

DIPHTONGIZATION AND MONOPHTHONGIZATION
IN OLD PRUSSIAN

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A comparison of the three Old Prussian catechisms yields the following picture (Kortlandt 1998b: 124f.):

- (1) *ē > I [ē] > II [ie] > E [ī], e.g.
I turrettwey, II turryetwey, E turritwei.
I stenuns, II styienuns, E stīnons.
- (2) *ēi > I [ēi] > II, E [iei], e.g.
I palletan, II praliten, E pralieiton.
- (3) *ēn > I [ēn] > II, E [ien], e.g.
I penckts, II pyienkts, E piēncts.
- (4) *ī > I, II [ei] > E [ī], e.g.
I preiken, II preyken, E prijki.
I leiginwey, II leygenton, E ligint.
I geiwans, II geywans, E gijwans.
I geiwin, II geywien, E gijwan.
I polleygo, II poleygo, E polijgu.
I deyg, II deygi, E dijgi.

This close diphthong remains distinct from open *ei > I, II, E [æi].

- (5) *ā > *ō > I [uo] > II, E [ū], e.g.
I gobuns, II gubons, E gūbons.
I pergubuns, II pergubons, E pergūbons.
- (6) *ōi > I [uoi] > II [ūi] > E [oui], e.g.
I pugeitty, II puieyti, E poieiti.
I pogeitty, II puietti, cf. E poūis.

(7) *ū > I [ū] > II, E [ou], e.g.

I sunun nusun, II sounon nouson, E soūnon noūson.

I numons, II noumans, E noūmans.

The question which now arises is: how must these correspondences be interpreted from a structural point of view? It is clear that the orthography of the catechisms is partly subphonemic and partly inaccurate. We must therefore find a way to retrieve the missing features and to assess the correctness of the spellings.

Elsewhere I have argued that the number of irregularities increases toward the end of the Enchiridion (2000a: 72f. and 2000b: 127). This observation is confirmed by the unexpected instances of diphthongized *ei* for *ī* in the Enchiridion, the majority of which are found in the Trawbüchlein and the Tauffbüchlein which make up the final third of the text. If we look at the nominal forms of the root *gīw-* 'live, life', where diphthongal reflexes of **ī* are more frequent than in other words, we find 11x *ij*, *ī*, *i* and 1x *eij* in the first two thirds of the Enchiridion, but 3x *ij* and 4x *ēi*, *eī* in the final part of the text, all of these in the Tauffbüchlein and three of the diphthongal forms in the last few pages (Trautmann 1910: 79). I therefore regard *eij* in *vnds steises geijwas* 'wasser des lebens' (Trautmann 1910: 41) as the only real exception and consider it a printer's error for monophthongal *ij* under the influence of the preceding article. This eliminates a third of the diphthongal reflexes of **ī* in the Enchiridion.

Most other instances can be explained along similar lines. For *dīgi* 'also' we find 39x *ij*, *ī*, *i* and 3x *ēi*, *eī* in the Enchiridion. The isolated form *dei* in the Tauffbüchlein is clearly mistaken. The three exceptional forms are probably printer's errors:

(i) *Twais Quāits Audāsin kāgi Endangon tijt dēigi nosemien* 'Deine Wille geschehe wie im Himmel also auch auff Erden' has *kāgi* for *kāigi*, which may have given rise to the mistaken diphthong in *dēigi* for *dīgi*.

(ii) *Tou quoitilaissi mien schan deinan Deigi pokūnst* 'Du wöllest mich diesen tag auch behüten' may have *ei* under the influence of the preceding word *deinan*.

(iii) *Ious Rikijai seggīta stansubban Deigi prīkin tennans* 'Ir Herrn thut auch dasselbige gegen jnen' has a mistaken imperative ending *-ta* for *-tei* (cf. Stang 1966: 418f.) followed by an unexpected inversion. It looks as if *-a* anticipated the vowel of *stan-* and was wrongly corrected in the *ei* of the word which was forgotten and became misplaced. Note that the capital letter in the two instances of *Deigi* is also peculiar.

In the word *malnijks* 'child' and its diminutive *malnijkiks* we find 33x *ij*, *ī*, *i* and 2x *eij*, *ey* in the *Enchiridion*. While the nom.sg. form *malneyks* is found on the very last page of the *Tauffbüchlein*, the acc.pl. form *malneijkans* is found in the heading *Esse Steinans Malneijkans* 'Von den Kindern' (Trautmann 1910: 59), where it may have taken its *eij* for *ij* from the preceding article. The single instances of *debeīkan* 'big' and *etneīwings* 'gracious' have *eī* for *ī*, *ij*, which is found 6x and 10x in these words, respectively. The isolated forms *ainaweydi* 'equally' for *ainawīdai* (ibidem), *Rikeis* 'Lord' for *Rikijs* (26x), and *poweistins* 'things' for *powijst-* (12x) occur together on a single page of the *Trawbüchlein* (Trautmann 1910: 65). I have no explanation for the diphthongal reflex in *-weid-* for *-wīd-* (which is attested dozens of times) in *bhe labbai wissaweidin sūndanper schlūsimai* 'vnnd wol eitel straff verdienen' (Trautmann 1910: 37), which is probably a mistranslation.

Unlike *ei* < *ī and *ou* < *ū, we do not find diphthongal reflexes of *ē, *ā, *ō in the *Enchiridion*, except in the case of *ēi, *ēn, *ōi, *ōn (cf. Kortlandt 1988: 89-91). This already suffices to demonstrate the basic reliability of the orthography. Unlike the diphthong *ei* < *ī, which is regular in the earlier catechisms but has evidently become monophthongized and merged with the reflex of *ē in the *Enchiridion*, the diphthong *ou* < *ū is regular in the latter source and distinct from the reflex *ū* of *ā and *ō after labials and velars

(cf. already de Saussure 1892: 80-83). This is especially clear from the word **soūns** 'son', which has 18 diphthongal and no monophthongal occurrences, the verb **boūt** 'to be', which has 30 diphthongal attestations and a single instance of **būton**, its derivative **bousennis** 'state', which is found 8x with a diphthong and 2x with **bu-** (both instances in the *Trawbüchlein*), and from the pronouns. We find 33x **toū**, **tou**, **ton** (once), **tuo** (once), **tau** (once), the latter two instances in the *Tauffbüchlein*, beside 1x **tū** and 24x **tu**, which was a clitic, and 77x **noū-**, **nou-**, **nō-** (once), **naū-** (once), 53x **ioū-**, **iou-**, **iaū-** (once) versus 2x **nū-** and 1x **iū-**, all three in the *Tauffbüchlein*. While the Second catechism is in accordance with the *Enchiridion*, diphthongization of *ū in the First catechism is limited to the pronouns 10x **thou** beside 1x **thu** (enclitic), 1x **yous**, 1x **nou-** beside 9x **nu-** and 2x **sun-** 'son'. The diphthongization was evidently under way already but lagged behind the development of *ī > **ei**, which was reversed in the *Enchiridion*. On the other hand, the diphthongization and monophthongization of *ē > **ie** > **ī** seems to have lagged behind the development of *ō > **uo** > **ū**. Thus, we arrive at the following relative chronology:

- (D1) *ī > **ei**, *ō > **uo**,
- (D2) ū > **ou**, ē > **ie**,
- (M1) **uo** > **ū**,
- (M2) **ie** > **ī**, **ei** > **ī**.

While the normal reflex of *ū is **ou** in the *Enchiridion*, as has just been pointed out, there are a number of words where we find monophthongal **ū**, which suggests a reversal of the diphthongization, as in the case of *ī > **ei** > **ī**. Ferdinand de Saussure thought that the diphthongization was blocked by an **i** in the following syllable (1892: 81), e.g. **tūsīmtons** 'thousand', **schlūsītwei** 'to serve' (16x, including inflected and derived forms), **tūlninai**, **tūlninaiti** 'multiply', as opposed to **toūls** (3x), **toūlan**, but once **tūlan** 'much',

prūsiskai (2x), *prūsiskan* 'Prussian', *salūbiskan* 'marital' with variants (4x), *salūbin* 'spouse' (2x), *sallūbi-*, *lūbi-*, *lūbnigs* 'priest', *lūbeniks* (2x), once *sallaūbiskan*, but also *salūban*, *sallūban* beside *salaūban* 'marriage', once *sallūban* for *-in* 'spouse', *sallūbs*, *sallūbai-*, *sallubai-* beside *salaūbai-* (2x) 'marital', *salūbsna* 'wedding', and finally *iūrin* 'sea' (2x), *supūni* 'lady' (2x). Though this rule seems to have been universally rejected (e.g. Berneker 1896: 126, Trautmann 1910: 136), I think that it is correct. Trautmann adds the following examples (1910: 137): *maldūnin* 'youth' (2x), *kailūstikun* 'health', *podrūktinai* 'confirm', but *drūktai* 'firm' with variants (3x), *weldūnai* 'heirs' with variants (3x), *rūkai*, *rūkans* 'clothes', *dūrai* 'shy', *krūt* 'to fall', *kūra* 'built', *aumūsnan* 'washing off', the last three instances in the *Trawbüchlein* and the *Tauffbüchlein*. Note that only six of these counter-examples are from the first two thirds of the *Enchiridion*. A special case is acc.sg. *dūsin*, *dusin*, *doūsin*, *daūsin* (2x) 'soul', which is most probably an *ī/jā*-stem (cf. Kortlandt 1997: 158f.) for which we have to reconstruct an alternating paradigm with nom.sg. **dūsi* and gen.sg. **doūschas*, cf. Lith. *patì*, *pačios* 'wife'.

The question now is: how do these changes fit into the larger picture of the linguistic system? From a structural point of view, the diphthongizations of the long vowels **ī > ei*, **ū > ou* and **ō > uo*, **ē > ie* do not change the phonemic make-up of the forms, but the monophthongization of *uo > ū* and *ie > ī* implies a phonemic change of /ō/ > /ū/ and /ē/ > /ī/. While the latter phoneme merged with earlier /ī/, which became a monophthong again, earlier /ū/ was now rephonemicized as a diphthong /ou/, unless there was an *i* in the following syllable. I think that this rephonemicization was a consequence of the development of the original four-vowel system /i, e, a, u/, which is still attested in the *Elbing Vocabulary*, into a five-vowel system /i, e, a, o, u/ as a result of the Prussian accent shift (cf. Kortlandt 1988: 90f.). The new rounded back vowel /o/ made the preservation of the distinction between

ou and ū possible but pushed /a/ to the front and thereby caused raising of [æi] /ei/ and [ei] /ī/. The asymmetry in the development of the high vowels is thus explained by the rise of the new vowel system. The spelling æ for a in the Second catechism can be viewed as a warning against the retracted pronunciation of the low vowel, which is rarely written o in the catechisms, though o for a was regular after labials and velars in the Elbing Vocabulary (cf. Trautmann 1910: 109).

The Prussian accent shift can be dated before the First catechism, perhaps to the end of the 15th or the beginning of the 16th century. As de Saussure pointed out already (1892: 83fn.), the raising of long vowels was arrested by other developments in final closed syllables. While the endings *-ās, *-āi were shortened to -as, -ai before the raising took place, the ending *-ān was raised to *-ōn after labials and velars, diphthongized to *-uon in the language of the catechisms, and rephonemicized as /-uan/ before further raising yielded new /ū/ in the Second catechism and the Enchiridion (cf. Kortlandt 1988: 93f.). This explains the correspondence between the acc.sg. forms of the ā-stems which we find in the three catechisms:

I anterpinsquan, (II enbænden, E enbāndan.)

I pattiniskun, II salobisquan, (E sallūban.)

I mergwan, II mergwan, E mērgan.

I krixstianiskun, II krichstianisquan, E crixtiāniskan.

I perroniscon, II perronisquan, E perōniskan.

I prabitscun, II prabusquan, E prābutskan.

The flexion was evidently regularized in the language of the Enchiridion. Final *-ā and *-ō yielded -ū in *widdewū* 'widow', *gallū* 'head', *mergu* 'maid', neuter nom.pl. -u in *malnijkiku* 'little children' (2x), dat.sg. -u < inst.sg. *-ō beside -ai < *-āi (cf. Kortlandt 1988: 94), 1st sg. *asmu* 'am' but -a < *-ō in *crixtia* 'baptize' beside

regular *asmai* 'am' < *-ō plus *-i (cf. Kortlandt 1979: 56). The preservation of length in the ending *-uan* < *-ōn < *-ān suggests that its final part may have been a centralized nasal vowel, perhaps comparable to the final part of nasal vowels in some varieties of Polish. If this is correct, postvocalic *-an* stands for a nasalized unrounded central back vowel which may have arisen before the First catechism, and perhaps before the Prussian accent shift already.

The acc.sg. ending is /-ien/ for the *ē*-stems, /-in/ for the *i*- and *i/jā*-stems, and /-jan/ for the *ja*-stems (cf. Kortlandt 1997: 158). The position of *-ien* < *-ēn, which is written *-in* in the First catechism and *-ien* in the Second catechism and the *Enchiridion*, is wholly analogous to that of *-uan*, which suggests that postvocalic *-en* may have been a nasalized unrounded central front vowel which arose before the First catechism already. When *-ēn was rephonemicized as /-ien/, this probably limited the phonetic range of the ending /-jan/, where the vowel may have lost the status of an archiphoneme of earlier /a/ and /e/. This conjecture is supported by the fact that the acc.sg. form I *tawischen*, II *tauwyschen* 'fellow-' is reflected in the *Enchiridion* as *tawischan* (4x), *tawischen* (1x), *tawisen* (1x).

The remaining question is: why is final *-ē reflected as *-ē* under the stress, e.g. in *semmē* 'land', *weddē* 'led', but as *-i* after the stress, e.g. in *mūti* 'mother', *pertraūki* 'covered'? When the forms *semmē* and *weddē* received final stress as a result of the Prussian accent shift, the final vowel had probably become half-long by the shortening of long vowels in final syllables which was in progress at that time. As a consequence, the newly stressed half-long mid vowel did not share the diphthongization to *ie* but became the front counterpart of /ō/ in the new five-vowel system. The latter is found as the reflex of earlier /a/ after a labial under secondary lengthening in the preposition *pa*, e.g. *pōstan* 'under the', *pōmien* 'after me' (cf. Kortlandt 1988: 90). It is also found as the reflex of *ō after *r* before a nasal in nom.pl. *tickrōmai* 'just', acc.sg. *perōnin*

'common' and their derivatives (24 instances and no counter-examples in the Enchiridion). Final *-ē in *mūti* and *pertraūki* was evidently closer to short /-i/, with which it merged, than to short /-e/, which was a low front vowel [æ] at the time of the Prussian accent shift. The asymmetry between *semmē*, *weddē* on the one hand and *gallū* 'head', *mergu* 'maid' on the other is a consequence of the fact that the latter belong to the Balto-Slavic mobile accent type which from the outset already had final stress in the nom.sg. form.

William Schmalstieg has recently (2000) argued that there was a diphthongization of /ī/ to /ei/ but no monophthongization of /ei/ to /ī/. I think to have shown that his argument is based on a misunderstanding and that things are much more complicated than he imagines. He also observes that the time span between the catechisms is hardly compatible with major changes in the vowel system. Note that my chronology is based on the more or less archaic character of the texts, not on the printed dates. It is obvious that different dialects can develop at different rates. The Old Prussian proverb *Deues does dantes*, *Deues does geitka* 'God give teeth, God give bread' is dated 22 years after the Enchiridion but clearly represents a more archaic variety of the language (cf. Kortlandt 1998a).

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