibit different orthographical regularities and cannot therefore be lumped together without obscuring the evidence. Secondly, the Prussian data must not be judged on the basis of the comparative evidence from Lithuanian and other languages because it cannot be known beforehand how much the Prussian system differed from its cognates. If the Old Prussian texts reflect archaic elements which are not found in its closest relatives, it is imperative that the evidence is drawn from the separate texts on the basis of their internal properties and not diluted by a comparison with different sources.

In his dissertation (2009), Vytautas Rinkevičius offers a complete analysis of the Old Prussian accentual system with a full discussion of the scholarly literature. Since his conclusions differ from mine (2009) in important respects, it may be appropriate to look into the origins of our disagreements. I shall limit myself to the language of the Enchiridion (third catechism).

Rinkevičius recognizes the following elements as indications of the place of the stress (2009, 81):

- (1) the macron of *ā*, *ē*, *ī*, *ō*, *ū*, also the digraph *ij*, e.g. in *wīrans*, *gēide*, *rānkan*, *pogāunai*, *pogaūt*, *aīnan*,
- (2) the systematic absence of a macron reflecting an acute diphthong or unstressed syllable, e.g. in gen. sg. *kermenes* (5×) as opposed to *kērmēn-* (5×) elsewhere,
- (3) the digraph *ae* for *ā* outside the Enchiridion,
- (4) apparent vowel reduction in unstressed syllables, e.g. *attrātwei*, *ettrāi*.

He assumes that double consonants follow short vowels without indicating the place of the stress.

While we agree in principle on the macron (1) and its absence (2), we differ about the interpretation of the details in a number of instances. The digraph *ae* (3), which is found in I *staey*, *pallapsaey*, *laeims*, II *staey*, *pallapsaey*, *daeczt* and III *Israel*, is in my view quite irrelevant. Though the alternation between *a* and *e* before a double consonant (4) may indeed reflect reduction of an unstressed vowel, there are other forms of alternation which must be taken into consideration. A correct interpretation of such alternations requires a detailed analysis of the data. In the present instance, there are two types of regularity which must be taken into account. First, the phonetic reflex of an initial \**e*- is *a*- in Old Prussian while *e*- is the reflex of an original pretonic \**i*- (cf. Kortlandt 2009, 255). In the Enchiridion, the 1st sg. pronoun *as* is found 44× (never *es*) and the verb ‘to be’ is written 156× *as*- (and 2× *es*- in suspicious forms, cf. Kortlandt 2009, 256). Second, we find 116× *et*-, but *at*- once in the infinitive *attrātwei* and 7× in the formulaic plural imperative form *attrāiti*. All of these instances are found in the last few pages of the text (Trautmann 1910, 77–79) while we find 42× the singular imperative *ettrais* and once the indicative *ettrāi* in the earlier parts (Trautmann 1910, 23–49 and 63, respectively). The alternation between *a*- and *e*- clearly does not reflect a vowel reduction in the pretonic syllable here.

On the other hand, I have argued that double consonants can be taken as an indication of pretonic position, firstly because they are particularly frequent before a macron, e.g. *semmē*, *weddē*, *billit*, *seggīt*, *skellānts*, *dessīmts*, *stallēmai*, *turrīlai*, etc., and secondly because the alternation between *e* and *a* is particularly frequent before a double consonant, e.g. dat. pl. *wirdemmans*, *waikammans*, 1st pl. *giwemmai*, *giwammai*, nom. sg. *tennā*, *tannā*, acc. sg. *gennan*, *gannan*, nom. pl. *gennai*, *gannai*, acc. pl. *gennans*, *gannans*. The same “Vortondoppelung” is found in Lithuanian documents from Prussia (Bense 1958, 657): “Ein einfacher Konsonant wird unmittelbar vor dem Ton verdoppelt, wenn der ihm vorausgehende Vokal kurz ist. [...] Doppelschreibung steht auch, wenn im Paradigma Tonwechsel auftritt und der Ton auf den Vokal vor dem zu verdoppelnden Konsonanten fallen kann, aber nur dann, sobald dieser nicht den Ton trägt”, e.g. *turrēti*, *zinnoti*, *darryti* but 3rd pret. *padare*, nom. pl. *mattydami* but *pamatę*, gen. sg. *swétimo* and acc. pl. *swétimus* versus nom. pl. *swettimi*, acc. sg. *Métq* versus loc. sg. *Mette*, etc. (Cf. also Bense 1998.) The final stress of *gannan* has now been confirmed by its occurrence in a 17th century hexameter (cf. Kortlandt 2009, 254).

Rinkevičius assumes phonetic reduction of pretonic *a* to *e* not only in *ettrāi* but also in *skellānts*, *kelsāi*, *dellīks* and *widdewū* (2009, 78), and in these instances I agree (cf. 2009, 244, 251). However, he assumes reduction of post-tonic *a* to *i* in *wijrin*, *dīlins*, *madlin*, *pikullis*, *wijrimans*, *pogaunimai* and *immimai*, the latter two evidently on the basis of Lith. *gáuna* and *ima* (ibidem), in spite of the fact that there are no variants with *e* here. It seems obvious to me that this alternation between *a* and *i* is not the result of a phonetic development but requires a morphological explanation. The rash elimination of this alternation as meaningless variation deprives the author from new insights on the basis of independent Prussian evidence. I regard *-in*, *-ins*, *-imans*, *-imai* as real endings which must be taken seriously, whether or not one chooses to interpret them as erroneous. In the case of *pikullis*, it is important to distinguish between the word for ‘devil’ *pickūls*, gen. sg. *pickullas*, also *pjckulas*, acc. sg. *pickullan* and *pikullan*, and the word for ‘hell’, gen. sg. *pikullis*, acc. sg. *pickullien* (2×), also I *pekollin*, II *pykullien*, EV *pyculs* (cf. Trautmann 1910, 398; Van Wijk 1918, 35; Kortlandt 2009, 130). The latter was erroneously used for the former in the Tauffbüchlein, where mistakes are more frequent than in the earlier parts of the Enchiridion (cf. Kortlandt 2009, 260–262, 266f., 299f.). I conclude that morphological information is essential in the appreciation of nominal and verbal endings.

Comparing the Prussian data with the East Baltic and Slavic evidence, I have argued that these are three branches of a common Balto-Slavic proto-language which shared the rise of lateral mobility in the accent patterns, the raising of PIE final *\*-om* to *\*-um*, the loss of PIE final *\*-t/d*, Hirt’s law, the dissolution of the PIE syllabic resonants, Winter’s law, and the retraction of the stress from final open syllables in disyllabic word forms (cf. Kortlandt 2009, 43–50). The lateral mobility is exemplified in *spignā*, *spignān*, *antrā*, *āntran*, *mergu* (with *-u* indicating final stress), *mērgan*, *mergūmans* (with retraction according to Hirt’s law), *wirdemmans*, *waikammans*, *giwemmai*, *giwammai*, Hirt’s law in *mūti* and *wijrimans*, cf. Vedic *mātá*, *vīrás*, and the retraction of the stress from final open syllables in *lāiku*, analogically *lāikumai*, also *kīrdimai*, *gīwu*, *gīwasi* beside *giwassi* (2×), cf. *laikūt*, *kirdīt*, *giwīt*, *giwāntei*. Prussian differs from East Baltic and Slavic as a result of an accent shift from a stressed short vowel to the following syllable (cf. Kortlandt 2009, 241–254). This shift was probably limited to short vowels in open syllables, e.g. *semmē*, *weddē*, *twaiā*, *tennā*, *gennāmans*, *ismigē*, *widdewū*, *widdewūmans*, also

*gennan, gannan, gennai, gannai, gennans, gannans*. Rejecting the accent shift (“Kortlandto dēsnis”), Rinkevičius proposes different solutions, in particular suggesting that these words had adopted accentual mobility in Prussian (2009, 89–92). In the following I shall discuss the material which is relevant to our disagreement.

Rinkevičius assumes accentual mobility in the paradigms of *gallū*, dat. pl. *gennāmans, mensā, mergu, widdewū, iousā, nousā, tennā, twaiā, ainā, antrā, piencktā, imtā, semmē*, gen. sg. *kermenes, crixtisnā, etwerpsnā, spignā* and *aucktimmiskū* (2009, 106–108). On the basis of the comparative evidence I assume fixed stress on the ending in *gennāmans, widdewū, tennā, twaiā* and *semmē*. The latter view is supported by the pretonic neutralization of *a* and *e* in acc. sg. *gennan, gannan*, nom. pl. *gennai, gannai*, acc. pl. *gennans, gannans*, by the macron in dat. sg. *tennēi, maiāsmu, twaiāsmu, swaiāsmu* (as opposed to *noū(se)smu, ioūsmu*), and by the attestation of end-stressed *gannan* in Zamelius’ hexameter (cf. Kortlandt 2009, 254). Similarly, I assume desinential stress in the paradigm of *rikijs*, gen. sg. *rikijas*, acc. sg. *rikijan* (also attested with final stress in Zamelius’ poem, cf. *ibidem*), nom. pl. *rikijai*, acc. pl. *rikijans*. The original stress pattern of Lith. *žėmė* (2) is supported by Old Slovene *zemlo* (cf. Kortlandt 2011, 64) and by Kajkavian and Russian data (cf. Jedvaj 1956, 302; Illič-Svityč 1963, 108). The pronoun *tāns* is a contamination of the PIE demonstrative *\*to-* with a deictic particle *\*an* which provided a suppletive nominative for anaphoric *\*e/i-* in Balto-Slavic (cf. Van Wijk 1918, 116–118; Kortlandt 2009, 139–43). The formation of Lith. *anàs* on the analogy of *tàs* is evidently more recent. The absence of a macron in gen. sg. *kermenes* (5×) beside nom. sg. *kērmens* (2×), acc. sg. *kērm-* (3×), *kerm-* (2×), derivatives *kerm-* (5×), *kērm-* (4×) does not justify the assumption of final stress. As in the case of *ālgas* (2×), the gen. sg. form had probably adopted the accentuation of the acc. sg. form (cf. Van Wijk 1918, 67–76; Kortlandt 2009, 192).

As I have argued earlier (2009, 137f.), I think that nom. sg. *etwerpsnā, ispresnā, crixtisnā* and acc. sg. *etwerpsennien, isspressennien, crixtissennien* represent a single original paradigm with nom. sg. *\*-sin < \*-sn*, acc. sg. *\*-senin < \*-sen-m* and gen. sg. *\*-snās*, later generalized as separate formations in Prussian nom. sg. *-snā, -sennis*, gen. sg. *-snas, -sennis*, acc. sg. *-snan, -sennien*, acc. pl. *-snans, -senniens*, Lith. *-sena*, Latvian *-šana*, Russian e.g. *basn’, basnja, bojazn’, ukorizna*. Against this background it is reasonable to

assume that the new acc. sg. form *isspresnān* had final stress on the analogy of nom. sg. *ispresnā*. The macron of *aucktimmiskū* (1× beside 1× *-skai* and 5× *-skan*) may be erroneous because there are no other forms in *-skū* in the Enchiridion.

There is a class of words with a diphthong which never have a macron, in particular *deiw-* ‘god’ (119×), *swint-* ‘holy’ (48×), *warg-* ‘evil’ (19×), *dang-* ‘heaven’ (13×), *dein-* ‘day’ (9×), *waix*, *waik-* ‘boy’ (7×), which Rinkevičius reluctantly assigns to the mobile accent type (2009, 110–112), also *teis-* ‘glory’ (8×). This is at variance with his interpretation of gen. sg. *kermenēs* (5× without a macron beside 9× *kērm-* and 7× *kerm-* elsewhere) as end-stressed, cf. also 1× *wīrds* ‘word’ versus 33× *wird-* without a macron, 1× *āinan* and 1× *ainā* versus 39× *ains*, 27× *ainan*, 7× *aina*. It is clear from these examples that no conclusions can be drawn from the absence of a macron, which is particularly frequent in the case of religious vocabulary. Moreover, if we disregard the instances of diphthongized *\*ī* and *\*ū*, diphthongs with a macron on their second component are extremely rare and often erroneous (cf. Derksen 1998, 46; Kortlandt 2009, 267) and cannot therefore be used as evidence. Against this background, the consistent double consonant in nom. sg. *maddla* ‘prayer’ (7×) and its consistent absence in *madl-* elsewhere (54×) appear to be a more reliable indication of the place of the stress than the absence of a macron. I conclude that *maddla* had mobile stress.

In the verb, Rinkevičius’ assumption that posttonic *a* appears as *i*, e.g. in *immimai*, *augauņimai* (2009, 174), has grave consequences for his classification of inflectional types. On the basis of East Baltic and Slavic data he assumes fixed stress on the root in the paradigms of *immimai*, *girrimai*, *ersinnimai*, *posinnimai*, *gunnimai*, *turrimai* (2009, 181f.) and suffixal stress in the presents with *-inn-* (2009, 198f.), where I assume fixed stress on the following syllable, mostly as a result of the Prussian accent shift. He does not discuss the personal endings of the verb at all. While he attributes the alternations in *pogāunai*, *pogaunai*, *pogaunimai* and *imma*, *immati*, *immimai* to reduction of posttonic *a* to *i* (2009, 78), he does not explain why we find only 1st pl. *-mai* (103×) beside 2nd pl. *-ti* (71×), *-tei* (9×), *-tai* (8×), *-te* (4×) and *-ta* (1×). This clearly does not reflect a phonetic development but a morphological alternation. Stang has argued that *-tei* is an imperative ending (1966, 418) and I have shown that the deviating endings can be explained on philological grounds (2009, 308). In the case of *turri* (43×), *turei* (15×), *turrei* (1×), *ture*

(1×) and *-inna* (20×), *-inai* (7×), *-ina* (6×), *-inne* (3×), *-innei*, *-inei*, *-inno* (once each), too, the hypothesis of phonetic variation is quite unsatisfactory. Since we find 14× *turei* and 1× *turrei* in the singular versus 1× *turei* beside 10× *turri* in the plural, I have argued that *-ei* and *-i* represent the singular and plural endings, respectively (2009, 277). In the cognate languages, Slavic generalized *\*ei* and East Baltic *\*i* in the paradigm. The alternation between *\*ei* and *\*i* is also attested in Italic and Celtic (cf. Kortlandt 2007, 134–137). In the same way we find 6× *-inai*, 1× *-inei*, 1× *-innei* in the singular versus 1× *-inai* beside 3× *-inna* and 2× *-ina* in the plural. This points to a similar distribution of *-inai* in the singular and *-inna* in the plural (cf. Kortlandt 2009, 280). Here the singular stem form *-inā-* is reflected in the Latvian verbs in *-inât*, which are not thematic, and the plural form in *-ina* in the Lithuanian verbs in *-inti* (cf. Stang 1966, 369; Kortlandt 2009, 281).

As a result of the Prussian accent shift, the quadrangular vowel system *i, e, a, u* changed into the triangular system *i, e, a, o, u* (cf. Kortlandt 2009, 190, 262). The unstressed variant *po* of *pa* was generalized in the preposition and the rounded vowel was analogically introduced in the preposition *na* and the prefix *na-* (cf. Van Wijk 1918, 49–51). Thus, we find original pretonic *po-* (189×) beside pretonic *pa-* 63× in words where the accent was shifted to the second syllable, e.g. *pallaips*, *paggan*. It follows that the accentuation of *pōstan* (1×) and *pōmien* (1×) cannot be old. It was probably introduced on the analogy of *ēnstan* (12×), *ēnmien* (2×), *prēistan* (10×), *prēimans* (4×), *pērstan* (3×), *pērwan* (3×), etc. These examples may be compared with Russian *tudá*, *ottúda*, Ukr. *mené*, *do méne*, which have the stress on the second syllable as a result of Dybo's law (cf. Kortlandt 2011, 141).

Another consequence of the change from a quadrangular to a triangular vowel system is that the diphthongization of *\*ī* to *ei* in the first and second catechisms was arrested and reversed to *ī* in the Enchiridion (cf. Kortlandt 2009, 259–261), e.g. I *preiken*, *leiginwey*, *geiwans*, *geiwin*, *polleygo*, *deyg*, II *preyken*, *leygenton*, *geywans*, *geywien*, *poleygo*, *deygi*, III *prijki*, *līgint*, *gijwans*, *gijwan*, *polijgu*, *dijgi*. The close diphthong remained distinct from open *\*ei* [æi]. On the other hand, the diphthongization of *\*ū* to *ou* in the second and third catechisms, which was blocked by an *i* in the following syllable (cf. Saussure 1892, 81; Kortlandt 2009, 261), was not reversed, e.g. I *numons*, *sunun nusun*, II *noumans*, *sounon nouson*, III *noūmans*, *soūnon nouson*. Since *ou* < *\*ū* did not merge with earlier *\*au* (cf. Kortlandt 2009, 266), it

introduced a new distinctive opposition in the diphthongs. These developments are explained by the Prussian accent shift which gave rise to a triangular vowel system.

## DĖL PRŪSŲ KALBOS TEKSTŲ RAŠYBOS

### *Santrauka*

Savo disertacijoje (2009) Vytautas Rinkevičius pateikia išsamią prūsų kalbos kirčiavimo sistemos analizę su detalia mokslinės literatūros apžvalga. Kadangi jo išvados ne vienu atžvilgiu iš esmės skiriasi nuo manųjų (2009), naudinga yra apžvelgti skirtumų priežastis.

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