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"KORTLANDT'S HYPOTHESIS" AND OLD PRUSSIAN STRESS*

Hitherto, our sole direct source of information on the placement of stress in Old Prussian has been the third and last of the Catechism texts, Abel Will's 1561 translation of Luther's Enchiridion. Here, it is generally agreed that word stress is indicated by the marking of length on a stressed syllable with a macronlike device: *wīrans* 'man, acc. pl.' : Lith. *výrus* (with *-ij-* as an allograph of *-ī-*)[1]. In diphthongs, as F o r t u n a t o v (1880, 153 ff.) has shown, the marking of (secondary) moric length indicates not only word stress, but also syllable tone: *rānkan* 'hand, acc. sg.' (Lith. *rañką*, with Baltic circumflex) : *kaūlins* 'bone, acc. pl.' (Lith. *káulus*, i.e., Baltic acute). In the Enchiridion, then, the representation of stress and vowel/mora length is graphically merged, and word stress is directly attested only for long vowels.

There is no *communis opinio* regarding the indication of stress on short vowels. On the one hand, T r a u t m a n n (1910, 196), Van W i j k (1918, 101), and R y s i e w i c z (1938–40, 101–2) find that short accented vowels are indeed represented graphically, by a doubling of a following (intervocalic) consonant: *buttan* ['butan] : Lith. *bùtas, gallan* ['galan] : Lith. *gãlą, enmigguns* [en'miguns] : Lith. *įmìgęs*. S m o c z y ń s k i 1990 extends this interpretation to other environments. On the other hand, B e r n e k e r (1896, 102), E n d z e l i n (1944, 23–24, 27), and S c h m a l s t i e g (1974, 25) argue that Will's doubling of a consonant is simply a device to mark the shortness of a preceding vowel, "nach dem Vorbild der deutschen Orthographie", according to E n d z e l i n (1944, 23). In this case, a geminate consonant (*-j-* and *-w-* are never doubled) could be found after either a stressed or

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[1] Abel Will says as much in the foreword to the Catechism (cited according to M a ž i u l i s 1981, 105): "Damit aber der lefer folche fprach nach jrer Natürlichen art verftendliglich lefen könne: vnd es die zuhörer auch verftehen / ift diefes fleiffig zu mercken / das die Fünff Vocales gemeiniglich durch eine lange Pronunciation aussgefprochen werden / Derwegen folche buchftaben jhre fondere zeychen haben müffen / Wo nun diefe nachfolgende verzeychnus an einem folchen buchftaben im wort erfunden, muss derfelbige mit feinem gewohnlichen accent Pronuncijrt werden. ā, ē, ī, ō, ū, ij".

unstressed vowel, and, conversely, the single writing of a consonant indicates the length of a preceding vowel (regardless of stress)[2].

While these two approaches agree in regarding Will's use of single and geminated consonants as essentially reflecting contemporary German orthographic practice, a fundamentally different interpretation of the doubling of consonants in the Enchiridion has been put forward by K o r t l a n d t (1974), who, starting from numerous writings of the type *semmē, dessīmpts, ettrāi*, with a macron on the vowel following a geminated consonant[3], proposes that such a notation indicates the stress of a following, rather than preceding vowel (or simple brevity). As K o r t l a n d t explains (loc. cit., 300), "Considering that it is *a priori* more probable that double consonants occur under the same conditions in word forms without a macron as they do in word forms where we can derive the place of the stress from the macron, we can formulate the following HYPOTHESIS: a d o u b l e c o n s o n a n t i n d i - c a t e s t h a t t h e n e x t v o w e l w a s s t r e s s e d" (original emphasis). The above *buttan* (Lith. *bùtas*), *gallan* (Lith. *gãlą*), *enmigguns* (Lith. *įmìgęs*) would thus represent "bu'tan", "ga'lan", "enmi'guns", all with final stress.

Together with this hypothesis, K o r t l a n d t (loc. cit., 302) proposes a progressive stress shift for Old Prussian analogous to Dybo's law for Slavic (advancement of stress from a non-acute syllable to the next syllable, irrespective of its prosodic composition), except that in Old Prussian the conditions for stress displacement are more restricted: here stress advances only from a short syllable; circumflex syllables are unaffected: "a stressed short vowel lost the ictus to the following syllable"[4]. This would account for such comparisons as OPr. nom. sg. *semmē* 'earth' : Lith. *žĕmé*, OPr. 3 sg. pret. *weddē(din)* 'lead' : Lith. *vēdė*, OPr. fem. sg. *twaiā* 'your' :

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[2] As E n d z e l i n (1944, 23–24) points out, the marking of a short vowel through the gemination of a following C is not absolutely consistent in these texts; for example, it is rare before another C (*siggnat = signāt*). (It is, however, typically found before a resonant: *maddla, tickra*.) As Endzelin further notes, consonant gemination is less common in suffixes than in roots (*spartina, spartinno*), is almost completely lacking across a prefix-root boundary (*pallaip-* is the only example), and is never found in word-final position (*kas*).

[3] I count 193 examples (including hyphenated words) of this sort in the Enchiridion, including forms with the structure -*VCCij*- (*Dellijks*), -*VCCrV*- (*tickrōmai*), and stressed diphthong after the geminated consonant (*sallaūbiskan*). The only examples here of a geminated consonant following a stressed syllable (vowel or diphthong) are *polijcki* 27[10], *drūcktai* 66[12], *bīllīt* 79[4], *dīnckama* 79[11], *lassīnnuns* 104[29], *drūcktawingiskan* 119[11], *dīnckun* 132[15].

[4] D y b o 1982, 247, note 25, refers to "Закон Кортландта" and says that he himself had proposed something similar at a conference on Nostratic in 1973. Commenting on Kortlandt's Hypothesis, he notes that it "eliminates the 'mystical nature' (мистический характер) of the connection between ictus and double consonants". He is apparently referring to the view put forth in the works of T r a u t m a n n (1910, 196), Van W i j k (1918, 101), and R y s i e w i c z (1938–40, 101–2), that the doubling of a consonant in the various Old Prussian texts is an attempt at representing the stress of a previous short vowel.

Russ. *твоя́, твоё* (original barytone), OPr. dat. pl. *gennāmans* 'woman' : Russ. *жена́, жену́* (original barytone). Circumflex bases retain their original stress: OPr. acc. pl. *rānkans* 'hand' : Lith. *rankàs* (circumflex base with Saussure's law), OPr. acc. pl. *āusins* 'ear' : Lith. *ausìs* (circumflex base with Saussure's law).

As supporting evidence for such a stress advancement in Old Prussian, K o r t l a n d t (loc. cit., 300) cites the "remarkable alternation between *e* and *a* before a double consonant in *wirdemmans, waikammans* and *giwemmai, giwammai*. The vacillation is more easily explained as the result of a pretonic neutralization than as an unmotivated alternation in the stressed syllable. ... (p. 302:) Here again the final stress in the Old Prussian forms is supported by the variants *gannan, gannai, gannans*, which point to a weak pretonic vowel". But as P a r e n t i 1998, 136 has indicated, this "remarkable alternation" is found equally well in syllables which according to Kortlandt's hypothesis would be stressed, and the alternation would therefore be unmotivated: *ucke-* (1x) of *vckcelāngewin-giskai* $59^{4/5}$: *ucka-* (5x; *vckalāng_wingiskai* $39^{13/14}$, etc.); 81^{22} *wesselingi* 81^{22} : *Wessals* 121^8 (P a r e n t i loc. cit. cites other examples). The alternation is also found in *kittewidei* 49^8 and *kittewidiskai* 129^{15} : *kittawidin* 115^{25}; *pogattewinlai* $103^{10/11}$: *pogattawint* 77^{11}, which according to K o r t l a n d t (p. 303) are not actually exceptions to his hypothesis, but represent stress on the syllables *-wid-* and *-win-*, the *-w-* having exerted a certain reducing effect on the preceding vowel; a stop preceding this vowel is written doubly.

On the other hand, there are words of relatively high frequency throughout the Enchiridion, like *tebbei* (11x; hyphenated forms are included for all counts), *mennei* (9x), *adder* (72x), *paggan* (26x), *pallaips* (25x), *labban* (25x), *segge/seggē* (12x), *gemmons* (6x), which never show an alternation *e ~ a* in actual or purported pretonic position; etymological *a* and *e* are kept distinct here (cf. also L e v i n 1982, 206–209)[5].

The graphic alternation of *e ~ a* in the Old Prussian texts is a complex issue which almost certainly has several motivating factors. For cases like *giwemmai, wirdemmans, gennan*, S t a n g 1966, 27 sees the fronting of a stressed *a* before a nasal. Other instances, such as *Sacramentan ~ Sacramenten* reflect, according to Stang, a reduced pronunciation of the vowel in unstressed position. Still other instances in the Enchiridion of graphic *e ~ a* contain an etymological *e*, and may reflect the open pronunciation of this vowel (as is the case in the Elbing Vocabu-

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[5] Since etymological *e* is rendered consistently in high-frequency examples such as *tebbei, mennei, seggē, gemmons*, I have reservations concerning P a r e n t i's (1998, 138–139) reiteration of S c h m a l s t i e g 1959: "in Old Prussian, as in modern Lithuanian, there was no opposition between /a/ and /e/ in the position after a consonant".

lary: Levin 1971, 12, 17), which is apparently marked in Catechism II by the graph æ: II *æst* (*est*) : III *ast*, II *hæse* 'from' : III *esse/asse*, II *æsse* 'be, 2 sg. pres.' : III *essei/assai/assei*.

In fact, there are several other compelling reasons, both linguistic and cultural, for preferring the traditional interpretation of consonant gemination (in Endzelin's formulation) to Kortlandt's hypothesis. To begin with, the Enchiridion text itself provides a number of graphic counterexamples to Kortlandt's hypothesis. These include:

a) Multiple writings of double C: Omitting compounds (like *stessepaggan*) on the grounds that they may have more than one stress, we have *tickinnimai* 35[2], *saddinna* 97[11], *isspressennen* 67[11] (3 sets!), *perweckammai* 31[4], *pickullas* 51[16], *preistattinnimai* 111[15], *kackinnais* 117[27], *Crixtissennien* 131[18], and others.

b) Expected double consonants lacking: *ismigē* 101[13], *budē* 89[11], *Supūni* 67[4], 69[8], *pagār* 27[6], *perōni* 103[24];

c) Forms in which double consonants are not immediately pretonic (again, excluding compounds like *ackewijstin* 125[5]) *Pallaipsītwei* 35[6], *pērgimmans* 41[3], *kūmpinna* 51[14], *polijcki* 57[10], *Jssprettīngi* 75[18], *aū-pallai* 79[20/21], *widdewū* 97[10] [6] *Widdewūmans* 97[9], *boūsennien*, 103[2], *skijstinnons* 103[9], and others. Note also *giwassi* (2x) alongside the spelling *gīwasi* (1x). On the basis of such forms, Endzelīns (1943, 19; 1944, 27) raised doubts concerning Trautmann's formulation.

d) Instances of vowel reduction after a doubled consonant (suggesting an unstressed syllable): *tickars* 47[9], 61[20], 77[13] (indicating reduced final: *'tikṛs*), *tickran*; *tāns* 37[11] (repeatedly) < *'tanas*, although Kortlandt argues that *tennā/tannā* is by progressive stress shift; *Trinta_winni* 89[26] (*-i* < unstressed *-ē*, if this is not in fact an *-ī* ~ *-iā* stem, on which cf. Levin 1971, 82 ff.).

e) Forms such as *semmē* 105[17] 'earth' : Lith. *žēmė*, OPr. 3 sg. pret. *weddē(din)* 101[17] 'lead' : Lith. *vēdė*, which serve in part to motivate Kortlandt's hypothesis, are somewhat suspect in view of the fact that etymological long *-ē-* in the Enchiridion is otherwise routinely represented as *-ī-* (Stang 1966, 46)[7].

Kortlandt's hypothesis is also less compelling when the cultural context underlying the appearance of the catechisms is brought to bear on the question of Old

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[6] Note also Derksen 1996, 366: "Words of the type *widdewū* constitute an exception to the general rule that a double consonant indicates that the next vowel was stressed". As in the examples *kittewidei*, *pogattewinlai*, Kortlandt (loc. cit., 303) sees in *widdewū* the "reducing effect of the *w* on the preceding pretonic vowel".

[7] Smoczyński 1990, 192, note 12, views the macron of *ē* as an abbreviatory device for a diphthong *ei*.

Prussian orthographic practice. The three catechism editions were translated into Old Prussian in order to assist German speaking clergymen in educating a generation of native speakers of Old Prussian in the Christian doctrine. This aim is stated quite clearly in Hartknoch's 1684 *Alt- und Neues Preussen*, and it would be useful to quote the relevant passage in full (p. 89, column 2; original emphasis in bold used as a quotation):

In dem vorigen Jahrhundert unter der Regierung Alberti des erſten Hertzogen in Preuſſen / ist gedachte Sprache noch in gedachten Ländern / wiewol im Samlande am allermeiſten / ſehr gebraucht. Ja es ſind auch dazumahl die meiſten Leute im Samlande keiner andern als dieſer Alt-Preuſſiſchen Sprache kündig geweſen. Derſelben Heyl zu befördern hat Albertus den Catechiſmum in die Alt-Preuſſiſche Sprache überſetzen / und zu Königsberg im Jahr Chriſti 1545 drucken laſſen / **damit die Pfarrherren / wie in der Vorrede dieſes überſetzten Catechiſmi geſagt wird / und Seelſorger auffm Lande denſelbigen alle Sontage von der Cantzel von Wort ohne Tolcken ſelbſt ableſen / und dem unteutſchen Preuſſiſchen Volcke in derſelbigen Sprache mit Fleiß fürſprechen ſolten / daß alſo die Pfarrer ſelbſt mögen beyde Junge und Alten im Gebet und andern Stücken des Catechiſmi zu gelegener Zeit / ...** [p. 90] **verhören / und können alſo auch in Kranckheiten hiemit den Leuten in dieſem Stück tröſtlich ſeyn.** [...] [p. 91, column 1] Damit ſich auch die Prediger ſelbst je mehr und mehr in der alt Preuſſiſchen Sprache üben möchten / hat Hertzog Albrecht die Preuſſiſche Kirchen-Agenda laſſen in dieſe Sprache überſetzen. Sind auch hernach / da die Königsbergiſche Univerſität angeleget / ſonder allem Zweiffel ſolche Leute auff Fürſtliche Unkosten daſelbst verpfleget / damit ſie hinfüro in dieſer Preuſſiſchen Sprache die Ehre Gottes unter dieſem Volck mehr und mehr außbreiten möchten.

The question remains: Why would books intended for use by 16th-century German-speaking clergy (rather than for 20th-century linguists) adopt an orthographic convention presumably unfamiliar to the speakers? Nor is there any evidence (e.g., in H a r t k n o c h 1684) of a German-derived Old Prussian writing tradition which over time may have evolved into the system envisioned by Kortlandt, and upon which Abel Will might have drawn; and no such system is found among those languages in the Baltic region which were subject to German cultural influence. For Latvian, which distinguishes vowel length, earlier orthographic practice shows a doubling of consonants after short vowels: Older Latvian *ʒittas* (*citas*), *taggad* (*tagad*), *aʒʒis* (*acis*), *labbi* (*labi*), *tu eſſi* (*esi*), *turram* (*turam*), *Semme* (*zeme*). The same practice of doubling consonants to denote the shortness of preceding vowels prevailed in Estonian up until Ahren's spelling reforms of the mid-19th century,

when the German-style orthography was replaced by one modelled on Finnish: older *tullukene* > *tulukene* 'little fire', while *tuled* > *tuuled* 'winds' (R a u n, S a a r e s t e 1965, 72).

Of course, both Latvian and Estonian, like German, are languages with initial stress; the question of the representation of word-internal accent does not arise. The question is germane, however, in the case of the East Prussian publications in Lithuanian (a point recently made by P a r e n t i 1998, 137 ff.), which, like Old Prussian, is a language with free stress. Regarding such texts, D e r k s e n 1996, 16–17 (citing I l l i c h - S v i t y c h 1979, 17–18, 152) notes that "in certain Lithuanian editions that appeared in Königsberg a double consonant indicates that a preceding *e* or *a* is short and therefore usually unstressed, e.g. Asg. *rásą* (= *rãsą*), Gsg. *rassõs* (= *rasõs*) in the *Prayer Book* of 1705, or Gpl. *pádû* (= *pãdų*), *naggû* (= *nagų̃*) ... This orthographic convention was first pointed out by A. Baranowskij with respect to Haack's vocabulary (1730), where we find *sukkù*, *lippù* ... Though in these cases the function of the double consonant as a marker of the place of stress seems to be secondary, I think that it supports Kortlandt's hypothesis".

Derksen properly notes here that the function of the double consonant in these Lithuanian texts is secondary, as it surely is in the relevant examples for Old Prussian: the correlation of geminate consonant and following stress is merely a consequence of the general convention for short vowels. But it does not follow that this notation supports Kortlandt's hypothesis: for disyllabic Lithuanian words with a root in *e*, *a*, like *rasà*, a geminated consonant will necessarily indicate stress on the following syllable, since root-stressed forms will have secondary lengthening of the *e*, *a* (which has not been proposed for Old Prussian!) and concomitant single-writing of the consonant in question: acc. sg. *rásą*, as opposed to *rassõs*, with original short *a* and double consonant. In syllables with short *i*, *u* (and non-lengthened *e*, *a*), consonant gemination will appear irrespective of stress, because there is no inherent connection with stress. A perusal of Daniel K l e i n's *Grammar* and *Compendium* (1653, 1654), which serve as a model for later Prussian-Lithuanian orthographic practice, shows consonant doubling here (although with no great consistency) without reference to stress: *źinnau* (*žinaũ*), *źinnai* (*žinaî*), *źinno* (*žìno*); *vadinnu* (*vadinù*), *vadinni* (*vadinì*), *vadinna* (*vadìna*); *wiſſas* (nom. sg. masc.: *vìsas*), *wiſſas* (acc. pl. fem.: *visàs*), *wiſſa* (ntr. sg.: *vìsa*); *uppe* (*ùpė*); *ſupraſſu* (1 sg. fut.) (*supràsiu*, short *a*!), *ſuprattau* (*suprataũ*) [8].

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[8] The same point is made with illustrations from Lysius' 1719 Catechism by D i n i 1990, 76, and P a r e n t i 1998, 135–6. P a l i o n i s 1995, 31, sums up the relevant orthographic principles underlying the Lithuanian texts of East Prussia as follows: "Anuometinei priebalsių rašybai būdingas dar ir priebalsinių rašmenų dvejinimas

Although the various arguments adduced above against Kortlandt's hypothesis are, I believe, compelling in themselves, the most decisive proof would be a single clear case of a stressed short vowel in the language. I believe such direct evidence exists.

In his intriguing 1991 article "Die Altpreussischen Wörter in einem Gedicht von Friedrich Zamelius (1590–1647)", Jos S c h a e k e n indicates several Old Prussian words and phrases which embellish an early 17th-century poem, "De Galindis ac Sudinis, Carmen, In quo multa de Veteri Lingua Prussica occurrunt", composed in Latin by a certain Friedrich Zamelius (Zamel, Zamehl). Citing J. H. Zedler's *Universal-Lexicon* of 1749, Schaeken informs us that Zamelius, about whom little is otherwise known, was "ein Preusse, Kayserl. gecrönter Poet und Bürgermeister zu Elbingen".

As S c h a e k e n reports, the poem appears in two nearly identical versions. Version A (in Schaeken's usage) concludes (pp. 104–108) the section "De Lingua Veterum Prussorum", one of the "Selectæ dissertationes historicæ de variis rebus prussicis", a supplement to historian Christoph Hartknoch's 1679 publication of Peter von Düsburg's *Chronicon Prussiae*. Version B is found in Hartknoch's 1684 *Alt- und Neues Preussen* (pp. 112–114), at the end of the chapter "Von der vorjährigen Preussischen Sprache".

Certain of the Old Prussian forms in this poem appear in Greek letters with attendant diacritics (since it is customary to write Greek words with accents); these appear again in Latin transcription, this time without diacritics, in Hartknoch's discussion of whether Old Prussian might be related to Greek (p. 92 of Hartknoch 1679; p. 97, column 2, of Hartknoch 1684). I reproduce the Greek-letter forms with diacritics here from my own readings of both versions; page and line numbers refer to Version B. Unless otherwise noted, the forms in versions A and B are identical.

γάνναν (γάνναν pepererεγυναῖκες is the full phrase in the poem), p. 113, line 23 from bottom.

Μαλνῦκαν (Μαλνῦκαν Sobolem, Pumilum propè Sarmata vertat), p. 113, line 20 from bottom.

πȣτον (πȣτον potare ab origine Graeca), p. 113, line 10 from bottom. Schaeken represents the root vowel as two graphs: ποῦτον; the original actually has the single ligature ȣ in both versions.

(geminacija). Jis ypač buvo išplitęs R[ytų] P[rūsijoje], kur stipriau veikė vokiečių rašybos įtaka. Čia iš pradžios dažniau buvo dvejinama tik *s* [...], o vėliau ir *l, m, n, r, b, d, g, p, t* [...]. Šitokiu dvejinimu, panašiai kaip ir vokiečių rašyboje, norėta pažymėti prieš dvejinamąjį priebalsį balsio trumpumą".

ἄυκλιπζς (ἄυκλιπζς adopertum à voce καλύπτω), p. 113, line 10 from bottom. The expected τ (for ζ) appears in Version A. Some of the Greek τ's in the original text are quite similar to ζ; it is easy to see how the misprint might have occurred. The Latin transcription in Version B also shows "t" (p. 97). Version A differs in placing over the initial α- a grave accent somewhat higher and to the right of the smooth breathing.

Μῆς ῥίκυαι ἀσμὲν (Μῆς ῥίκυαι ἀσμὲν ſonat ἡμεῖς κύριοι ἐσμέν), line 113, line 3 from bottom. Version A lacks the rough breathing over initial *r*.

Schaeken concludes from the Old Prussian material of the poem that Zamelius' main source for these words was the Enchiridion, and that we cannot assume that he was a fluent speaker of Old Prussian (p. 285). He also finds (p. 288, note 15) that "Den Akzentzeichen über den griechischen Wörtern muß offensichtlich keine Bedeutung beigemessen werden": although the circumflex as macron in Μαλνῦκαν and ποῦτον agrees with the orthographic -*ij*- (= *ī*) and *ū* in the Enchiridion, we would not expect the acute as a mark of stress in ῥίκυαι and γάνναν, the latter apparently because of Kortlandt's Hypothesis: "vgl. K o r t l a n d t 1974".

But Schaeken's conclusions are surely more pessimistic than the data warrant. S c h a e k e n himself (p. 285) gives evidence for Zamelius as a seemingly original source of Old Prussian: Zamelius corrects the misprint *boklusmans* in the Enchiridion to *Poclufmans* (note that an accusative singular *poklusman* does occur in the Enchiridion); chooses the correct of two forms (*waikui, waikai*) attested as nominative/vocative plural in this text; produces an original Old Prussian sentence; adduces three new Old Prussian forms: nom. pl. *Kurpis*, nom. pl. ῥίκυαι and nom. pl. *rankas*; and gives two hitherto-unknown place names. I might add that Zamelius includes the indication of stress in the form ἄυκλιπζς (=ἄυκλιπτς), which it lacks in the Enchiridion (*auklipts* 77[4]); in Μῆς he provides a long-vowel form of "we" unknown elsewhere in the Old Prussian corpus, though it is standard in Latvian and dialectal in Lithuanian (S t a n g 1966, 254); and, lastly, he provides stress marks for ῥίκυαι and γάνναν, which remain to be discussed.

As mentioned above, Schaeken dismisses the significance of the diacritics in the Greek transcription of Zamelius' Old Prussian words. But if certain of these, such as Μαλνῦκαν and πῦτον, are taken at face value, why not all? Indeed, the diacritics of Μαλνῦκαν and πῦτον have stress correspondences in the Enchiridion: dat. sg. *malnīku* 131[17] and the many instances of the stem *malnijk-*; *pūton* 41[6], *poūton* 75[24], 77[1], 77[5]. The circumflex in the Greek forms is technically not a replacement for a macron (and clearly has no connection with Old Prussian tone), but simply the accentual diacritic required by Greek orthographic practice when marking a long

stressed penult, given a short-vowel ultima. The form ἄυκλιπζς (=ἄυκλιπτς), while it apparently violates the rules of Greek diacritics (but, then again, the final consonant cluster is not found in Greek), can be seen as uncontroversially reflecting the initial stress seen in the Enchiridion in other instances of the *au-* prefix; compare Enchiridion *āuschautins* 53[20/21] and *aūpallai* 79[20/21]. Like Schaeken, I have no explanation for ἀσμὲν in place of the Enchiridion's *asmai*; as he suggests, it may simply be in imitation of the Greek form.

Needing special comment is ῥίκυαι (corresponding segmentally to the Enchiridion nom./voc. pl. *Rikijai* 95[21]), which shows the proper acute diacritic for antepenultimate stress, but unexpected stress on the initial syllable. The following forms of this frequent word are known from the Enchiridion, where the spelling is quite consistent: nom.(/voc.) sg. *Rikijs* (23x), *Rickijs* (1x), *Rikeis* (1x); gen. sg. *Rikijas* (6x), *Rikijs* (2x); acc. sg. *Rikijan* (32x); nom. pl. *Rikijai* (1x); acc. pl. *Rikijans* (2x), *Rikian* (1x); adv. *Rikijiskai* ("herrlich") (1x). Since the sequence *-ij-* functions as *-ī-*, the spelling *Rikijs* suggests stress on the second syllable. But in this particular stem, the graphic sequence *-ij-* may function in a unique way: before a vowel (*Rikijan*, *Rikijas*, *Rikijiskai*, etc.) it is ambiguous – it may indicate a long or short *i+j+*vowel. If a short *-i-* is present, then the nom. sg. *Rikijs* has secondary length formed by the closing of a syllable ending in a resonant, a process well-known in Lithuanian and seen elsewhere in the Enchiridion in examples such as *pickullis* 117[8], *Pickullan* 125[10], but *Pickūls* 55[19]; *tannans* 111[22], but *tāns* (frequent throughout). In this case, the *-ij-* may not necessarily refer to stress. Even assuming that it does (S t a n g 1966, 192 views *rikijs* as an *-ii̯o-* stem), the possibility remains of a stress alternation *rīkijàs* (> *rīkís*) ~ *ríkijai*, i.e., certain case forms with stress on the initial syllable (which must be interpreted as long due to the nearly consistent writing of a following single consonant, and the word's origin[9]). M a ž i u l i s 1981, although working within a different orthographic interpretation, sees barytonic stress in this word in the accusative and (apparently) other oblique forms (p. 325, note 274).

Finally, in γάνναν, the diacritic is appropriate in terms of Greek orthographic practice (acute on a short stressed vowel). Taking the form at face value, which I believe is sanctioned by the above considerations, we have the sole direct example

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[9] According to B ū g a II 85, the Enchiridion's *rikijs* represents *rīkīs*, a borrowing from Gothic **reikeis* 'Herrscher, Herr' (cf. B a m m e s b e r g e r 1990, 199: **rīk-* > Gothic *reiks* 'Herrscher'). Būga's rejection of a connection between OPr. *rikijs* and Lith. *rykáuti*, Latv. *rìkuot(ies)* 'anordnen, schalten und walten' (Daukantas' *rykys* 'valdovas, karalius' is an innovation) seems artificial. Concerning the reflection of length on unstressed (as well as stressed) syllables through the single-writing of a following consonant, see T r a u t m a n n 1910, 198.

of a stressed short vowel in Old Prussian. The stress is on the root (it shows the same place of stress as acc. sg. *rānkan*, but is at odds with the stress of dat. pl. *gennāmans* 93[11]), and Kortlandt's Hypothesis for Old Prussian, already suspect on the basis of the Enchiridion's cultural context and the graphic counterexamples adduced above, is vitiated. Consequently, a claim for a progressive stress shift in Old Prussian cannot be demonstrated. The handful of cases which seem to indicate a progressive shift of ictus with respect to Lithuanian (OPr. nom. sg. *semmē* 'earth' : Lith. *žēmė*; OPr. 3 sg. pret. *weddē(din)* 'lead' : Lith. *vēdė*) or parallel Dybo's Law in Slavic (OPr. fem. sg. *twaiā* 'your' : Russ. *твоя́, твоё*; OPr. dat. pl. *gennāmans* 'woman' : Russ. *жена́, жену́*; OPr. nom. sg. *widdewū* 'widow' : Russ. *вдова́, вдову́*) await another explanation[10].

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[10] For example, that of Smoczyński 1990, 192, where a final macron in these examples is interpreted as abbreviatory device.

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