

# THREE PROBLEMS OF BALTO-SLAVIC PHONOLOGY

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## I

Professor Hamp has recently returned to the problem of PIE *\*eu* in Balto-Slavic (1976). I take the matter up again because his analysis has certain implications for the relative chronology of sound laws.

After a detailed study of the earlier literature, Endzelin concludes that both prevocalic and preconsonantal *\*eu* have a twofold reflex in Balto-Slavic, viz. *\*ev* and *\*jau* (Slavic *ju*) if the following vowel is front, but *\*av* (Slavic *ov*) and *\*au* if the following vowel is back (1911 : 78-104). This point of view is often repeated in the more recent literature (e. g., Vaillant 1950 : 110 and 123, Stang 1966 : 32 and 74). I agree with Hamp that it cannot be correct. The Slavic dat. sg. *synovi* < *\*-euei* and nom. pl. *synove* < *\*-eues* suffice to show that prevocalic *\*eu* yielded Slavic *ov* before front vowels as well. Since H. Pedersen's conclusive discussion of Lith. *iau* (1935), it can hardly be doubted that the only phonetic reflex of preconsonantal *\*eu* was *\*jau* in Balto-Slavic.

If the Balto-Slavic reflex of PIE *\*eu* was *\*av* (or rather *\*ov*) before vowels and *\*jau* (or rather *\*jou*) before consonants, the occurrence of *ev* requires an explanation, especially in Lith. *devyni*, Slavic *devetŭ*. The suggestion that *de-* was borrowed from *děšint/desetŭ* cannot be maintained. As Hamp points out, *ev* must have been reintroduced in the cardinal *\*dovin* < *\*H<sub>1</sub> neun* on the model of the ordinal *\*deuno-*, which was subsequently replaced by *\*devino-* on the model of the new cardinal *\*devin*.<sup>1</sup> It follows that preconsonantal *\*eu* had been preserved at a stage which was posterior to the phonetic elimination of prevocalic *\*eu* and that the latter development was early Balto-Slavic.

This chronology is in contradiction with the one given by Zupitza, who dates the Slavic development of *\*ev* to *\*ov* after the first palatalization (1907 : 251). The latter chronology is based on Czech *návštěva* 'visit', Old Czech *vščieviti* 'to visit', which is derived from *\*(s)keu-*, cf. Gothic *usskawis*, Latin *caveo* (Marzenauer 1884 : 179 and Mikkola 1904 : 96). Though Machek does not even mention this etymology (1968 : 392), I think that it is correct. It is certainly preferable to the proposed connections with Lith. *svēčias* and Slavic *posētiti*, which do not fit phonologically, or PIE *\*ueid-* (Berneker), which cannot be identified without violating Winter's law (see below). I assume that *ev* was restored in this word on the basis of preconsonantal *\*eu*, e. g. in *čuti*, in the same way as in *devetŭ*.

<sup>1</sup> I think that the initial *d-* is the phonetic reflex of PIE *\*H<sub>1</sub>n-*. I learn from *Die Sprache* 24 (1978), 239 that Hamp puts forward the same view in the CLS book of squibs (Chicago, 1977), which has not been accessible to me.

## II

The Indo-European proto-language possessed two series of velar stops, viz. a palatovelar and a labiovelar series.<sup>2</sup> The „plain velars” resulted from the depalatization of the palatovelars in some dialects and the delabialization of the labiovelars in others. As Steensland has shown (1973 : 30-35), the opposition between the two velar series was neutralized after initial \*s in Proto-Indo-European. The archiphoneme was palatovelar before \*i and plain velar in other positions (Steensland 1973 : 34). This explains the double reflex of initial \*sk in Balto-Slavic.

According to the two principal doctrines, PIE \*sk appears as Lith. š, Slavic s (e. g., Endzelin 1939), or as Lith. šk, Slavic sk (Būga 1922 : 249-252 or 1959 : 284-287). In his most recent discussion of the matter, where references to the earlier literature can be found, Stang agrees with Endzelin on the initial reflex and with Būga on the medial reflex of PIE \*sk (1972 : 83-87). The main evidence is the following:

Sl. *sovati*, Lith. *šauti*, Old Norse *skjóta*.

Sl. *sjati*, Gothic *skeinan*.

Sl. *šēn*, Latvian *sejs*, Gr. *skiá*.

Sl. *iskati*, Lith. *ieškoti*, Skt. *icchāti*, OHG. *eiscōn*.

Sl. *voskz*, Lith. *vāškas*, OHG. *wahs*.

Sl. *-bskz*, Lith. *-iškas*, Gothic *-isks*.

Sl. *jasn*, Lith. *diškus*.

Sl. *rěsn*, Lith. *ráiškus*.

As to Lith. *šokti*, Slavic *skočiti*, I think that these words are not related (cf. Fraenkel 1965 : 1022). The initial *s* in *sjati* and *šēn* (which replaces earlier \**sjā*, cf. also Alb. *hie* and Toch. B *skiyo*) continues the palatal variant of initial \**sk* before \**i*. The same development could be assumed for Lith. *šauti*, Slavic *sovati*, if the rise of \**iou* (or \**jau*) from preconsonantal \**eu* were anterior to the rise of new initial \**sk* before \**i*. I do not think that this chronology can be upheld, however. It follows from the preceding section that the development of preconsonantal \**eu* was posterior to the elimination of the syllabic resonants, which reintroduced initial \**sk* before \**i*, e. g. Lith. *skirti*, *skilti*, *skinti*. Thus, I subscribe to the traditional view that the initial fricative of Lith. *šauti* and Slavic *sovati* continues an initial palatovelar and that there is a mobile \**s* in the Germanic cognates.

The neutralization of the opposition between the velar series after initial \**s* in the Indo-European proto-language suggests the possibility that the opposition was also neutralized after non-initial \**s*. It has long been recognized that Indo-Iranian does not offer evidence for a distinction between palatovelars and plain velars after \**s*.<sup>3</sup> Moreover, there is an important piece of evidence which has not received due attention in the literature on the subject (cf. Von Patrúány 1902 : 124):

<sup>2</sup> Cf. Meillet 1894, Steensland 1973, Kortlandt 1978.

<sup>3</sup> Cf. Zubaty 1892 : 9, Meillet 1894 : 295, Wackernagel 1896 : 155.

Sl. *mozgъ*, Avestan *mazga-*, Old Norse *mergr* < \**mosgho-*.

Lith. *māzgas*, Gr. *móskhos* < \**mosgho-*.

Arm. *mozi*, Gr. *moskhíon* < \**mosghio-*.

Though the relevant material is small, I assume that after non-initial \**s*, too, the opposition between the velar series was neutralized, and that the archiphoneme was palatovelar before \**i* and plain velar elsewhere.<sup>4</sup>

Thus, the expected reflex of medial \**sk* is Balto-Slavic *šk* in the words listed above. The appearance of *š* in Lith. *ieškóti*, *-iškas*, *áiškus*, *ráiškus* must be attributed to the preceding \**i*. For Lith. *vāškas* and OHG. *wahs*, which is Stang's main argument for subscribing to Būga's derivation of *šk* from \**sk*, I reconstruct \**uoksko-*, which is the only form that explains both the Germanic and the Balto-Slavic material. The Baltic inchoative suffix *-sta-*, which cannot be separated from PIE \**-ske-*, requires special attention. Its historical relationship has been clarified by Van Wijk, whose point of view is unjustly disregarded by later investigators:<sup>5</sup> „Ich halte das baltische Formans *-sta-* für identisch mit dem in andern indogermanischen Sprachen häufigen *-sgo-*, und zwar nehme ich an, dass *-sgo-* zunächst bei denjenigen Verben durch *-sto-* ersetzt worden ist, deren urzel ein *k* oder *g* enthielt, und dass dann analogische Übertragung auf die Verba mit anderm Konsonantismus stattgefunden hat. Die Bedeutung des *-sta-*Präsens stimmt schön zu derjenigen der *-sgo-*Präsentia anderer Sprachen" (1933 : 58). Compare in this connection the substitution of *-utas* for *-ukas* after stems in *k* and *g* in Lithuanian dialects (Hasiuk 1970).

It has been argued that the suffix *-sta-* represents the phonetic development of PIE \**-ske-* (Leumann 1942 : 118-126). This position, which can no longer be maintained, is apparently supported by Lith. *tūkstantis*, Prussian *tūsintons*, Slavic *tysešti* (Ru. *tyśjača*), *tyšpšti* (SCr. *tišuća*). The agreement between the East Baltic and the South Slavic vocalism on the one hand, and between the West Baltic and the North Slavic vocalism on the other, suggests that the latter branches took the vowel from \**šimto* (Lith. *šimtas*) in late Balto-Slavic.<sup>6</sup> The older vocalism is reminiscent of \**-konta* in Gr. *triákonta* and Breton *tregont*, cf. Arm. *eresun* < \**-šonta*. The main problem is the presence of *s*, not *š*, in Lith. *tūkstantis*, which cannot be derived from \**tūs-* or \**tūks-*. I would suggest that the cluster *-kst-* is due to metathesis of earlier \**-tsk-*, which is compatible with the Germanic and Slavic material. If this is correct, East Baltic \**-sk-* betrays that the word dates from a period when the opposition between the velar series was still neutralized after \**s*, while Slavic and West Baltic *-s-* point to compounding or reanalysis at a later stage.

<sup>4</sup> Gr. *aspís* is probably a loan-word and does not constitute a counter-example (cf. Frisk 1973 : I 169).

<sup>5</sup> Generally, Van Wijk's contributions to Baltic and Slavic linguistics are not sufficiently appreciated by the scholarly community: too many of his valuable insights remain unknown to those who could benefit from his ideas. Stang does not even mention Van Wijk's opinion on the suffix *-sta-* (1966 : 343 and 1972 : 83). Endzelin's objections against Van Wijk's view are not convincing (1937 : 428-430).

<sup>6</sup> Following Trautmann (1923 : 4), I assume that \**šimto* was replaced with \**šumto* in early Slavic on the basis of its apophonic relations (cf. also Vaillant 1950 : 172). The reason for the replacement was the absence of *e*-grade alternants, while the *o*-grade had evidently been preserved in the decades in \**-kont-*. The new form developed phonetically into *sžto* (cf. Kortlandt 1980, section 3.13).

## III

One of the most important discoveries of recent years is the following: „In Baltic and Slavic languages, the Proto-Indo-European sequence of short vowel plus voiced stop was reflected by lengthened vowel plus voiced stop, while short vowel plus aspirate developed into short vowel plus voiced stop” (Winter 1978 : 439). I have called this rule ‚Winter’s law’ in my chronological account of Baltic accentuation (1977). Here I shall discuss the main exceptions to the rule.

Some of the exceptions were explained by Winter himself already. Thus, Lith. *pādas* and Slavic *podъ* have nothing to do with PIE *\*ped-* ‚foot’, but must be derived from *\*po-dhH<sub>1</sub>-o-* for both formal and semantic reasons. Slavic *sedъlo* was probably borrowed from Gothic *sitls*. Lith. *sėgti* and Slavic *xodъ* have no certain etymology. Some other exceptions are explained by the relative chronology of sound changes. The short vowel of Lith. *duktė* and Slavic *\*dъkti*, which must be derived from PIE *\*dhugH<sub>2</sub>tēr* in view of Gr. *thugátēr*, is regular because the loss of the laryngeal and the assimilation of *\*g* to the following *\*t*, which Balto-Slavic shared with Germanic and Armenian, was anterior to Winter’s law, which must be dated to the end of the Balto-Slavic period (cf. Kortlandt 1977 : 322).

The semantic identity of Slavic *bogъ* and Iranian *baga-* and the absence of the word from Baltic suggest that the Slavic word was borrowed from Iranian. The semantic argument has been refuted by Meillet, who adduces „d’autres termes fondamentaux du vocabulaire religieux slave où l’hypothèse d’un emprunt est exclue” (1926 : 168). Moreover, the words *bogatъ*, *ubogъ*, Czech *zboží* derive from an earlier meaning ‚riches’, which is in perfect correspondence with Skt. *bhāgah*: the latter word means both ‚fortune’ and ‚distributor’ (epithet of gods). It now turns out that Winter’s law excludes the derivation of Slavic *bogъ* from *\*bhog<sup>w</sup>os* on formal grounds.<sup>7</sup> I conclude that the word was borrowed from Iranian at an early stage, not only with the meaning ‚god’, but also in the sense of ‚fortune’. It seems probable that other correspondences between Slavic and Iranian can also be attributed to very early influence of the latter on the former, e. g. the meaning of the word *slovo*, Avestan *sraoδ*.<sup>8</sup>

Slavic *ognъ*, Lith. *ugnis*, Skt. *agnih*, Latin *ignis* can all be derived from *\*ng<sup>w</sup>nis*.<sup>9</sup> The labialization of the original labiovelar, which accounts for the initial *u* (not *i*) of Balto-Slavic *\*ungnis*, was lost before the following *n* in Latin (cf. Meillet 1894 : 279). It appears that the medial cluster *\*-ngn-* blocked the operation of Winter’s law.<sup>10</sup> The first *\*n* was subsequently eliminated in Baltic. The Slavic development of *\*un-* to *o-* must be viewed in the chronological perspective of other developments.

<sup>7</sup> The connection with Gr. *phageîn* < *\*bhH<sub>2</sub>ǵ-* (Frisk 1973 : II 980) cannot be maintained.

<sup>8</sup> „Le caractère religieux de *sraoδ* dans l’Avesta est manifeste; *sraoδ* y est une expression plus spécifiquement religieuse de ce qui est ordinairement indiqué par *vaēō* ‚parole’.” (Meillet 1926 : 169) The semantic change of Slavic *slovo* apparently ousted the original Balto-Slavic word, which has been preserved in Prussian *wīrds*. The original meaning of *slovo* has been preserved in the verb *sluti* and its derivative *slava*.

<sup>9</sup> Cf. Hamp 1970. The view that the initial vowel derives from a syllabic nasal was already propagated by Meillet in *Mémoires de la Société de Linguistique* 8 (1894), 236.

<sup>10</sup> This rule offers a clue for the relative chronology of Winter’s law with respect to the loss of the syllabic resonants (cf. Kortlandt 1977 : 322).

Elsewhere I have explained the different treatment of PIE *\*-ons* (close reflex: Old Russian *-y*, after soft stems *-ě*) and PIE *\*-onts* (open reflex: Old Russian *-a*) in North Slavic on the basis of the hypothesis that the rise of nasal vowels was later before a tautosyllabic stop than in other positions (1980, section 3.10). The delabialization of PIE *\*o* to early Slavic *\*a* (late Proto-Slavic *\*o*) must be dated in between (ibidem, section 3.5). The development of *\*un-* to *\*o-* was apparently anterior to the delabialization. Since the velar stop in *\*ungnis* belonged probably to the first syllable at the stage under consideration, the word was not subject to the early rise of nasal vowels (ibidem, section 3.3). Now I assume that the opposition between *\*on* and *\*un* was neutralized before a tautosyllabic stop at the same time when it was neutralized before word-final *\*s* (ibidem, section 3.4). The dissimilatory loss of the first nasal in the resulting form *\*ongnis* must be dated between this neutralization and the rise of nasal vowels before a tautosyllabic stop.

The explanation put forward here has the advantage of accounting for the most notable exception to Winter's law, viz. Slavic *voda*. The acute intonation of Lith. *vanduō*, acc.sg. *vándeni*, and the broken intonation of Latvian *ūdēns* are in accordance with Winter's law. On the basis of these words and of Prussian *unds*, *wundan*, I reconstruct the following Balto-Slavic paradigm:

nom.sg. *\*vondōr*  
 acc.sg. *\*vondenim*  
 gen.sg. *\*(v)undnes*  
 nom.pl. *\*(v)undā*

The initial *\*v* of the nom.acc.sg. was introduced analogically in the other case forms, probably after the rise of *\*un* as the zero grade of *\*on*, which resulted from the loss of the syllabic resonants. The form *\*(v)undā*, which is immediately comparable with Latin *unda*, had probably collective meaning, cf. Lith. *mėsà*, Latvian *miesa*, Prussian *mensā* next to Slavic *měso*, Skt. *māmsām*. Prussian (Elbing) *wundan* (the expected reflex of which is *unds* in the Enchiridion) was apparently formed as a singular to *\*vundā*. The coexistence of Lith. *vanduō* and (Žemaitian) *unduō*, Latvian *ūdēns*, points to the preservation of the vocalic alternation up to the end of the East Baltic period, for which I reconstruct:

nom.sg. *\*vandō*  
 acc.sg. *\*vandenin*  
 gen.sg. *\*vundenes*

If we assume that the cluster *\*-ndn-* blocked the operation of Winter's law in the same way as the cluster *\*-ngn-*, the Slavic development of gen.sg. *\*vundnes* to *\*vodnes* parallels that of *\*ungnis* to *\*ognis* in all respects. The new vocalism was introduced in *\*vundā*, perhaps after the development of the latter into *\*vyda* (cf. *lyko*, Lith. *lūnkas*, Latvian *lūks*, Prussian *lunkan*). The preservation of the *n*-flexion in early Slavic is evident from the derivative *povonъ* next to *povodъ* (Vaillant 1958 : 179). The accentual mobility of Slavic *voda* also points to an earlier consonantal paradigm.

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### TRI PROBLEMA BALTO-SLOVENSKE FONOLOGIJE

#### R e z i m e

Autor je došao do sledećih rezultata: 1. Razvoj indoevropskog *\*eu* u *\*ov* pred vokalom prethodio je razvoju u *\*jou* pred suglasnikom. 2. Baltoslovenski je refleks indoevropskog *\*sk*: *\*š* (litv. *š*, slov. *s*) pred *\*i*, a *\*sk* (litv. *šk* za *\*i*) u drugim položajima. 3. Grupe suglasnika *\*ngn* i *\*ndn* sprečile su delovanje Winterovog zakona.