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THE DEVELOPMENT OF VOWEL LENGTH IN SLAVIC

COBISS: 1.01

Razvoj vokalne dolžine v slovanščini

V prednaglasnih zlogih so dolgi vokali izšli iz Dybojevega zakona, medtem ko so v naglašenih in ponaglasnih zlogih nadaljevanje praindoevropskih vokalov s podaljšano stopnjo in narečnih indoevropskih kontrakcij in so izšli iz slovanske monoftongizacije diftongov ter so po nastanku novih barvnih razlik nasledek Van Wijkovega zakona in kontrakcij v ponaglasnih zlogih, v naglasni paradigmi (c) umika naglasa s končnih jerov in daljšanja v enozložnicah, v naglasni paradigmi (b) Stangovega zakona, samo v ponaglasnih zlogih pa preminitve laringalov.
Ključne besede: laringali, podaljšana stopnja, monoftongizacija, kontrakcije, daljšanje, krajšanje

In pretonic syllables long vowels originated from Dybo's law while in stressed and posttonic syllables long vowels continue Proto-Indo-European lengthened grade vowels and dialectal Indo-European contractions and arose from the Slavic monophthongization of diphthongs, and after the rise of the new timbre distinctions resulted from Van Wijk's law and contractions in posttonic syllables, in accent paradigm (c) from the retraction of the stress from final jers and from lengthening in monosyllables, in accent paradigm (b) from Stang's law, and only in post-posttonic syllables from the loss of laryngeals.
Keywords: laryngeals, lengthened grade, monophthongization, contractions, lengthening, shortening

Though the importance[1] of Stang's classic monograph (1957) is generally recognized, the consequences of his findings have not yet been properly understood by the majority of scholars in the field. In the pre-Stang era, scholars tried to derive the accentuation of Slavic word forms from inherent tonal properties of their constituent morphemes. According to Hirt's law, an acute vowel attracted the accent from a following syllable. According to de Saussure's law, an acute vowel attracted the accent from a preceding non-acute syllable. Since it has now become clear that the acute was not a tonal, but a glottalic feature, the assumption of inherent tonal features of morphemes must be abandoned and replaced by the reconstruction of glottalized versus non-glottalized syllables.

1 This article was presented at the third Slavic studies conference, as part of which the Department of Slavic Languages at the University of Ljubljana's Faculty of Arts hosted the Tenth International Workshop on Balto-Slavic Accentology (*10. mednarodna konferenca o baltoslovanskem naglasoslovju / X Международный семинар по балто-славянской акцентологии*, IWoBA X) from October 16th to 18th, 2014.

The most important result of Stang's analysis is that the Slavic accent patterns must not be derived from inherent tonal properties of their constituents but, conversely, that the tones must be derived from the accent patterns (1957: 179). Stang showed that the acute is characteristic of paradigms with fixed stress (a), that the neo-acute developed from a retraction of the stress in paradigm (b), and that the circumflex is characteristic of paradigms with mobile stress between initial and final syllables (c). Dybo has shown that paradigm (b) developed from a paradigm with fixed stress as a result of an accent shift from a non-acute vowel to a following syllable (1962, 1968). Since paradigms (a) and (b) are in complementary distribution, they can be identified with Lithuanian accent patterns (1) and (2).

Since the acute was glottalization, not a tonal movement, it follows that the rise of distinctive tone was a more recent development. This offers a simple explanation for the fact that the normal reflex of the acute is falling while the circumflex is rising in standard Lithuanian, whereas the converse distribution is found in Latvian. It appears that the rise of distinctive tone was a development of the separate languages (cf. already Kortlandt 1977). It probably never reached Prussian (cf. Kortlandt 2009: 267). In Slavic, distinctive tone originated in initial syllables when the accent was retracted to a preposition or prefix in barytone forms of mobile paradigms (c) at stage 6.10 of my chronology (2011: 166, 301), for example, in Russian *ná vodu* 'onto the water', *né byl* 'was not', *pródal* 'sold', *póvod* 'rein'. If the accent was a high tone, as it was in Sanskrit, this development is perhaps best understood as a generalization of the low tone of pretonic syllables in barytone forms of mobile paradigms, which received a falling tone movement on the initial syllable. The result may be compared with the system of standard Serbo-Croatian, which has a falling tone on initial syllables and a rising tone on non-final syllables.

In non-initial syllables, distinctive tone on long vowels originated as a result of Dybo's law at stage 8.7 of my chronology (2011: 171, 305) because newly accented long vowels received a falling tone movement, as opposed to stressed long vowels of an earlier date. Long falling vowels in final syllables (not counting final jers) lost the stress to the preceding accentuable syllable according to Stang's law (stage 9.3 of my chronology) and were shortened, as were all other long falling vowels except in Slovene monosyllables and Serbo-Croatian monosyllabic and disyllabic word forms, for example, *bôg* 'god', acc.sg. *rûku* 'hand' (stage 9.4 of my chronology). The combination of Dybo's law and Stang's law gave rise to accentual mobility between adjacent syllables in paradigm (b), with a rising tone in the first syllable and a short vowel in the second. Short rising vowels were lengthened under certain conditions in Russian, Czech, Upper Sorbian, and Slovene (cf. Kortlandt 2011: 173f., 307f.), for example, Czech *vůle*, Slovene *vọ́lja* 'will'. Finally, Slovene developed new long falling vowels under certain conditions, for example, *okọ̑* 'eye', *mladọ̑st* 'youth', *bîtka* 'battle', *lẹ̑ta* 'years', *osnọ̑va* 'base' (stages 10.7–10.9 of my chronology).

Thus, we have an accent paradigm (a) with fixed stress on an acute vowel, an accent paradigm (b) with a rising tone (neo-acute) in some forms and a short

accent on the following syllable in others, and an accent paradigm (c) with a falling tone (circumflex) on the initial syllable (or proclitic element) in some forms and a short or long rising tone on the ending (or enclitic element) in others. When final jers lost their stressability (stage 8.2 of my chronology), the preceding accentuable syllable received a long rising tone, for example, Slovene gen. pl. *gọ́r* < **gorъ̀* 'mountains', *dán* < **dьnь̀* 'days', *ọ́vəc* < **owьcь̀* 'sheep', Polish *rąk* < **rǫkъ̀* 'hands', Russian dat.pl. *détjam* < **dětьmъ̀* 'children', all (c). When the acute eventually lost its glottalic character (stage 9.2 of my chronology), it merged with the short rising tone, for example, Slovene *dìm* 'smoke', *góra* < **gorà* 'mountain', Ukrainian *moróz* < **-orò-* 'frost' as opposed to gen.pl. *holív* < **-oló-* 'heads'. As a result of the loss of glottalization, the almost universal shortening of long falling vowels, and the widespread lengthening of short rising vowels, distinctive tone was limited to Slovene and Serbo-Croatian while vowel length remained distinctive everywhere up to a later stage (cf. Kortlandt 2011: 111–115 on Bulgarian).

The oldest type of long vowel in Balto-Slavic are Proto-Indo-European lengthened grade vowels, for example, Lith. *duktẽ* 'daughter', *akmuõ* 'stone', Greek *θυγάτηρ*, *ἄκμων*, SCr. *žȅrāv* 'crane', sigmatic aorist 1st sg. *dònijeh* 'brought', *ùmrijeh* 'died', root nouns Lith. *gėlà* 'pain', *žolẽ* 'grass', *mėsà* 'meat', all (4), SCr. *rȉječ* 'word', *čâr* 'magic', *sâm* 'alone', Czech *čár*, *čára*, *sám* (b). In principle, these long vowels were never shortened (cf. Kortlandt 1985; Vermeer 1992). The second-oldest type of long vowel in Balto-Slavic developed from the loss of a laryngeal between two full vowels (**e*, **o*), for example, Lith. gen.sg. *algõs* 'salary' < **-ās* < **-aHes*, Greek *ἀλφῆς*. This was a dialectal Indo-European development which Balto-Slavic shared with Indo-Iranian, but not with Greek, where the circumflex points to a disyllabic sequence at an earlier stage of the language. Other long vowels originated in the separate branches of Balto-Slavic. At that time, the remaining laryngeals had merged into a glottal stop, for example, Lith. *algà* (4) < **-aʔ*, *galvà* (3) 'head' < **golʔwaʔ* < **golHuaH*, and the Proto-Indo-European glottalic consonants had dissolved into a laryngeal and a buccal part (Winter's law, stage 4.3 of my chronology), for example, Latvian *pẽds* < **peʔdom* 'footstep', *nuôgs* < **noʔgʷos* 'naked'.

In Slavic, glottalization was lost in pretonic and post-posttonic syllables with compensatory lengthening of an adjacent vowel (stage 5.3 of my chronology), for example, **golwàʔ* < **golʔwàʔ* 'head', **pīlàʔ* < **pʔilàʔ* '(she) drank', inst.sg. **sūnumì* < **suʔnumì* 'son', **òpsnowā* < **òpsnowaʔ* 'base', inst.pl. **gènaʔmīs̨* < **gènaʔmiʔs̨* 'women'. The long vowel in the final syllable of the latter words is reflected by the neo-circumflex tone of Slovene *osnȏva* < **osnòwā*, *ženâmi* < **ženàmī*, where the middle syllable received the stress as a result of Dybo's law. Glottalization was eliminated by analogy in barytone forms of mobile accent paradigms (Meillet's law, stage 5.4 of my chronology), for example, SCr. *sîn* 'son', acc.sg. *glâvu*, neuter *pîlo* (cf. Lith. *gálvą*, *sū̃nų*). Glottalization was preserved in stressed and first posttonic syllables up to a later stage.

New long vowels originated from the monophthongization of diphthongs: **ē* < **ai*, **ę̄* < **ei*, **ō* < **au* (my stage 6.5). The rise of nasal vowels **iɴ*, **eɴ*, **aɴ*, **oɴ*, **uɴ* can be dated around the same time. The same holds for the rise of glottalized vowels *i̇*, *ę̇*, *ė*, *ȧ*, *ȯ*, *u̇*, which had the timbre of the corresponding long vowels, as in the case of the Latvian broken tone in *î*, *iê*, *ê*, *â*, *uô*, *û*. At a later stage (7.8), the rounded vowels **u*, **ū*, **uɴ* and their glottalized counterparts were delabialized to **y*, **ȳ*, **yɴ*, after palatalized consonants **i*, **ī*, **iɴ*, and the long mid vowels **ę̄* and **ō* were subsequently raised to **ī* and **ū* (stage 7.9). This resulted in the following vowel system (cf. Kortlandt 2011: 106):

ī			*ȳ*			*ū*		*eɴ*		*oɴ*		*i*		*y*	
		ē			*ā*				*aɴ*				*e*		*a*

Here, the long vowels and the nasal vowels could be either glottalized (acute) or not. In initial syllables, the non-acute vowels could be either falling (circumflex) or not.

At this stage (7.13), the loss of glottalization in posttonic syllables gave rise to a series of new short vowels *i*, *ě*, *a*, *u*, *y*, which were opposed to the older short vowels *ь*, *e*, *o*, *ъ* by timbre and vowel height. The result is the following vowel system (cf. Kortlandt 2011: 107):

i					*y*					*u*					
		e			*ь*			*ъ*		*o*			*eɴ*		*oɴ*
			ě					*a*					*aɴ*		

In stressed syllables, the acute vowels were now half-long while the non-acute vowels could be either long or short. In pretonic syllables, long vowels were shortened and the opposition between long and short vowels was replaced by the new timbre distinctions. In posttonic syllables, vowel length remained distinctive but final nasal vowels were shortened, for example, SCr. nom.acc.pl. *glâve* with a short ending versus gen.sg. *glávē* < **-ę́* 'head', Slovene gen.sg. *kráve* (a) 'cow' without the neo-circumflex versus *gorę́* (c) 'mountain' with a long vowel, similarly Susak (Croatian) gen.sg. *sestrè* (b) 'sister' versus *vodiè* (c) 'water'. There is no trace of glottalization in final nasal vowels. The mid vowels *e*, *ь*, *ъ*, *o* were always short, but that was to change very soon.

According to Van Wijk's law (stage 7.15), clusters of consonant plus **j* were shortened with compensatory lengthening of the following vowel, for example, **píšē* < **píšje* 'writes', **wòl̥ā* < **wòlja* 'will'. New **ē* did not merge with earlier **ē*, which had become *ě* at this stage. Case endings could now have three different quantities. For example, the nom.sg. ending of the *a*-stems was short in **žèna*, long in **wòl̥ā* and **òsnowā*, and half-long in **gorȁ*. The same distribution holds for the neuter nom.acc.pl. ending. At the next stage, several levelings took place. Endings

which did not occur under the stress were shortened in the whole Slavic territory, for example, gen.sg. **kòŋa*, dat.sg. **kòŋu*, nom.pl. **kòŋi* 'horse', dat.sg. **žèně* 'woman', **pónti* 'way'. Length was generalized in the unstressed nom.acc.pl. ending of Slovene *lẹ̑ta* < **-ā* 'years', but not under the stress, cf. *drvà* < **-å* 'firewood'.

Other new long vowels originated from contractions in posttonic syllables (stage 8.1), for example, Čakavian (Novi) *pítā* 'asks', Bulg. *píta*, cf. Čak. *kopâ* < **kopå(j)e* 'digs', Bulg. *kopáe*, Old Polish *kopaje*. Here again, new **ē* did not merge with earlier **ē*, for example, Czech gen.sg. *nového* 'new'. New long vowels under the stress arose when the accent was retracted from final jers in mobile accent paradigms (stage 8.2), for example, Slovene gen.pl. *gọ́r* < **gorъ̀* 'mountains', *dán* < **dьnъ̀* 'days', *ọ́vəc* < **owьcъ̀* 'sheep', Polish *rąk* < **rǫkъ̀* 'hands', Russian dat.pl. *détjam* < **dětьmъ̀* 'children'. The vowel length in the gen.pl. forms subsequently spread analogically to other accent paradigms.

In pretonic syllables, vowel length became distinctive when in line with Dybo's law the accent shifted from non-acute vowels to the following syllable (stage 8.7), for example, **nāròdъ* 'people', **ōntròbā* 'entrails', Slovene *národ*, *vọ́troba*. Short falling vowels in monosyllables were lengthened (stage 8.8), for example, SCr. *bôg* 'god', *kôst* 'bone', *dân* 'day'. The final loss of glottalization in stressed syllables gave rise to new short rising vowels (stage 9.2), for example, Slovene *dìm* 'smoke', *góra* < **gorà* 'mountain'. The retraction of the stress from long falling vowels in final syllables (Stang's law, stage 9.3) yielded new long rising vowels and short rising diphthongs *ʲè*, *ʷò*, for example, **wʷòļa* < **woļâ* < **wòļā* (Dybo) < **wòlja* (Van Wijk), Czech *vůle*, Slovak *vôľa*, Slovene *vọ́lja*, SCr. *vòlja*. These developments were followed by lengthening of short rising vowels and shortening of long falling vowels under certain conditions and by the rise of new long falling vowels in Slovene. The distinction between diphthongized jat *ie* < *ě* and the new diphthong *ʲe* < *e* has been preserved as *ię* versus *ię̋* in the Slovene dialect of Soča (cf. Greenberg 2000: 171).

Summarizing, we can say that in pretonic syllables long vowels originated from Dybo's law, while in stressed and posttonic syllables long vowels continue Proto-Indo-European lengthened grade vowels and dialectal Indo-European contractions and arose from the Slavic monophthongization of diphthongs, and after the rise of the new timbre distinctions resulted from Van Wijk's law and contractions in posttonic syllables, in accent paradigm (c) from the retraction of the stress from final jers and from lengthening in monosyllables, in accent paradigm (b) from Stang's law, and only in post-posttonic syllables from the loss of laryngeals. It may now be useful to see how these developments are reflected in nominal case endings. Here I give the paradigms of *krava* (a) 'cow', *konjь* (b) 'horse', *pǫtь* (b) 'way', *volja* (a/b) 'will', *igo* (c) 'yoke' and *dětę* (b/c) 'child' in the pre-Slovene dialect of Slavic at stages 8.0 (after Van Wijk's law), 9.0 (after lengthening in monosyllables) and 10.0 (after merger of the jers; for a fuller account, see Kortlandt 2011: 277–309).

Slovene (8.0, 9.0, 10.0)

nom.sg.	*krảwa*	*krảwa*	*kràwa*
gen.sg.	*krảwy*	*krảwy*	*kràwy*
dat.sg.	*krảwā̋*	*krảwę*	*kràwę*
acc.sg.	*krảwoɴ*	*krảwoɴ*	*kràwoɴ*
inst.sg.	*krảwoöɴ*	*krảwōɴ*	*kràwōɴ*
loc.sg.	*krảwä*	*krảwę*	*kràwę*
nom.pl.	*krảwy*	*krảwy*	*kràwy*
gen.pl.	*krảwъ*	*krảwъ*	*kràwъ*
dat.pl.	*krảwamъ*	*krảwamъ*	*kràwamъ*
acc.pl.	*krảwy*	*krảwy*	*kràwy*
inst.pl.	*krảwamī*	*krảwamī*	*kràwamī*
loc.pl.	*krảwaxъ*	*krảwaxъ*	*kràwaxъ*

nom.sg.	*kòn̨ē*	*kòn̨ь*	*kòn̨ь*
gen.sg.	*kòn̨ā̋*	*koɲà*	*koɲà*
dat.sg.	*kòn̨ū̃*	*koɲù̇*	*koɲù*
acc.sg.	*kòn̨ь*	*kòn̨ь*	*kòn̨ь*
inst.sg.	*kòn̨ēmь*	*koɲêmь*	*koɲèmь*
loc.sg.	*kòn̨ī*	*koɲî*	*kᵘòn̨i*
nom.pl.	*kòn̨ī*	*koɲì*	*koɲì*
gen.pl.	*kòn̨ь*	*kòn̨ь*	*kǫ́n̨ь*
dat.pl.	*kòn̨ēmъ*	*koɲêmъ*	*koɲèmь*
acc.pl.	*kòn̨eɴ*	*koɲèɴ*	*koɲèɴ*
inst.pl.	*kòn̨ī*	*koɲî*	*kᵘòn̨i*
loc.pl.	*kòn̨īxъ*	*koɲîxъ*	*kᵘòn̨ixь*

nom.sg.	*pónть*	*pónть*	*pónть*
gen.sg.	*pónтī*	*pōɴtî*	*pōɴtì*
dat.sg.	*pónтī*	*pōɴtì*	*pōɴtì*
acc.sg.	*pónть*	*pónть*	*pónть*
inst.sg.	*pónтьmь*	*pōɴtьmь*	*pōɴtьmь*
loc.sg.	*pónтī*	*pōɴtî*	*pōɴtì*
nom.pl.	*pónтьe*	*pōɴtьe*	*pōɴtьje*
gen.pl.	*pónтiь*	*pōɴtíь*	*pōɴtí*
dat.pl.	*pónтьmъ*	*pōɴtьmъ*	*pōɴtьmь*
acc.pl.	*pónti*	*pōɴtì*	*pōɴtì*
inst.pl.	*pónтьmī*	*pōɴtьmī*	*pōɴtьmī*
loc.pl.	*pónтьxъ*	*pōɴtьxъ*	*pōɴtьxь*

Slovene (8.0, 9.0, 10.0)

nom.sg.	*wòl̓ā̋*	*wol̓â*	*wᵘòl̓a*
gen.sg.	*wòl̓eɴ*	*wol̓êɴ*	*wᵘòl̓eɴ*
dat.sg.	*wòl̓ī*	*wol̓ì*	*wᵘòl̓i*
acc.sg.	*wòl̓öɴ*	*wol̓ȍɴ*	*wᵘòl̓oɴ*
inst.sg.	*wòl̓eöɴ*	*wol̓ôɴ*	*wᵘòl̓ōɴ*
loc.sg.	*wòl̓ī*	*wol̓î*	*wᵘòl̓i*
nom.pl.	*wòl̓eɴ*	*wol̓èɴ*	*wᵘòl̓eɴ*
gen.pl.	*wòl̓ь*	*wòl̓ь*	*wòl̓ь*
dat.pl.	*wòl̓ā̋mъ*	*wol̓âmъ*	*wᵘòl̓amь*
acc.pl.	*wòl̓eɴ*	*wol̓èɴ*	*wᵘòl̓eɴ*
inst.pl.	*wòl̓ā̋mī*	*wol̓âmī*	*wᵘòl̓amī*
loc.pl.	*wòl̓ā̋xъ*	*wol̓âxъ*	*wᵘòl̓axь*

nom.sg.	*îɣo*	*îɣo*	*ȉɣo*
gen.sg.	*îɣā*	*îɣa*	*ȉɣa*
dat.sg.	*îɣū*	*îɣu*	*ȉɣu*
acc.sg.	*îɣo*	*îɣo*	*ȉɣo*
inst.sg.	*îɣomь*	*îɣomь*	*ȉɣomь*
loc.sg.	*îzā̋*	*îzę*	*ȉzę*
nom.pl.	*iɣȁ*	*iɣȁ*	*iɣà*
gen.pl.	*iɣȍ*	*íɣъ*	*íɣь*
dat.pl.	*iɣomȍ*	*iɣómъ*	*iɣòmь*
acc.pl.	*iɣȁ*	*iɣȁ*	*iɣà*
inst.pl.	*iɣý*	*iɣý*	*iɣý*
loc.pl.	*izäxъ*	*izę́xъ*	*izę́xь*

nom.sg.	*dā̋teɴ*	*dę̄tèɴ*	*dę̄tèɴ*
gen.sg.	*dā̋teɴte*	*dę̄têɴte*	*dę̄tèɴte*
dat.sg.	*dā̋teɴtī*	*dę̄têɴti*	*dę̄tèɴti*
acc.sg.	*dā̋teɴ*	*dę̄tèɴ*	*dę̄tèɴ*
inst.sg.	*dā̋teɴtьmь*	*dę̄têɴtьmь*	*dę̄tèɴtьmь*
loc.sg.	*dā̋teɴte*	*dę̄têɴte*	*dę̄tèɴte*
nom.pl.	*dā̂ti*	*dę̂ti*	*dę̏ti*
gen.pl.	*dätiȍ*	*dętíь*	*dętí*
dat.pl.	*dätьmȍ*	*dę̂tьmъ*	*dę̏tьmь*
acc.pl.	*dā̂ti*	*dę̂ti*	*dę̏ti*
inst.pl.	*dätьmí*	*dętьmí*	*dętьmí*
loc.pl.	*dätьxȍ*	*dę̂tьxъ*	*dę̏tьxь*

In accent paradigm (a), e.g., *krava*, we have fixed stress throughout and loss of glottalization toward the end of the prehistoric period. In accent paradigm (b), e.g., *konjь*, *pǫtь*, *volja*, *dětę*, the accent shifted from the first to the second syllable (but not to a final jer) as a result of Dybo's law and was retracted in accordance with Stang's law in the loc.sg., inst.pl., and loc.pl. forms of *konjь* and in the majority of case forms of *volja* (and analogically in the other forms of this paradigm). In accent paradigm (c), e.g., *igo* and *děti*, there is a falling tone (which was eventually shortened) on the initial syllable in some forms and final stress (which was retracted from final jers) elsewhere. The accent pattern of mobile nouns (c) is identical with that of Lithuanian (3) except in the inst.sg. form of the *aH*-stems, where **-òjǫ* was taken from the pronoun, and the nom.pl. form of the *o*-stems, where end-stressed Lith. *-aĩ* replaced the original neuter ending (cf. Kortlandt 1993).

We can now identify the origin of long vowels in Slavic nominal case endings as follows. Proto-Indo-European lengthened grade vowels can be reconstructed for the loc.sg. endings **-ēi* and **-ēu*, which appear as long *-ī* and *-ū* after monophthongization. Long vowels from dialectal Indo-European contractions were shortened in gen.sg. *-a* < **-ōd* and dat.sg. *-u* < **-ōi* and *-ě* < **-āi*, Lith. *-o*, *-ui*, *-ai*, which were never stressed, but length was preserved in inst.pl. *-ȳ* < **-ōis*, Lith. *-aĩs*, where it is reflected as length (c) and by Stang's law (b) and Slovene neo-circumflex (a), for example, *stəbrí* 'pillars', *kǫ́nji* 'horses', *ǫ́kni* 'windows', *râki* 'crabs', *lę̑ti* 'years'. The Early Slavic loss of glottalization in post-posttonic syllables yielded long vowels, which are reflected by the Slovene neo-circumflex in trisyllabic word forms where Dybo's law shifted the accent to the middle syllable, for example, *osnǫ̑va* < **òpsnowā* 'base', *zabâva* < **zábaʔwā* 'amusement', inst.pl. *ženâmi* < **gènaʔmīs̀* 'women', inst.du. *ženâma*, nom.pl. *telę̑ta* < **tèlɛntā* 'calves', fem.sg. *nosîla* < **nòsiʔlā* 'carried'. Length spread analogically in the neuter pl. ending, for example *lę̑ta* (a) 'years', *pǫ̑lja* (c) 'fields', also Slovak *mestá* 'cities', *srdcia* 'hearts', Čakavian and Posavian *vrimená* 'times', *imená* 'names', *ramená* 'shoulders', *telesá* 'bodies', and to a limited extent in other categories, for example, Slovene inst. *gorâmi*, *gorâma* (c) 'mountains', *kostmí*, *kostę̑ma* (c) 'bones', and in a limited area also *želę̑la* 'wished', *mîslila* 'thought', *vîdela* 'saw' beside regular *želǫ́la*, *míslila*, *vídela* (cf. Rigler 1970).

New long vowels from the monophthongization of diphthongs were shortened in dat.sg. *-i* < **-ei*, loc.sg. *-ě* < **-oi*, and nom.pl. *-i* < **-oi-s* (cf. Kortlandt 2011: 128), which were never stressed, but preserved to a limited extent in gen. sg. **-ī* < **-e/ois*, **-ū* < **-e/ous*, loc.sg. **-ī* < **-ēi*, **-ū* < **-ēu*, and loc.pl. Slovene *-ǫ́h* < **-oiṣù*. Long **-ī* is reflected by the neo-circumflex in the oblique form *nîti* of *nìt* (a) 'thread' and long **-ū* as Slovincian *-ū* and in the Slovene locative by the neo-circumflex in *orę̑hu* (a) 'nut' and the retraction according to Stang's law in *kǫ̑nju* (b) 'horse' (which has an analogical neo-circumflex). The long vowel of the loc.pl. ending is also reflected by the neo-circumflex in *râkih* (a) 'crabs' and the retraction according to Stang's law in *kǫ́njih* (b). In Kajkavian, the long vowel of

the loc.sg. ending is found in *nоćî* ‘night’, *pećî* ‘stove’, *kostî* ‘bone’ (cf. Vermeer 1984: 380). The acute loc.sg. ending **-ě* < **-aHi* is always short. While the nasal vowels of acc.sg. *-ǫ* and nom.acc.pl. *-ę* are always short because they were never stressed, the original distribution of long and short reflexes is preserved in gen.sg. Slovene *kráve* (a) ‘cow’ (without the neo-circumflex) versus *gorę́* (c) ‘mountain’ and Susak (Croatian) *sestrè* (b) ‘sister’ versus *vodiè* (c) ‘water’, and in inst.sg. Slovene *kostjǫ́* (c) ‘bone’, where the neo-circumflex of *nîtjo* (a) ‘thread’ is due to the lost jer, not to the following nasal vowel.

Van Wijk’s law gave rise to new long vowels in endings in the paradigms of *konjь* and *volja*. These were subsequently shortened in the gen.sg. *-a*, dat.sg. *-u*, nom.pl. *-i*, and acc.pl. *-ę* forms of *konjь* because these endings were never stressed, and analogically in inst.sg. *-emь* and dat.pl. *-emъ*. Length was preserved in loc.sg. **-ī*, inst.pl. **-ī*, and loc.pl. **-īxъ*, which were later shortened in accordance with Stang’s law. In the paradigm of *volja* there is no evidence for analogical shortening, which may or may not have taken place before the general phonetic shortening according to Stang’s law. A new long nasal vowel developed from contraction in the posttonic inst.sg. ending *-ojǫ*; cf. Polish acc.sg. *rybę* (a) ‘fish’, inst.sg. *rybą*, Slovene *ríbo*, *rîbo* (with the neo-circumflex reflecting a long ending). The long vowel of gen.pl. *kostí* (c) ‘bones’ < **-iь* < **-ьjь* developed from the retraction of the accent from the final jer.

REFERENCES

Dybo 1962 = Vladimir A. Dybo, O rekonstrukcii udarenija v praslavjanskom glagole, *Voprosy slavjanskogo jazykoznanija* 6 (1962), 3–27.

Dybo 1968 = Vladimir A. Dybo, Akcentologija i slovoobrazovanie v slavjanskom, in: *Slavjanskoe jazykoznanie: VI meždunarodnyj sъezd slavistov, Praga, 1968*, Moskva: Nauka, 1968, 148–224.

Greenberg 2000 = Marc L. Greenberg, *A historical phonology of the Slovene language*, Wiesbaden: Harrassowitz, 2000.

Kortlandt 1977 = Frederik Kortlandt, Historical laws of Baltic accentuation, *Baltistica* 13 (1977), no. 2, 319–330.

Kortlandt 1985 = Frederik Kortlandt, Long vowels in Balto-Slavic, *Baltistica* 21 (1985), no. 2, 112–124.

Kortlandt 1993 = Frederik Kortlandt, Tokie šalti rytai, *Baltistica* 28 (1993), no. 1, 45–48.

Kortlandt 2009 = Frederik Kortlandt, *Baltica & Balto-Slavica*, Amsterdam: Rodopi, 2009.

Kortlandt 2011 = Frederik Kortlandt, *Selected writings on Slavic and general linguistics*, Amsterdam: Rodopi, 2011.

Rigler 1970 = Jakob Rigler, Akcentske variante, *Slavistična Revija* 18 (1970), 5–15.

Stang 1957 = Christian S. Stang, *Slavonic accentuation*, Oslo: Universitetsforlaget, 1957.

Vermeer 1984 = Willem Vermeer, On clarifying some points of Slavonic accentology: The quantity of the thematic vowel in the present tense and related issues, *Folia Linguistica Historica* 5 (1984), no. 2, 331–395.

Vermeer 1992 = Willem Vermeer, In the beginning was the lengthened grade: On the continuity of Proto-Indo-European vowel quantity in Slavic, in: *Rekonstruktion und relative Chronologie: Akten der VIII. Fachtagung der Indogermanischen Gesellschaft, Leiden, 1987*, Innsbruck: Institut für Sprachwissenschaft, 1992, 115–136.

Povzetek

Razvoj vokalne dolžine v slovanščini

Obstaja naglasna paradigma (a) s stalnim naglasom na akutiranem (glotaliziranem) vokalu, naglasna paradigma (b) z rastočim tonom (novim akutom) v nekaterih oblikah in kratkim naglasom na naslednjem zlogu v drugih in naglasna paradigma (c) s padajočim tonom (cirkumfleksom) na začetnem zlogu (ali proklitiki) v nekaterih oblikah in kratkim ali dolgim rastočim tonom na končnici (ali enklitiki) v drugih. Ko so končni jeri izgubili naglasljivost, je predhodni naglasljivi zlog dobil dolg rastoč ton. Ko je akut tik pred koncem predhistorične dobe izgubil glotalno naravo, se je zlil z rastočim tonom. Zavoljo izgube glotalizacije, skoraj splošnega krajšanja dolgih padajočih vokalov in široko razširjenega daljšanja kratkih rastočih vokalov se je ločevalni ton zamejil na slovenščino in srbohrvaščino, medtem ko je vokalna dolžina ostala ločevalna povsod še pozneje.

V prednaglasnih zlogih so dolgi vokali izšli iz Dybojevega zakona, medtem ko so v naglašenih in ponaglasnih zlogih nadaljevanje praindoevropskih vokalov s podaljšano stopnjo in naročnih indoevropskih kontrakcij in so izšli iz slovanske monoftongizacije diftongov. Po nastanku novih barvnih razlik so nasledek Van Wijkovega zakona in kontrakcij v ponaglasnih zlogih, v naglasni paradigmi (c) umika naglasa s končnih jerov in daljšanja v enozložnicah, v naglasni paradigmi (b) Stangovega zakona, samo v ponaglasnih zlogih pa preminitve laringalov.